Draft Environmental Impact Report for the

1215 O Street
Office Building Project

April 2017

PREPARED FOR:
California Department
of General Services
707 3rd Street, MS-509,
West Sacramento, CA 95605
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Senior Project Manager
Draft Environmental Impact Report
for the

1215 O Street Office Building Project
State Clearinghouse No. 2016122026

PREPARED FOR

CALIFORNIA DEPARTMENT OF GENERAL SERVICES

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April 18, 2017
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# ACRONYMS AND ABBREVIATIONS

°F  Fahrenheit

µg/m³  micrograms per cubic meter

AB  Assembly Bill

ADA  minimum American with Disabilities Act

af  acre-feet

afy  acre-feet per year

ARB  Air Resources Board

BMPs  Best Management Practices

Btu  British thermal unit

C&D  construction and demolition

CA SDWA  California Safe Drinking Water Act

CAA  Clean Air Act

CAAQ Act Amendments of 1990

CAAQS  California Ambient Air Quality Standards

CADA  Capitol Area Development Authority

CalEEMod  California Emissions Estimator Model

CALEMA.  California Emergency Management Agency

Caltrans  Department of Transportation

CalVet  California Department of Veteran Affairs

CAP  Capitol Area Plan

CAP  Climate Action Plan

CBD  Central Business District

CCAA  California Clean Air Act

CCR  California Code of Regulations

CDFA  California Department of Food and Agriculture

CDFA Annex  California Department of Food and Agriculture Annex Building

CDFW  California Department of Fish and Wildlife

CEC  California Energy Commission

CEQA  California Environmental Quality Act

CESA  California Endangered Species Act

cfh  cubic feet per hour

CFL  compact-fluorescent

CFR  the Code of Federal Regulations

cfs  cubic feet per second
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<tr>
<td>CNDB</td>
<td>California Natural Diversity Database</td>
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<tr>
<td>CNEL</td>
<td>Community Noise Equivalent Level</td>
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<td>CNRA</td>
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<td>CO</td>
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<tr>
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<td>heating, ventilation, and air conditioning</td>
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<tr>
<td>in/sec</td>
<td>inches per second</td>
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<tr>
<td>JPA</td>
<td>joint powers authority</td>
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<td>km</td>
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<td>kilovolt</td>
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<td>kilowatts</td>
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<tr>
<td>L_{den}</td>
<td>Day-Evening-Night Level</td>
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<tr>
<td>L_{dn}</td>
<td>Day-Night Level</td>
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<tr>
<td>LED</td>
<td>light-emitting diode</td>
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<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
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<td>L_{eq}</td>
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<td>Definition</td>
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<td>---------</td>
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<td>PM</td>
<td>particulate matter</td>
</tr>
<tr>
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<td>parts per million</td>
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<tr>
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<td>peak particle velocity</td>
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<tr>
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<td>Senate Bill</td>
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<td>Sacramento City Unified School District</td>
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<td>Sacramento Metropolitan Air Quality Management District</td>
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<td>Sacramento Municipal Utility District</td>
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<td>SO₂</td>
<td>sulfur dioxide</td>
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<tr>
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<td>single-occupant vehicle</td>
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<tr>
<td>SPIF</td>
<td>State Projects Infrastructure Fund</td>
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<td>SPL</td>
<td>sound pressure level</td>
</tr>
<tr>
<td>sq. ft.</td>
<td>square foot</td>
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<tr>
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<td>SRCSD</td>
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<td>SRWTP</td>
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<td>Toxic air contaminants</td>
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<td>Urban Water Management Plan</td>
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<td>Urban Water Management Planning Act</td>
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<td>Waste Discharge Requirements</td>
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1 INTRODUCTION

This draft environmental impact report (DEIR) evaluates the environmental impacts of the proposed 1215 O Street Office Building Project. This DEIR has been prepared under the direction of the State of California Department of General Services (DGS) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines. This chapter of the DEIR provides information on the following:

- project requiring environmental analysis (synopsis);
- type, purpose, and intended uses of the DEIR;
- scope of the DEIR;
- agency roles and responsibilities; and
- standard terminology.

1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The following is a synopsis of the project characteristics. For further information on the proposed project, see Chapter 3, “Project Description.” The DGS Real Estate Services Division (RESD) is responsible for the planning, permitting, and implementation of the 1215 O Street Office Building Project, which was identified in DGS’s 2015 Capitol Area Plan (CAP) Progress Report and Governor Brown’s 2016 Five-Year Infrastructure Plan to address the safety and capacity of the California Department of Food and Agriculture (CDFA) Annex building as well as critical State office space deficiencies in downtown Sacramento. This project would involve the demolition of the vacant CDFA Annex building and construction of a new office building at the same location. The State-owned, four-story office building was constructed in 1953 and is attached to the existing California Department of Food Agriculture Building at 1220 N Street via an elevated skybridge over the alley between the two buildings. The project is intended to redevelop underutilized space in downtown Sacramento and to consolidate and upgrade State office space in the region. The new building would be approximately 300,000 to 350,000 gross square feet (GSF) with a maximum height of 150 feet. The building would primarily provide State office space, but would include some limited underground parking, ground-level commercial space, and a fitness center for State employees. The new building would be connected to the State-owned Central Plant for heating and cooling. Photovoltaic solar panels would be installed on the roof of the building and over the parking spaces of the existing surface parking lot immediately across O Street, and would provide power to the new building. The building would have a proposed occupancy of approximately 1,000 to 1,200 employees, which would primarily be relocated from the State-owned Bateson office building at 1600 9th Street. Vacating the Bateson building would allow the eventual renovation and re-occupation of that building. However, there are no details currently available regarding the ultimate future use of the Bateson building, who might occupy it, or the timing of any future renovation and re-occupation of the building.

1.2 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

According to CEQA, preparation of an EIR is required whenever it can be fairly argued, based on substantial evidence, that a proposed project may result in a significant environmental impact. An EIR is an informational document used to inform public-agency decision makers and the general public of the significant environmental impacts of a project, identify possible ways to minimize the significant impacts, and describe reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. This DEIR has been prepared to meet the requirements of a project EIR as defined by...
Section 15161 of the State CEQA Guidelines. A project EIR focuses on the changes in the physical environment that would result from the implementation of a project, including its planning, construction, and operation. The State’s intention in preparing a project EIR is that no further environmental analysis would be required for additional regulatory approvals following DGS approval of the project, absent conditions requiring a subsequent EIR, a supplement to the EIR, or an addendum. (See State CEQA Guidelines Sections 15162–15164.)

1.3 SCOPE OF THIS DRAFT EIR

This DEIR includes an evaluation of the following 14 environmental issue areas as well as other CEQA-mandated issues (e.g., cumulative impacts, growth-inducing impacts, significant unavoidable impacts, alternatives):

- Land Use;
- Population, Employment, and Housing;
- Transportation and Circulation;
- Utilities and Infrastructure;
- Air Quality;
- Greenhouse Gas Emissions and Climate Change;
- Noise;
- Geology and Soils;
- Hydrology and Water Quality;
- Hazardous Materials and Public Health;
- Cultural and Tribal Cultural Resources;
- Biological Resources;
- Public Services; and
- Aesthetics/Light and Glare

Under the CEQA statutes and the State CEQA Guidelines, a lead agency may limit an EIR’s discussion of environmental effects when such effects are not considered potentially significant (PRC Section 21002.1[e]; State CEQA Guidelines Sections 15128, 15143). Information used to determine which impacts would be potentially significant was derived from review of the 1215 O Street Office Building Project; review of applicable planning documents and CEQA documentation; field work; feedback from public and agency consultation; comments received during a public scoping meeting held on January 12, 2017; and comments received on the Notice of Preparation (NOP) (see Appendix A of this DEIR).

The NOP was distributed on December 14, 2016, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. The purpose of the NOP and the scoping meeting was to provide notification that an EIR for the 1215 O Street Office Building Project was being prepared and to solicit input on the scope and content of the environmental document. As a result of the review of existing information and the scoping process, it was determined that each of the issue areas listed above should be evaluated fully in this DEIR. Further information on the NOP and scoping process is provided below in Section 1.5, “Public Review Process.”

1.4 AGENCY ROLES AND RESPONSIBILITIES

1.4.1 LEAD AGENCY

DGS is the lead agency responsible for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public-review process is complete, the Director of DGS will determine whether to certify the EIR (see State CEQA Guidelines Sections 15090) and approve the project.
1.4.2 TRUSTEE AND RESPONSIBLE AGENCIES

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

Responsible agencies are public agencies, other than the lead agency, that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency’s CEQA process, review the lead agency’s CEQA document, and use the document when making a decision on project elements. For example, the City of Sacramento will use this EIR for discretionary actions such as sidewalk, roadway, or alley encroachment permits and permits for connections to City-operated utilities. Agencies that may have responsibility for, or jurisdiction over, the implementation of elements of the project include the following:

STATE AGENCIES

- California Air Resources Board (ARB)
- California Highway Patrol, Capitol Protection Section (CPS)
- California Department of Fish and Wildlife (CDFW)
- California State Parks, Office of Historic Preservation (OHP)
- Central Valley Regional Water Quality Control Board (RWQCB) (Region 5)

REGIONAL AND LOCAL AGENCIES

- City of Sacramento
- Sacramento Air Quality Management District (SMAQMD)

1.4.3 REQUIRED PERMITS AND APPROVALS

The following list identifies permits and other approval actions likely to be required before implementation of individual elements of the proposed project.

STATE ACTIONS/PERMITS

California State Parks, Office of Historic Preservation: Review of project design pursuant to PRC Sections 5024(f) and 5024.5 regarding historic resources and consultation regarding the project’s potential to adversely affect the Food and Agriculture Building at 1220 N Street, which is listed on the California Register of Historic Resources.

Central Valley RWQCB (Region 5): National Pollutant Discharge Elimination System construction stormwater permit (Notice of Intent to proceed under General Construction Permit), discharge permit for stormwater, general order for dewatering, recycled water permit.

REGIONAL AND LOCAL ACTIONS/PERMITS

City of Sacramento: Sidewalk, roadway, and alley encroachment permits, permits for connections to City operated utilities.

SMAQMD: Permit to construct and permit to operate.
1.5 PUBLIC REVIEW PROCESS

As identified above in Section 1.3, “Scope of this Draft EIR,” in accordance with CEQA regulations, an NOP was distributed on December 14, 2016, to responsible agencies, interested parties and organizations, and private organizations and individuals that could have interest in the project. The NOP was available at the Sacramento Central Library at 828 I Street and at DGS Environmental Services Section office at 707 3rd Street, West Sacramento, and availability of the NOP was advertised in the Sacramento Bee.

The purpose of the NOP was to provide notification that an EIR for the 1215 O Street Office Building Project was being prepared and to solicit input on the scope and content of the document. The NOP and responses to the NOP are included in Appendix A of this DEIR.

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

A public meeting will be held on the DEIR on May 17, 2017, between 4:30 p.m. and 6:30 p.m. at the Sheraton Grand Sacramento Hotel, 1230 J Street, Sacramento, CA 95814. Upon completion of the public review and comment period, a Final EIR (FEIR) will be prepared that will include both written and oral comments on the DEIR received during the public-review period, responses to those comments, and any revisions to the DEIR made in response to public comments. The DEIR and FEIR will comprise the EIR for the project.

Before adopting the 1215 O Street Office Building Project, the lead agency, DGS, is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.6 DRAFT EIR ORGANIZATION

This DEIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Chapter 4, “Affected Environment, Environmental Consequences, and Mitigation Measures” and Section 4.2, “Land Use”):

Chapter 1, “Introduction”: This chapter provides a description of the lead and responsible agencies, the legal authority and purpose for the document, and the public review process.

Chapter 2, “Summary”: This chapter introduces the 1215 O Street Office Building Project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to less-than-significant levels.

Chapter 3, “Description of the Proposed Project”: This chapter describes the location, background, and goals and objectives for the 1215 O Street Office Building Project, and describes the project elements in detail.

Chapter 4, “Affected Environment, Environmental Consequences, and Mitigation Measures”: The sections within this chapter evaluate the expected environmental impacts generated by the 1215 O Street Office Building Project, arranged by subject area (e.g., Land Use, Hydrology and Water Quality). Within each subsection of Chapter 4, the regulatory background, existing conditions, analysis methodology, and thresholds of significance are described. The anticipated changes to the existing conditions after development of the project are then evaluated for each subject area. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented and the level of impact significance after mitigation is identified. Environmental impacts are numbered sequentially within each section (e.g., Impact 4.2-1, Impact 4.2-2, etc.). Any required mitigation measures are numbered
to correspond to the impact numbering; therefore, the mitigation measure for Impact 4.2-2 would be Mitigation Measure 4.2-2.

Chapter 5, “Cumulative Impacts”: This chapter provides information required by CEQA regarding cumulative impacts that would result from implementation of the 1215 O Street Office Building Project together with other past, present, and probable future projects.

Chapter 6, “Other CEQA-Mandated Sections”: This chapter evaluates growth-inducing impacts and irreversible and irretrievable commitment of resources, and discloses any significant and unavoidable adverse impacts.

Chapter 7, “Alternatives Analysis”: This chapter evaluates alternatives to the 1215 O Street Office Building Project, including alternatives considered but eliminated from further consideration, the No Project Alternative, and two alternative development options. The environmentally superior alternative is identified.

Chapter 8, “References”: This chapter identifies the organizations and persons consulted during preparation of this DEIR and the documents and individuals used as sources for the analysis.

Chapter 9, “Report Preparers”: This chapter identifies the preparers of the document.

1.7 STANDARD TERMINOLOGY

This DEIR uses the following standard terminology:

“No impact” means no change from existing conditions (no mitigation is needed).

“Less-than-significant impact” means no substantial adverse change in the physical environment (no mitigation is needed).

“Potentially significant impact” means an impact that might cause a substantial adverse change in the environment (mitigation is recommended because potentially significant impacts are treated as significant).

“Significant impact” means an impact that would cause a substantial adverse change in the physical environment (mitigation is recommended).

“Significant and unavoidable impact” means an impact that would cause a substantial adverse change in the physical environment and that cannot be avoided, even with the implementation of all feasible mitigation.
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2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This summary is provided in accordance with California Environmental Quality Act Guidelines (State CEQA Guidelines) Section 15123. As stated in Section 15123(a), “an EIR [environmental impact report] shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical.” As required by the guidelines, this chapter includes (1) a summary description of the 1215 O Street Office Building Project, (2) a synopsis of environmental impacts and recommended mitigation measures (Table 2-1), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of the areas of controversy associated with the project.

2.2 SUMMARY DESCRIPTION OF THE PROJECT

2.2.1 Project Location

The proposed 1215 O Street Office Building Project site encompasses areas on the north and south sides of O Street in downtown Sacramento, and the portion of O Street in between, as shown on Exhibits 2-1 and 2-2. On the north side of O Street is the site of the existing vacant 115,000 sq. ft. California Department of Food and Agriculture (CDFA) Annex building, located on the southwestern portion of the block bounded by O and N Streets and 12th and 13th Streets. This portion of the site is approximately 1.3 acres (57,600 sq. ft.), and the existing CDFA Annex building footprint is approximately 30,000 sq. ft. (DGS 2017a). This 1215 O Street site would be redeveloped to replace the CDFA Annex with a new State-owned office building. On the south side of O Street, directly across O Street from the CDFA Annex is the State-owned CalVet employee surface parking lot. This parking lot would be used as a staging area during demolition of the CDFA Annex and construction of the replacement building. This surface parking lot would then be repaved and a solar array would be constructed over the spaces to provide electricity for the new office building. The surface parking lot is approximately 0.8 acre (34,800 sq. ft.) in size. Utility connections and other construction activities for the new office building would result in disturbances to 12th Street, O Street, and Neighbors Alley adjacent to the office building site. The sky bridge across the alley that connects the CDFA Annex to the California Department of Food and Agriculture Building (Food and Agriculture Building) directly to the north would be removed and façade improvements would be made to that building. The project also includes limited access, mobility, and safety improvements inside the Food and Agriculture Building. The combined project site disturbance area totals approximately 2.3 acres.

2.2.2 Background and Need for the Project

Replacement of the vacant CDFA Annex at 1215 O Street in downtown Sacramento has been funded by the State of California through the State Projects Infrastructure Fund (SPIF), as administered by the California Department of General Services (DGS). This project was identified in DGS’s 2015 Capitol Area Plan (CAP) Progress Report and Governor Brown’s 2016 Five-Year Infrastructure Plan to address the safety of the CDFA Annex as well as critical State office space deficiencies in downtown Sacramento.

The CDFA Annex office building was constructed in 1953 as an addition to the Food and Agriculture Building at 1220 N Street. The two buildings are connected via an elevated sky bridge over the alley (Neighbors Alley) between the two buildings. The CDFA Annex served as an office building for the CDFA; however, because of significant fire and life safety deficiencies, it was vacated by order of the State Fire Marshal in November 2011.
Ascent Environmental Executive Summary

California Department of General Services
1215 O Street Office Building Project Draft EIR 2-3

Exhibit 2-2 Project Location
Most of the designated 1215 O Street Office Building Project site, including the CDFA Annex, the Food and Agriculture Building, CalVet surface parking, and the portion of O Street between these two sites are located on State-owned property. The entire project site is located within the Capitol Area covered by the Capitol Area Plan (CAP) (DGS 1997), which is the statutory master plan for development on State-owned land surrounding the State Capitol, in accordance with Government Code Section 8160 et seq. The CAP envisions State offices, housing, neighborhood commercial, parking, and multimodal streets creating a vibrant urban district in the heart of Sacramento. DGS developed the CAP and is responsible for its administration (DGS 1997). DGS implements the office and parking elements of the CAP and the Capitol Area Development Authority (CADA), a joint powers authority (JPA) between the State of California and the City of Sacramento, implements the housing and retail elements. Although redevelopment of the CDFA Annex was not specifically proposed in the CAP, the plan suggests examination of underutilized State properties, including the 1215 O Street site. The vacant CDFA Annex is an underutilized building, located one block away from the Capitol, and adjacent to other State office buildings and a Regional Transit light rail station. The vacant building provides an opportunity to consolidate State office space and address State office space deficiencies in downtown Sacramento.

Governor Brown’s 2016 Five-Year Infrastructure Plan, a study of State office infrastructure in Sacramento (required by Chapter 451, Statutes of 2014 [AB 1656]), documented serious deficiencies with existing downtown buildings that require replacement or renovation. The study found deficiencies in building systems, including inadequate fire and life safety systems, electrical, and plumbing. In addition, the State heavily relies on leased space, which is flexible and necessary to meet short term fluctuation in office space needs, but is more expensive over the long term. To address office infrastructure needs, the Governor proposed a budget and identified initial projects to better use State-owned land; replacement of the CDFA Annex was identified as one of the initial projects. Furthermore, DGS completed a site study of the unoccupied CDFA Annex in 2010 to determine the highest and best use of the property and evaluate the cost to renovate the existing building. The site study concluded that it is not cost-effective to renovate the building and recommended replacing the existing structure with a new 397,400 gross square feet (GSF), 11-story office building with tenant parking, to maximize State office space on the site while maintaining compliance with the Capitol View Protection Act (DGS 2010).

2.2.3 Project Objectives

Consistent with, and in furtherance of the CAP (DGS 1997), the 2015 CAP Progress Report (DGS 2015), and Governor Brown’s 2016 Five-Year Infrastructure Plan, the objectives of the 1215 O Street Office Building Project are to:

- consolidate State office space and address State office space deficiencies in downtown Sacramento, prioritizing building on underutilized state property;
- restore functional office space at the vacant California Department of Food and Agriculture Annex at 1215 O Street, while conforming with the Capitol View Protection Act;
- accommodate staff from State-owned office buildings targeted for renovation or replacement (such as the Bateson Building at 1600 9th Street) to vacate such building(s) and allow for their eventual renovation and re-occupation while minimizing the number of disruptive moves for state agencies;
- provide a modern, efficient, and safe environment for State employees and the public they serve;
- integrate the new State development with the existing neighborhood;
- develop a sustainable and energy-efficient building;
- encourage and support the use of alternative commute modes by designing the project to have easy access to multiple transit modes (e.g., bus, light-rail); and
Maximize the effectiveness of the design-build project delivery method by maintaining sufficient flexibility in the performance criteria to support innovation in the design competition.

2.2.4 Design-Build Method

The 1215 O Street Office Building Project would be delivered via the design-build method of project delivery. The State’s goal in using this method is to provide a shorter elapsed time from project initiation to building occupancy; provide overall cost savings; provide a more efficient construction process; and promote higher quality and more innovative design solutions. In design-build, a Criteria Architect (or Master Architect) team develops performance criteria to establish the building’s design characteristics, such as:

- maximum height and square footage;
- design mandates such as solar panels, Zero Net Energy, and the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) certification;
- facilities required by anticipated building tenants such as sufficient office space and features; and
- minimum parameters to meet maintenance and functionality requirements.

Many of the project characteristics described below would be included in the performance criteria, as well as more detailed and focused criteria not relevant to this EIR’s impact analysis (e.g., characteristics of interior wall coverings, floor coverings, doors). Based on the performance criteria defined for the project, DGS would issue a Request for Qualifications (RFQ) and begin a competitive selection process for design-build teams. DGS would review submittals from prospective teams, hold interviews, and then select three teams to proceed to the Request for Proposal (RFP) phase.

DGS would issue a RFP to the three short-listed design-build teams and accept detailed proposals from each. The proposals would be reviewed and scored based on best value; project features, functions, and lifecycle costs; team experience; and past performance. Selection of the winning team would be based on its response to the RFP and compliance with the performance criteria. The winning proposal would become the defining contractual document that identifies project quality, scope, cost and schedule. Final project design, and then construction, would be completed by the selected team. It is anticipated that the design-build team selection process would occur in late 2017.

The analysis in this EIR is based on the performance criteria prepared by the Criteria Architect team. This is the typical stage that CEQA review is conducted in a design-build process, in part, so that the future RFQ can include any impact avoidance and mitigation measures that arise out of the CEQA review process. This approach places the CEQA process prior to completion of a final project design. However, the performance criteria are sufficient to support this EIR impact analysis. Where the performance criteria provide a maximum limit to a project characteristic, such as the building not exceeding 150 feet in height (see Section 2.2.5 below), this EIR assumes the project meets that maximum limit. If, ultimately, the selected design-build team can achieve all necessary criteria with a shorter building, the EIR will still be sufficient to support implementation of that design. If the performance criteria identify a range for a particular project characteristic, such as the building providing approximately 300,000 to 350,000 GSF of general purpose office space (see Section 2.2.5 below), where applicable, the EIR impact analysis will generally consider the higher value in the range. Again, if the ultimate project design provides GSF in a lower portion of the range, the EIR would be sufficient to support implementation of that design.

In some cases, to provide a sufficient CEQA impact analysis, the EIR project description identifies project features that are more specific than what is included in the performance criteria. For example, the performance criteria may identify a particular side of the building suitable for vehicle entry; however, the project development scenario evaluated in this EIR identifies a specific location for vehicle entry on that side.
Executive Summary
Ascent Environmental

of the building to allow an adequate analysis of traffic impacts. In this circumstance, if the design-build team ultimately selects a vehicle entry point different from the location evaluated in the EIR, DGS will need to consider whether the EIR adequately addresses the environmental effects that might result from this difference in a project feature, and determine whether the proposal from the design-build team is sufficiently different from what is analyzed in this EIR to warrant preparation of an EIR Addendum, Supplement to the EIR, or a Subsequent EIR consistent with Section 15162 of the CEQA Guidelines. As the selected design-build team completes the project design, DGS will need to consider whether any project elements differ sufficiently from the project scenario analyzed in the EIR to warrant additional CEQA review. If additional CEQA review is required, all elements of the review, including public notices and public involvement, would be implemented consistent with applicable elements of the CEQA Statute and Guidelines.

2.2.5 Characteristics of the Project

The project would involve demolition of the vacant CDFA Annex building as well as existing asphalt and concrete surrounding the building, including the O Street and 12th Street sidewalks, Neighbors Alley between the project and the Food and Agricultural Building, and portions of O Street and 12th Streets for utility connections. Based on a Phase 1 Environmental Site Assessment prepared for the project (The Sanberg Group, Inc. 2017), hazardous materials including asbestos, lead, PCBs (polychlorinated biphenyls), and mercury were found within the CDFA Annex building. To protect workers and the public and reduce disposal fees, hazardous materials would be abated and removed prior to demolition. Once this process is complete and the existing building has been certified as free from hazardous materials, demolition would commence.

The new office building would consist of approximately 300,000 to 350,000 GSF of general purpose office space, designed with a 50- to 100-year life expectancy (assessment of the structure based on levels of design, workmanship, maintenance, and the environment). The building is anticipated to be up to 11 stories tall, not exceeding 150 feet in height, in compliance with the 150-foot height limit of the Capitol View Protection Act (Government Code Section 8162 et seq.), which was enacted in 1992 to provide protection of views to and from the State Capitol building and Capitol Park.

The building massing is anticipated to accommodate nine building floors dedicated primarily to office space uses as well as a level below grade and additional enclosed facilities on the rooftop. The lower level (below grade) would include approximately 20 enclosed car parking spaces, approximately five parking spaces for building maintenance vehicles, bicycle parking for employees, building maintenance and staff locker room, greywater storage, fire sprinkler water storage, and mechanical and electrical rooms. Level 1, street level, would include the main pedestrian entrance on O Street, lobby and security, and a publicly-accessible food court. Other building elements anticipated to be included at the street level include an interpretive center for sustainability and zero net energy education, a meeting room for approximately 125 occupants, and the loading dock, recycling/solid waste, shipping/receiving, and mechanical and electrical space. The tenant office space would be provided on levels 2 through 10, providing approximately 1,200 workspace seats as well as break rooms, electrical rooms, and other appurtenant uses on each floor. The rooftop level is anticipated to house an employee fitness center, including showers and locker rooms, tenant storage, and mechanical rooms.

The CalVet surface parking lot across O Street from the office building site would be used as a temporary construction staging area during demolition of the CDFA Annex and construction of the new office building. During construction, the employees that normally utilize the CalVet parking lot would park in a nearby parking garage on 13th Street, which has capacity to temporarily serve these employees. Once construction of the new office building is complete, this surface parking lot would be repaved, parking spaces painted, and the parking lot would continue to serve CalVet. An array of photo-voltaic solar panels (solar panels) would be installed over the parking lot to generate energy for the new 1215 O Street Office Building.

The project’s energy goal is to achieve Zero Net Energy. The project would be designed to exceed the 2016 Building Energy Efficiency Standards, to meet or exceed the U.S. Green Building Council’s Leadership in...
Energy and Environmental Design (LEED) version 4 (v4) Silver certification, and to have an Energy Use Index (EUI) of 25-30. EUI is a measure of the total energy consumed by building in a period, expressed as British thermal units (Btus) per gross square foot (calculated by dividing the total energy consumed by a building in one year by the total gross floor area of the building). For comparison, existing buildings within downtown Sacramento often have a baseline EUI score of approximately 100. Energy Star office equipment, energy efficient computer monitors, and LED (light-emitting diode) lighting would need to be used throughout the building to achieve the energy goals. Electrical metering and control systems would be installed to control systems and monitor electrical loads on a per system basis (e.g., lighting, mechanical) and on a per floor basis. Solar panels would be installed on the roof of the new office building with additional panels potentially located on the south building face; as well as the solar array installed over the CalVet parking lot mentioned above.

The office building would include water conservation and reuse measures that exceed 2016 Title 24 water efficiency requirements. All plumbing fixtures in the building would be low-flow/high-efficiency fixtures. A dual pipe water system would be installed. Domestic (potable) water piping would supply drinking fountains, sinks, showers, and ice machines. Greywater would be used for toilet and urinal flushing. Greywater is defined as all wastewater generated in households or office buildings from sources other than toilets. Sources of greywater for the building could include non-food-service sinks, drinking fountain drains, shower drains, air conditioning condensate, and rainwater (collected and stored). The greywater would be stored in an approximately 25,000-gallon cistern and would be treated/sterilized before re-use in the building.

Heating and cooling for the office building would be provided by the State’s Central Plant (located on the block bordered by 6th, 7th, P, and Q Streets, see Exhibit 2-2) in the form of steam (heating) and chilled water (cooling) delivered by existing underground pipes. Water, drainage, and wastewater services would be provided through connection to the City’s water lines and combined sewer system lines. Pipelines to connect to utility systems would be constructed as part of the project.

It is anticipated that staff occupying the 1215 O Street Office Building would primarily be relocated from the State-owned Bateson Building at 1600 9th Street (Exhibit 2-2). These include staff from the California Health and Human Services Agency, the Department of State Hospitals, and the Department of Development Services. Vacating the Bateson Building would allow the eventual renovation and re-occupation of that building. This EIR assumes that the Bateson Building would be back-filled with the capacity for approximately 1,000 employees, consistent with its current occupancy level. Because there are no details currently available regarding the timing of renovation and future re-occupation of the Bateson Building, this EIR does not evaluate in detail renovation or reconstruction of that building, nor is approval for such renovation being sought through this environmental document or process. Rather, the Bateson Building renovation, as a reasonably foreseeable indirect effect of the project is addressed herein, but at a level of detail commensurate with what is currently known about the project.

2.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

2.3.1 Project-Specific Impacts

This EIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the proposed 1215 O Street Office Building Project. The DGS Real Estate Services Division is the lead agency for the project. DGS has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the Final EIR is prepared and the EIR public-review process is complete, the Director of DGS is the party responsible for certifying that the EIR adequately evaluates the impacts of the project.
Table 2-1, presented at the end of this chapter, provides a summary of the environmental impacts for the 1215 O Street Office Building Project. The table provides the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

### 2.3.2 Significant-and-Unavoidable Impacts and Cumulative Impacts

The 1215 O Street Office Building Project would result in project-level significant-and-unavoidable adverse impacts (i.e., impacts that cannot be reduced to less than significant levels with feasibly mitigation) in two resource areas: noise and historic resources. The significant and unavoidable noise impact occurs because, at this time, it cannot be guaranteed that some level of nighttime construction will not be required. Therefore, it cannot be guaranteed that more stringent nighttime noise standards can be met during the entirety of the construction process. The significant and unavoidable historic resources impact occurs because of the demolition of the existing CDFA Annex to allow construction of the new office building.

For purposes of this EIR, the existing CDFA Annex is considered a historic structure. Because implementation of the 1215 O Street Office Building Project results in the demolition of this existing historic structure, the project results in both a significant and unavoidable project level impact and the project makes a significant incremental contribution to the significant cumulative impact of the loss and degradation of historic structures in the general area.

### 2.4 ALTERNATIVES TO THE PROPOSED PROJECT

The following provides brief descriptions of the alternatives evaluated in this Draft EIR. Table 2-2 presents a comparison of the environmental impacts between the alternatives and the proposed project.

- **Alternative 1: No Project – No Development Alternative** assumes no demolition or new construction occurs on the project. The site would remain in its current condition.

- **Alternative 2: Reduced Building Size/No Basement Excavation Alternative** assumes project elements and features that are the generally the same as the proposed project, albeit reduced in size because there would be no below-grade level. With no below-grade (basement) level, it is less likely that earth moving or excavations during construction would encounter native soils that could contain cultural resources.

- **Alternative 3: Capitol Area Plan Housing Alternative** assumes project elements and features that are the same as the proposed project, with the exception that after the office building is constructed and operational, the CalVet surface parking lot would be developed with approximately 100 housing units. Housing development at this site would be consistent with the CAP Implementation Program, which proposes construction of a high-density residential development (approximately 100 housing units) on the site of the current CalVet surface parking lot (identified in the CAP Implementation Program as “Block 222, along O Street”).

#### 2.4.1 Environmentally-Superior Alternative

Alternative 1, the No Project-No Development Alternative would avoid the adverse impacts generated by the construction and operation of the 1215 O Street Office Building Project. Therefore, it is considered the environmentally superior alternative. However, the No Project–No Development Alternative would not meet the project objectives.
When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative other than the No Project Alternative from among the other action alternatives evaluated. As illustrated in Table 2-2, below, the Reduced Building Size/No Basement Excavation Alternative would be environmentally superior action alternative because although the environmental impacts would be similar to the proposed project, and no significant impacts or significant and unavoidable impacts would be completely avoided, the reduced degree of construction, excavation, and reduced building size would reduce the potential to encounter native soils that could contain cultural resources and reduce the emissions of criteria air pollutants and GHGs generated by the construction and operation of the project.

2.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A Notice of Preparation (NOP) was distributed for the 1215 O Street Office Building Project on December 14, 2016, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. A public scoping meeting was held on January 12, 2017. The purpose of the NOP and the scoping meeting was to provide notification that an EIR for was being prepared for the project and to solicit input on the scope and content of the environmental document. The NOP and responses to the NOP are included in Appendix A of this DEIR. Key concerns and issues that were expressed during the scoping process included the following:

- construction noise impacts,
- evaluation of traffic impacts and access to transit and bicycle facilities,
- support for solar and energy efficiency,
- capacity and condition of City utility infrastructure,
- water quality control measures, and
- outreach to and consultation with Native American tribes.

These issues are each addressed in this DEIR. With the exception of construction noise impacts, any impacts related to these issues are either identified as less than significant, or less than significant after mitigation. Because the potential exists for nighttime construction noise to result in a significant and unavoidable impact, this issue remains an area of controversy.
### Table 2-1 Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impacts</th>
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<tr>
<td><strong>4.2 Land Use</strong></td>
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<tr>
<td>Impact 4.2-1: Potential to divide an established community. The 1215 O Street Office Building Project would replace the vacant CDFA Annex office building with a new 11-story office building with a floor area of 300,000 to 350,000 GSF, reactivating an under-used State-owned site in Sacramento’s CBD. The proposed office building is consistent with the existing pattern of urban land uses downtown and southwest of the State Capitol. No part of the project would extend beyond the existing urban boundaries, and no part of the project would create a barrier within the established community. The project would have no impact related to dividing an established community.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>Impact 4.2-2: Consistency with land-use plans and documents. The 1215 O Street Office Building Project would be consistent with the objectives and purposes of the Capitol Area Plan, the 2015 Capitol Area Plan Progress Report, Governor Brown’s 2016 Five-Year Infrastructure Plan, and with local land use plans. Replacement of the vacant CDFA Annex with a new, larger State office building would not result in any conflicts with environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>4.3 Population, Employment, and Housing</strong></td>
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<td>Impact 4.3-1: Population growth and housing demand during construction. Development of the 1215 O Street Office Building Project would generate a temporary increase in employment in the city of up to 225 construction jobs during the peak construction period. The number of existing construction personnel in the region is sufficient to meet the demand associated with the project; therefore, this temporary increase in employment would not generate any substantial new population growth in the area or generate the need for substantial additional housing for construction workers. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>Impact 4.3-2: Increased employment opportunities and housing demand from project development. The 1215 O Street Office Building Project would facilitate relocation of about 1,000 existing State employees in the Bateson Building. In addition, the new O Street office building would support an additional 200 new employees, including approximately 12 new employees in the proposed ground-level food court and a projected increase in State employees. The net increase in employment of 200 employees would be insignificant compared to citywide employment of 213,700 jobs in 2015. The 200 new jobs would be</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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NI = No impact, LTS = Less than significant, PS = Potentially significant, S = Significant, SU = Significant and unavoidable
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<tr>
<td>filled by local residents and these jobs are consistent with State and local plans for job growth. The project would not generate new employment that would induce population growth such that there would additional demand for housing that could not be met by existing supply or by planned housing development. This impact is less than significant.</td>
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</table>

4.4 Transportation and Circulation

Impact 4.4-1: Impacts to intersection operations. Implementation of the project would redistribute traffic of existing employees who would be relocated to the O Street Building from other downtown locations, and would add a modest number of AM and PM peak hour trips from new employees. Based on the traffic modeling and analysis, all study area intersections would operate at acceptable levels of service, with the exception of W Street/16th Street/US 50 Westbound Off-Ramp, which would continue to operate at LOS D in the PM peak hour as it does under existing conditions. With the redistribution of existing traffic, implementation of the project would slightly reduce delay at this location in the PM peak hour. Because the project would not cause any intersection operations to degrade to unacceptable levels, this would be a less-than-significant impact.

Impact 4.4-2: Impacts to freeway off-ramp queuing. Implementation of the proposed project would result in either no change or minor increase (and even a slight decrease at one location in the PM peak hour) in queue lengths at study area freeway off-ramps. The project would not cause queuing at any freeway off-ramps to approach or extend beyond its storage capacity. Therefore, this would be a less-than-significant impact.

Impact 4.4-3: Impacts to vehicle miles traveled. The proposed project would not increase daily VMT per service population in the study area. Therefore, this would be a less-than-significant impact.

Impact 4.4-4: Impacts to transit. Implementation of the proposed project would add relatively few new (versus relocated) employees, which would, in turn, generate only modest demand for additional transit trips: 27 additional transit trips during the AM peak hour and 25 additional transit trips during the PM peak hour. Because the project area is served by multiple and substantial transit options, the small increase in demand can be easily accommodated by existing available transit. Adequate access to transit would be available to project employees and the additional transit trips would not adversely affect public transit operations. Therefore, this would be a less-than-significant impact.

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### Table 2-1 Summary of Impacts and Mitigation Measures

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<tr>
<td><strong>Impact 4.4-5: Impacts to bicycle facilities.</strong> The proposed project would result in a relatively minor increase in new employees which, based on mode-split assumptions would generate 17 additional bicycle trips per day. The downtown area offers numerous bicycle facilities. Project employees would have adequate access to bicycle facilities, and the additional bicycle trips would not adversely affect existing or planned bicycle facilities. Therefore, this would be a less-than-significant impact.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.4-6: Impacts to pedestrian facilities.</strong> Pedestrian facilities in the vicinity of the proposed project are adequate to accommodate the proposed project. Additional employees would have adequate access to pedestrian facilities and would not adversely affect existing or planned facilities. Therefore, this would be a less-than-significant impact.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.4-7: Construction related impacts.</strong> Project construction may require restricting or redirecting pedestrian, bicycle, and vehicular movements at locations around the site to accommodate demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours. Construction traffic impacts would be localized and temporary; ample staging area would be available to the construction contractor reducing the need for use of streets and other active areas; and DGS or its contractor would prepare and implement a Construction Traffic Management Plan to reduce the temporary impacts to the degree feasible. For these reasons, construction traffic impacts would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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### 4.5 Utilities and Infrastructure

| Impact 4.5-1: Increased demand for water supply. The total new water demand for the 1215 O Street Office Building Project would be 24 afy (21,426 gpd), increasing the overall demand on the City’s water supply by 0.03 percent. When the new office building is ready for occupancy in 2021, the estimated water demand would represent 0.02 percent of the City’s surplus water supply (152,688 afy). The City would have adequate water supply to serve the project. The proposed project would also reduce its water demand through project design and implementation of water conservation measures that would exceed Title 24 requirements and meet LEED v4 Silver standards. This impact would be less than significant. | LTS | No mitigation is required. | LTS |
| Impact 4.5-2: Effects on water conveyance and treatment infrastructure. The 1215 O Street Office Building Project would include a new water service connection to the water mains in either Neighbors Alley or 12th Street, and fire water service would connect to the | PS | Mitigation Measure 4.5-2: Improve water supply infrastructure capacity. DGS shall complete a water study to identify the best location for the project to connect to the City’s water supply infrastructure. Potential locations include: the 12-inch main in 12th Street, the 6-inch main | LTS |

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<tr>
<td>12-inch main in 12th Street. The existing water delivery infrastructure at the project site includes one water main that could be insufficient to supply water to the 1215 O Street Office Building Project. The City’s water treatment plants have sufficient capacity to serve the water treatment demand for the project. Because one of the potential water mains would be insufficient to serve the project, this impact is potentially significant.</td>
<td></td>
<td>in Neighbors Alley, and the 24-inch main in 13th Street. The water supply infrastructure must meet the project’s estimated demand for 24 afy of water, and meet fire flow pressure requirements of 6,000 gpm (with up to a 75 percent reduction in this standard if sprinklers are installed). If water infrastructure is determined to be insufficient, the water study shall identify, and DGS shall implement, the improvements necessary to meet the project’s demands and fire flow requirements. Improvements could include replacing the 6-inch cast-iron water main in Neighbors Alley with an 8-inch or 12-inch main. The water study shall be submitted to the City of Sacramento Department of Utilities prior to approval for connection to the City’s water supply infrastructure. Additionally, the Sacramento Fire Department shall conduct a fire flow test prior to issuance of an occupancy permit for the building to ensure the water supply infrastructure for the building meets fire flow standards.</td>
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<td><strong>Impact 4.5-3: Effects on the combined sewer system conveyance capacity.</strong> Although stormwater runoff would not increase over existing conditions, wastewater generated by the 1215 O Street Office Building Project would exceed the capacity of the City’s combined sewer system during large storm events. Although the existing combined sewer system conveyance pipelines are insufficient to serve the project during large storm events, the project would pay the Combined Sewer Development Fee for the project-related wastewater contributions to the CSS. The fee would be used towards improvements to the CSS planned by the City. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<td><strong>Impact 4.5-4: Effects to CSS treatment capacity.</strong> Wastewater generated by the 1215 O Street Office Building Project combined with stormwater generated from large storm events would, on rare occasions (less than once per year in the past 10 years), exceed the capacity of the CWTP and Pioneer Reservoir treatment capacity. Although the City has an operating agreement with Regional San that allows conveyance of up to 60 mgd to that facility, project-generated wastewater flows combined with stormwater from significant storm events could exceed the capacity of the combined system. However, exceedance of treatment capacity of the combined system is a rare event, the City is implementing the Combined Sewer System Improvement Plan to make improvements throughout the system, and the project would pay the Combined Sewer Development Fee for their wastewater contributions to the CSS. The addition of wastewater flows from the 1215 O Street Office Building Project would therefore be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td>Impact 4.5-5: Increased demand for electrical service. The 1215 O Street Office Building Project would include a 2 to 2.5 million kilowatt hours per year photovoltaic solar energy system (70,000 square feet of solar panels) to provide electricity to the new building and support the project goal of zero net energy. Electrical-infrastructure improvements would be necessary and constructed as part of the project. SMUD has also confirmed that it has adequate capacity and infrastructure to serve the project. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>Impact 4.5-6: Increased demand for natural gas. The State’s Central Plant would provide heating and cooling for the 1215 O Street Office Building Project. Connections to gas lines located in O Street for the new building would be required to provide natural gas for the food court in the new building. The Central Plant currently has natural gas connections that would be used for heating purposes for the new office building. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<td>Impact 4.5-7: Result in inefficient and wasteful consumption of energy. The project would increase electricity consumption at the site relative to existing conditions. However, electricity would be generated onsite photovoltaic solar panels and any additional energy from SMUD (e.g., during nighttime hours) would be from 100 percent renewable resources. While the project would increase the overall energy demand at the project site, the project would reduce per capita energy use compared to other similar projects through implementation of energy efficiency measures that would meet LEED v4 Silver standards and would exceed Title 24 requirements, thereby providing an energy-efficient office and commercial project. The project would not result in an inefficient or wasteful consumption of energy. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td>Impact 4.5-8: Potential interruption of utility service during construction. The State would coordinate with utility providers and the City throughout the 1215 O Street Office Building Project design, demolition, and construction process, as necessary, to ensure minimal disruption of utility services and minimal inconvenience to existing utility customers. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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### 4.6 Air Quality

| Impact 4.6-1: Construction emissions of criteria air pollutants and precursors (ROG, NOx, PM10, and PM2.5). Construction of the 1215 O Street Office Building Project would result in project-generated emissions of ROG, NOx, PM10, and PM2.5 from demolition, site | S | Mitigation Measure 4.6-1: Construction-related exhaust emission controls. To reduce construction-related exhaust emissions, and thus emissions of NOx, DGS shall ensure that the following measures are adhered to by the Design-Build Team during all construction | LTS |

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<td>Preparation (e.g., excavation, clearing), off-road equipment, material and equipment delivery trips, worker commute trips, and other miscellaneous activities (e.g., asphalt paving, application of architectural coatings). Construction activities would not result in daily emissions of ROG, PM_{10}, or PM_{2.5} and annual emissions of PM_{10} and PM_{2.5} that would exceed the respective SMAQMD thresholds. However, daily emissions of NO\textsubscript{x} would exceed SMAQMD's threshold of 85 lb/day. Therefore, construction-generated emissions of NO\textsubscript{x} would contribute to existing nonattainment status of the SVAB for ozone. This impact would be significant.</td>
<td>Exhaust Emissions Reduction Measures</td>
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<td>Minimize idling time 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]. Provide clear signage that posts this requirement for workers at the entrances to the site.</td>
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<td>Maintain all construction equipment in proper working condition according to manufacturer's specifications. Before delivery to the project site, the equipment must be checked by a certified mechanic and determined to be running in proper condition.</td>
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<td>The Design-Build Team shall submit to DGS and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The inventory shall also identify the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.</td>
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<td>The Design-Build Team shall provide a plan for approval by DGS and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NO\textsubscript{X} reduction compared to the most recent ARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.</td>
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Impact 4.6-2: Long-term operational emissions of ROG, NO\textsubscript{x}, PM\textsubscript{10}, and PM\textsubscript{2.5}.

Implementation of the 1215 O Street Office Building Project would not result in long-term operational emissions of ROG, NO\textsubscript{x}, PM\textsubscript{10}, and PM\textsubscript{2.5} that exceed SMAQMD’s thresholds of significance (65 lb/day for ROG, 65 lb/day for NO\textsubscript{x}, 80 lb/day for PM\textsubscript{10}, and 82 lb/day for PM\textsubscript{2.5}).

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<tr>
<td>PM$<em>{2.5}$). Therefore, operational-related emissions would not conflict with the air quality planning efforts or conflict substantially with the nonattainment status of Sacramento County with respect to ozone and PM$</em>{2.5}$. This impact would be less than significant.</td>
<td></td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.6-3: Mobile-source CO concentrations</strong>, Long-term operation-related local mobile-source emissions of CO generated by the implementation of the 1215 O Street Office Building Project would not result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm. Therefore, project operation would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial CO. As a result, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.6-4: Exposure of sensitive receptors to TACs</strong>, Construction- and operation-related emissions of TACs associated with the implementation of 1215 O Street Building Project would not result in an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 at existing or future sensitive receptors. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.6-5: Exposure of sensitive receptors to odors</strong>, The project would introduce new odor sources into the area (e.g., temporary diesel exhaust emissions during construction and delivery truck associated with commercial land uses). Construction and long-term operation of the project would not result in the exposure of sensitive receptors to excessive odors. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>4.7 Greenhouse Gas Emissions and Climate Change</strong></td>
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<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.7-1: Project-generated GHG emissions</strong>, The level of annual GHG emissions associated with the proposed project, including amortized construction-related emissions, would be approximately 3,797 MTCO$_2$e/year. Both construction and operation of the proposed project would include GHG efficiency measures consistent with all State and local policies and regulations for the purpose of reducing GHG emissions and enabling achievement of the statewide reduction targets of AB 32 of 2006 and SB 32 and AB 197 of 2016. The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
</tbody>
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<tr>
<td>Impact 4.7-2: Impacts of climate change on the project. Climate change is expected to result in a variety of effects that would influence conditions in the Sacramento area. However, the proposed project includes various features that would increase resiliency to the effects of climate change. These features would reduce the extent and severity of climate change-related impacts to the project. For these reasons, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
</tbody>
</table>

4.8 Noise

Impact 4.8-1: Short-term construction-generated noise levels. Proposed construction areas are located in close proximity to existing noise-sensitive receptors. Most noise-generating construction activity would be performed during daytime hours, when construction noise is exempt from noise standards by the City of Sacramento Noise Control Ordinance. However, it is possible that construction activity may be required during the non-exempt evening and nighttime hours (6 p.m. to 7 a.m., Monday through Saturday, and between 6 p.m. and 9 a.m. on Sunday) for activities such as large continuous concrete pours. Thus, potential nighttime construction activities could expose nearby noise-sensitive receptors to noise levels that exceed City of Sacramento Noise Control Ordinance nighttime noise standards. This impact would be significant.

Mitigation Measure 4.8-1a: Implement construction-noise reduction measures. To minimize noise levels during construction activities, the design-build team shall comply with the following measures during all daytime and nighttime construction work:

- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- Where available and feasible, construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dBA over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels.
- Install a temporary solid barrier (e.g., plywood) around the construction site and staging area. Also, as feasible, locate trailers and materials such that they would serve as noise barriers to protect off-site noise-sensitive receptors from noise generated by on-site construction activity.
- Designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.

Mitigation Measure 4.8-1b: Implement additional measures to reduce exposure to construction noise reduction during noise-sensitive time periods. For all outdoor construction activity that is to take place outside of the City of Sacramento construction noise exception timeframes (i.e., 7:00 a.m. and 6:00 p.m., Monday through Saturday, and...
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<tr>
<td>Generation of excessive short-term vibration levels. If pile driving is</td>
<td>S</td>
<td>Mitigation Measure 4.8-2a: Implement measures to reduce ground vibration. To reduce</td>
<td>LTS</td>
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<td>performed during project construction, it could expose existing nearby</td>
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<td>vibration and noise impacts from construction activities, DGS shall require the</td>
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<td>sensitive receptors and structures to levels of ground vibration that</td>
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<td>design-build team to implement the following measures:</td>
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<td>could result in and/or structural damage</td>
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<td>▶ Consistent with Section 8.68.080 Exceptions of the City Noise Control Ordinance,</td>
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<td>obtain an exception to Article II, Noise Standards for nighttime construction</td>
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<td>through the director of building inspections. An exception may be obtained for work</td>
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<td>to be performed outside the exempt hours in the case of urgent necessity and in the</td>
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<td>interest of public health and welfare for a period not to exceed three days.</td>
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<td>Application for this exemption may be made in conjunction with the application for</td>
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<td>the work permit or during progress of the work.</td>
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<td>▶ Install temporary noise curtains as close as possible to the noise-generating</td>
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<td>activity such that the curtains obstruct the direct line of sight between the</td>
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<td>noise-generating construction activity and the nearby sensitive receptors. Temporary</td>
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<td>noise curtains shall consist of durable, flexible composite material featuring a</td>
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<td>noise barrier layer bounded to sound-absorptive material on one side. The noise</td>
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<td>barrier layer shall consist of rugged, impervious, material with a surface weight of</td>
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<td>at least one pound per square foot.</td>
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<td>▶ Noise-reducing enclosures and techniques shall be used around stationary noise-</td>
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<td>generating equipment (e.g., concrete mixers, generators, compressors).</td>
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<td>▶ Operate heavy-duty construction equipment at the lowest operating power possible.</td>
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<td>▶ Provide a minimum of one week of advanced notice to owners of all residential</td>
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<td>located within 350 feet of where nighttime construction activity would take place.</td>
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<td>This noticing shall inform the recipients of when and where nighttime construction</td>
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<td>would occur and the types of measures being implemented to lessen the impact at</td>
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<td>potentially affected receptors. This noticing shall also provide the contact</td>
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<td>information for the designated disturbance coordinator.</td>
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<td>▶ Offer hotel accommodations to residents within 350 ft of the project site who</td>
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<td>would temporarily be exposed to nighttime interior noise levels that exceed the</td>
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<td>interior noise standard of 45 L_{eq}. Alternative overnight accommodations should</td>
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<td>be in a location that is not adversely affected by nighttime construction noise.</td>
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<tbody>
<tr>
<td>and/or human disturbance. This impact would be significant.</td>
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<td>- To the extent feasible, earthmoving and ground-impacting operations shall be</td>
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<td>phased so as not to occur simultaneously in areas close to sensitive receptors. The</td>
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<td>total vibration level produced could be significantly less when each vibration source</td>
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<td>is operated at separate times.</td>
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<td>- Where there is flexibility in the location of use of heavy-duty construction</td>
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<td>equipment, or impact equipment such as jackhammers, the equipment shall be</td>
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<td>operated as far away from vibration-sensitive sites as reasonably possible.</td>
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<tr>
<td>Mitigation Measure 4.8-2b: Develop and implement a vibration control plan.</td>
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<td>DGS shall require the design-build team to implement the following measures when</td>
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<td>performing pile driving.</td>
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<td>- Pile driving activities shall be limited to the daytime hours between 7:00 a.m.</td>
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<td>and 6:00 p.m. Monday through Saturday and between 9:00 a.m. and 6:00 p.m. on</td>
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<td>Sunday. No nighttime pile driving will be permitted.</td>
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<td>- A vibration control plan shall be developed by the design-build team to be</td>
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<td>submitted to and approved by DGS prior to initiating any pile driving activities.</td>
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<td>Applicable elements of the plan will be implemented before, during, and after pile</td>
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<td>driving activity. The plan shall consider all potential vibration-inducing activities</td>
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<td>that would occur and require implementation of sufficient measures to ensure that</td>
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<td>nearby sensitive receptors are not exposed to vibration levels in excess of</td>
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<td>applicable thresholds. Items that shall be addressed in the plan include, but are</td>
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<td>not limited to, the following:</td>
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<td>- Identification that the maximum allowable vibration levels at nearby buildings</td>
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<td>consist of Caltrans's recommended standards with respect to the prevention of</td>
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<td>architectural building damage: 0.2 in/sec PPV for normal dwelling houses, 0.1</td>
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<td>in/sec PPV for normal buildings. For buildings that are occupied at the time of</td>
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<td>pile driving, FTA's maximum-acceptable-vibration standard with respect to human</td>
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<td>response, 80 VdB, will also not be exceeded.</td>
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<td>- Pre-construction surveys shall be conducted to identify any pre-existing structural</td>
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<td>damage to nearby buildings that may be affected by project generated vibration.</td>
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<td>- Identification of minimum setback requirements for different types of ground</td>
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<td>vibration-producing activities (e.g., pile driving) for the purpose of preventing</td>
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<td>damage to nearby structures and preventing negative human response shall be</td>
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<td>established based on the proposed construction activities and locations and the</td>
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<td>maximum allowable vibration levels identified above. Factors to be considered</td>
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| **Impact 4.8-3: Long-term (operational) traffic-generated noise levels** | LTS                            | Mitigation Measure 4.8-3: Reduce exposure of existing sensitive receptors to noise generated by loading dock activity. The project applicant shall implement one of the following measures to reduce the effect of noise levels generated by on-site stationary noise sources:  
  - Loading docks shall be located and designed such that noise generated by activity at the loading dock would not exceed the City’s stationary noise source criteria established in this analysis (i.e., interior nighttime [10:00 p.m. to 7:00 a.m.] standards of $55 \text{ L}_{\text{eq}}$) at any existing noise sensitive receptor. As part of the design-build process, a specialized noise study will be completed to evaluate the specific design and ensure compliance with City of Sacramento noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as possible from noise sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. Final design, location, and orientation shall be dictated by findings in the noise study; or  
  - Operation of loading docks shall not be permitted between the hours of 10:00 p.m. and 7:00 a.m., 7 days a week. | LTS                                                        |
| **Impact 4.8-4: Long-term operational (non-transportation) noise levels** | S                              | Mitigation Measure 4.8-4: Reduce exposure of existing sensitive receptors to noise generated by loading dock activity. The project applicant shall implement one of the following measures to reduce the effect of noise levels generated by on-site stationary noise sources:  
  - Loading docks shall be located and designed such that noise generated by activity at the loading dock would not exceed the City’s stationary noise source criteria established in this analysis (i.e., interior nighttime [10:00 p.m. to 7:00 a.m.] standards of $55 \text{ L}_{\text{eq}}$) at any existing noise sensitive receptor. As part of the design-build process, a specialized noise study will be completed to evaluate the specific design and ensure compliance with City of Sacramento noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as possible from noise sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. Final design, location, and orientation shall be dictated by findings in the noise study; or  
  - Operation of loading docks shall not be permitted between the hours of 10:00 p.m. and 7:00 a.m., 7 days a week. | LTS                                                        |

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<td>Impact 4.8-5: Compatibility of project with on-site noise levels. The project office building would not be exposed to interior noise levels that exceed the City of Sacramento 45 $L_{eq}$ standard. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>Impact 4.8-6: Compatibility of land uses with on-site vibration levels. SacRT light rail passing along 12th Street and O Street in the vicinity of the project may generate groundborne vibration levels that are perceptible on the project site. However, light rail operations would not expose the project to levels of ground vibration that exceed Caltrans’s standard of 0.1 in/sec PPV with respect to structural damage and FTA’s standard of 75 VdB with respect to human disturbance. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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4.9 Geology and Soils

Impact 4.9-1: Seismic hazards. The project site is not located on any known faults or traces of active faults. Surface fault rupture, therefore, is extremely unlikely. Construction of the proposed facilities would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by ground shaking from earthquakes and to minimize secondary seismic hazards (i.e., ground lurching, liquefaction). Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of this project alternative would not result in exposure of people or structures to substantial adverse effects related to seismic hazards, nor would the project have the potential to exacerbate these hazards. This impact would be less than significant.

Impact 4.9-2: Liquefaction. The project site is located in an area of potential liquefaction based on the findings of the geotechnical investigation performed by Terracon and from previous investigations in the area. Construction of the proposed facilities would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by liquefaction. Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of this project alternative would not result in exposure of people or structures to substantial adverse effects related to liquefaction. This impact would be less than significant.

Impact 4.9-3: Expansive soils. The project site is located in an area where native soils may still exist, and these soil types exhibit a range in shrink-swell potential from low to high. However, potentially expansive soils were not identified in a geotechnical investigation beneath the project site. Through conformance with the CBC and implementation of

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<td>applicable measures (if needed) to address shrink-swell soils, development of the project would not result in exposure of people or structures to substantial adverse effects from these soil types. This impact would be less than significant.</td>
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<td><strong>4.10 Hydrology and Water Quality</strong></td>
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<tr>
<td><strong>Impact 4.10-1: Construction-related water quality impacts.</strong> Project construction would require ground-disturbing activities, which could lead to erosion and sedimentation, and possible exposure of the groundwater table. Stormwater or groundwater contact with construction materials could lead to degradation of water quality. Compliance with existing regulations relating to stormwater controls, including adherence to SWPPP BMPs and implementation of relevant design standards in the Stormwater Quality Design Manual for the Sacramento Region would result in a less-than-significant water quality impact.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>4.11 Hazardous Materials and Public Health</strong></td>
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<tr>
<td><strong>Impact 4.11-1: Storage, use, or transport of hazardous materials.</strong> Construction and operation of the 1215 O Street Office Building Project would involve the storage, use, and transport of hazardous materials at the project site. However, use of hazardous materials would be in compliance with local, State, and federal regulations. Therefore, adverse impacts related to the creation of significant hazards to the public through routine transport, storage, use, disposal, and risk of upset would not occur. This impact is considered less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.11-2: Exposure of construction workers and others to hazardous materials.</strong> According to the Phase I ESA prepared for the project site, there are no records in various hazardous materials databases of past soil or groundwater contamination at the site. Grading, excavation, and other soil disturbance at the project site would not represent a significant risk as no records of past contamination were identified. Demolition of the vacant CDFA Annex building could result in the exposure of construction workers to hazardous materials, including asbestos, lead-based paint, and PCB known to be present at the building. Contractors and the State would be required to comply with federal, State, and local regulations intended to protect workers and the public from exposure to these types of hazardous materials and related to the remediation and disposal of contaminated materials. Compliance with these regulations would prevent the proposed project from resulting in a significant risk to construction workers or the public. This impact is considered less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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### Table 2-1 Summary of Impacts and Mitigation Measures

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<tr>
<th>Impacts</th>
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<tbody>
<tr>
<td><strong>Impact 4.11-3:</strong> Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>4.12 Cultural and Tribal Cultural Resources</strong></td>
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<tr>
<td><strong>Impact 4.12-1:</strong> Potential for Impacts on Significant Historic Archaeological Resources. Construction at 1215 O Street would result in the expansion of the existing facilities on the 1200 block of O Street. Although the excavations required to build the Department of Motor Vehicles Building in the 1930s, and the expansion of the Department of Food and Agriculture Building in the 1950’s likely removed any significant historic archaeological features, there are a few areas that may yet be undisturbed, thus potentially retaining significant historic archaeological resources. Because earthmoving activities could potentially affect significant historic archaeological resources within these undisturbed areas, this impact is considered potentially significant.</td>
<td>PS</td>
<td>Mitigation Measure 4.12-1: Monitoring and Response Measures for Potential Unknown Historic Archaeological Resources. Where ground disturbing activities occur in native soils, or there is no evidence of extensive past ground disturbances, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists will monitor ground- disturbing activities. If evidence of any historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can access the significance of the find. If after evaluation, a resource is considered significant, all preservation options shall be considered as required by CEQA, including possible data recovery, mapping, capping, or avoidance of the resource. If artifacts are recovered from significant historic archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results, and distributes this information to the public.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.12-2:</strong> Potential for Impacts on Significant Prehistoric Archeological Resources and Tribal Cultural Resources. There are no known significant prehistoric archeological resources or tribal cultural resources on the project site. However, earthmoving activities associated with project construction could disturb or destroy previously undiscovered significant subsurface prehistoric archaeological resources and/or tribal cultural resources. This impact is considered potentially significant.</td>
<td>PS</td>
<td>Mitigation Measure 4.12-2: Monitoring and Response Measures for Potential Unknown Prehistoric Archaeological Resources and Tribal Cultural Resources. This mitigation measure expands on the actions included in Mitigation Measure 4.12-1 to also address encountering unknown prehistoric cultural resources and tribal cultural resources. Where ground disturbing activities occur in native soils, or there is no evidence of extensive past ground disturbances, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists will monitor ground- disturbing activities. Native American representative(s) will be invited to observe any excavations. If evidence of any prehistoric subsurface archaeological features or deposits are discovered during</td>
<td>LTS</td>
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<tbody>
<tr>
<td><strong>Impact 4.12-3: Potential discovery of human remains.</strong> There are no known past cemeteries or burials on the project site. However, earthmoving activities associated with project construction could disturb or destroy previously undiscovered human remains. This impact is considered potentially significant.</td>
<td>PS</td>
<td>Mitigation Measure 4.12-3: Response protocol in case human remains are uncovered. Consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act, if suspected human remains are found during project construction, all work shall be halted in the immediate area, and the county coroner shall be notified to determine the nature of the remains. The coroner shall examine all discoveries of suspected human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5(b)). If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050(c)). The NAHC shall then assign an MLD to serve as the main point of Native American contact and consultation. Following the coroner’s findings, the MLD, in consultation with the State, shall determine the ultimate treatment and disposition of the remains.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.12-4: Potential for impacts on historic architectural resources.</strong> Demolition of the CDFA Annex Building would cause a substantial adverse change in the significance of historic architectural resources. This would result in a significant impact on the environment as described in State CEQA Guideline 15064.5(b)(1).</td>
<td>S</td>
<td>Mitigation Measure 4.12-4: Preparation of a salvage report and documenting the historical resource. A precedent for mitigation of the loss of a contributing feature to the California State Government Building Complex historic district was set in 1998-1999 for the demolition of the Legislative Annex Building, formerly located at 1021 O Street, and very similar to the CDFA Annex Building. The mitigation included a salvage report identifying architectural features of the building that could be salvaged and reused in the immediate area. The SHPO, City of Sacramento, and local preservation groups would be consulted in development of the salvage report and plan. In addition, the project applicant will arrange for the preparation of historical resource reports.</td>
<td>SU</td>
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<tr>
<td>4.13 Biological Resources</td>
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| Impact 4.13-1: Conflict with any local applicable policies protecting biological resources. Implementation of the project could result in the direct loss or temporary disturbance of trees protected under the City of Sacramento Tree Preservation Ordinance. This impact would be potentially significant. | PS | Mitigation Measure 4.13-1: Remove and replace trees consistent with the City of Sacramento Tree Preservation Ordinance. Prior to construction, DGS will complete a survey of trees at the project site and prepare and submit a detailed tree removal, protection, replanting, and replacement plan to the City arborist. The tree removal plan will be developed by a certified arborist. The plan shall include the following elements:  
- The number, location, species, health, and sizes of all trees to be removed, relocated, and/or replaced. This information will also be provided on a map/design drawing to be included in the project plans.  
- Planting techniques, necessary maintenance regime, success criteria, and a monitoring program for all trees planted on, or retained on the project site. | LTS |
| 4.14 Public Services | | | |
| Impact 4.14-1: Increased demand for fire protection facilities, equipment, and services. The 1215 0 Street Office Building Project would result in an increased demand for fire protection facilities, equipment, and services. SFD would have adequate facilities and equipment to serve the project, would participate in the environmental review process, and would recommend fire prevention measures. In addition, the project would meet the minimum | LTS | No mitigation is required. | LTS |

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<td>necessary fire protection and safety requirements identified in applicable codes and regulations. This impact would be less than significant.</td>
<td></td>
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<tr>
<td><strong>Impact 4.14-2: Increased demand for fire flow.</strong> The 1215 O Street Office Building Project would include the development of an office building up to 150 feet tall and ground floor commercial uses that would require adequate available water flow for fire suppression (fire flow). Because the project incorporates the necessary fire protection infrastructure into the building to meet this need, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.14-3: Increased demand for police protection facilities, services, and equipment.</strong> Implementation of the 1215 O Street Office Building Project would result in an increase in the demand for police services, which could result in a need for additional police officers, support staff, and related facilities. However, because the project would consolidate existing State offices and because CHP and SPD share a concurrent jurisdictional relationship for this service area, existing police services would be adequate to serve the 1215 O Street Office Building Project. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.14-4: Increased demand for school services.</strong> Public schools that serve the project site include William Land Elementary School, Sutter Middle School, and C.K. McClatchy High School. The proposed project includes replacement of an existing office building with a new office building (including ground-level commercial uses); the project does not include residential uses that would create a more direct demand for public schools. Most of the employees that would occupy the new office building are current State employees that work in the immediate project vicinity. It is anticipated that new employees would either be current residents of the City of Sacramento or would commute from other areas within Sacramento County, rather than relocating to Sacramento from a distant city or another state. For these reasons, the project would be unlikely to result in substantial additional students within SCUSD facilities and the project would not result in any substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities the construction of which could cause significant environmental impacts. This impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.14-5: Increased demand for recreational facilities.</strong> The 1215 O Street Office Building Project would add about 200 employees in the immediate project vicinity. With the addition of this small number of employees, daytime use of nearby parks by employees associated with the proposed project would not substantially increase above the current level of use. Because construction at or expansion of existing parks and recreational facilities the construction of which could cause significant environmental impacts. This impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<tr>
<td>facilities would not be necessary as a result of this incremental increase in park/recreational facility use, this impact is considered less than significant.</td>
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<tr>
<td>Impact 4.14-6: Increased generation of solid waste beyond the capacity of existing landfills. The 1215 O Street Office Building Project would generate up to 50,000 cubic yards of C&amp;D waste during project construction, which would be reduced to an estimated 17,500 cubic yards after meeting recycling and/or salvaging requirements. The increase in employees generated by the project would result in an estimated 0.13 tons/day and approximately 47 tons/year (62 cubic yards/year) of solid waste generated during project operations after meeting recycling requirements. Multiple landfills are located throughout the region and have adequate capacity for disposal of solid waste generated by construction and operation of the project. Therefore, this impact is considered less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>4.15 Aesthetics, Light, and Glare</td>
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<tr>
<td>Impact 4.15-1: Substantially degrade existing visual character or quality. The 1215 O Street Office Building Project would replace the existing four-story CDFA Annex with a new office building, with a maximum height of 150 feet. The project is located within an urban setting in downtown Sacramento. The site design and building construction materials and finishes would be consistent with high-quality civic buildings in an existing prominent urban setting. Because the proposed project is located on a site with an existing office building and surface parking lot surrounded by a mix of low-rise, mid-rise, and high-rise buildings, the local visual character, as experienced by viewer groups in the area, would not be substantially altered. The replacement of the CDFA Annex at 1215 O Street and installation of solar panels on the rooftop and south face of that building and a solar array over the adjacent CalVet surface parking lot would not result in the substantial degradation of the existing visual character or quality of the site and its surroundings. Therefore, this impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>Impact 4.15-2: Conflict with the provisions of the Capitol View Protection Act. The Capitol View Protection Act was enacted to maintain the visual prominence of the State Capitol. The portion of the 1215 O Street Office Building Project site where the CDFA Annex is located is within the zone that limits building heights to 150 feet, and the portion that includes the CalVet surface parking lot is within the zone with a 250-foot height limit. The height of the proposed office building would be a maximum of 150 feet, consistent with the established height limit. The one-to-two story height of the proposed solar array above the surface parking lot would be well below the 250-foot height limit. Therefore, this impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td><strong>Impact 4.15-3: Introduce new sources of light and glare that would adversely affect day or nighttime views.</strong> The 1215 O Street Office Building Project would involve new lighting for the office building and the potential for new reflective surfaces due to the proposed solar array on the rooftop and south face of the office building and over the CalVet surface parking lot. The proposed exterior building finishes would not include materials that are highly reflective or that would produce substantial glare. Project-related light sources would be similar to the current lighting in downtown Sacramento in amount and intensity of light. In addition, DGS plans to implement a lighting plan that is consistent with the U.S. Green Building Council’s Leadership in Energy and Environmental Design version 4 (LEED v4) Green Building Rating System, which would reduce both the generation of exterior light and the potential for light trespass to affect off-site areas. DGS would also be required to meet the lighting and glare standards contained in the CALGreen Code that also limit light and glare for State-owned buildings. For these reasons, project implementation would not create a new source of substantial light that would adversely affect day or nighttime views in the area. The reflectivity of solar panels is generally lower than that of other nearby building materials (such as standard glass or steel), and the proposed solar panels would be oriented to the south and angled towards the sun. The rooftop solar panels would be well above any buildings to the south and would not produce glare on these structures. The solar array above the surface parking lot would likely not be high enough to reflect on buildings to the south, but could shine into north facing windows on the apartment buildings immediately south of the surface parking lot. Therefore, the proposed project could introduce new sources of light and glare that would adversely affect daytime views of adjacent residents. Therefore, this impact is potentially significant.</td>
<td>PS</td>
<td>Mitigation Measure 4.15-3 Direct solar panel reflection away from north facing windows on the apartment building immediately south of the CalVet surface parking lot. DGS shall ensure that adjacent residents will not be exposed to daytime glare by designing and constructing the solar array above the CalVet surface parking lot in such a manner that the panels do not reflect sunlight into north facing windows of the apartments immediately south of the parking lot.</td>
<td>LTS</td>
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<tr>
<td><strong>Impact 4.15-4: Potential for structures to cast shadows on shadow-sensitive uses.</strong> The proposed office building would be a maximum of 150-feet tall, which could cast shadows over shadow-sensitive nearby residences during various parts of the day, consistent with other mid- to high-rise buildings in the project vicinity. However, shadows generated by the project would not fall on any particular shadow-sensitive areas for a substantial portion of the day. The mass of the new office building would not be sufficient to shade public areas for an extended period. The solar array over the CalVet surface parking lot would provide shade and shadows on the parking lot, which is intended, but the one-to-two-story height of the panels would not result in shading of nearby residences. This impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<tr>
<td>Land Use</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Greater</td>
<td>Similar</td>
<td>Similar</td>
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<tr>
<td>Population, Employment, and Housing</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Similar</td>
<td>Less</td>
<td>Less</td>
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<tr>
<td>Transportation and Circulation</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
<td>Greater</td>
</tr>
<tr>
<td>Utilities and Infrastructure</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
<td>Greater</td>
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<tr>
<td>Air Quality</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Less</td>
<td>Greater</td>
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<tr>
<td>Greenhouse Gas Emissions and Climate Change</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Less</td>
<td>Greater</td>
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<tr>
<td>Noise</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
<td>Similar</td>
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<tr>
<td>Geology and Soils</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Similar</td>
<td>Similar</td>
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<tr>
<td>Hydrology and Water Quality</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Similar</td>
<td>Similar</td>
<td>Greater</td>
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<tr>
<td>Hazards and Hazardous Materials</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
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<tr>
<td>Cultural and Tribal Cultural Resources</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
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<tr>
<td>Biological Resources</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Similar</td>
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<td>Public Services</td>
<td>Less than significant (Project and Cumulative)</td>
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<tr>
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<td>Less</td>
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3 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND AND NEED

Replacement of the vacant California Department of Food and Agriculture Annex Building (CDFA Annex) at 1215 O Street in downtown Sacramento has been funded by the State of California through the State Projects Infrastructure Fund (SPIF), as administered by the California Department of General Services (DGS). This project was identified in DGS’s 2015 Capitol Area Plan (CAP) Progress Report and Governor Brown’s 2016 Five-Year Infrastructure Plan to address the safety of the CDFA Annex as well as critical State office space deficiencies in downtown Sacramento.

The existing 115,000 square foot (sq. ft.), four-story CDFA Annex office building was constructed in 1953 as an addition to the California Department of Food Agriculture Building (Food and Agriculture Building) at 1220 N Street. The two buildings are connected via an elevated sky bridge over the alley (Neighbors Alley) between the two buildings. The CDFA Annex served as an office building for the CDFA; however, because of significant fire and life safety deficiencies, it was vacated by order of the State Fire Marshal in November 2011.

The 1215 O Street Office Building Project site, including the CDFA Annex and the California Department of Veterans Affairs (CalVet) employee surface parking directly across O Street, are located on State-owned property located within the Capitol Area covered by the 1997 CAP (DGS 1997). The CAP, originally adopted in 1977, is the statutory master plan for development on State-owned land surrounding the State Capitol, in accordance with Government Code Section 8160 et seq. The CAP envisions State offices, housing, neighborhood commercial, parking, and multimodal streets creating a vibrant urban district in the heart of Sacramento. DGS developed the CAP and is responsible for its administration (DGS 1997). DGS implements the office and parking elements of the CAP and the Capitol Area Development Authority (CADA), a joint powers authority (JPA) between the State of California and the City of Sacramento, implements the housing and retail elements. The CAP was bounded by 5th Street on the west, 17th Street on the east, L Street on the north, R Street on the south, and an additional half-block area that lies south of R Street between 11th and 12th Streets. Senate Bill (SB) 1460 was passed by the California Legislature and signed by the Governor in 2002, which resulted in the addition of several blocks to the plan area along R Street.

Although redevelopment of the CDFA Annex was not specifically proposed in the CAP, the plan suggests examination of underutilized State properties, including the 1215 O Street site. The existing vacant CDFA Annex is an underutilized building, located one block away from the Capitol, and adjacent to other State office buildings and a Regional Transit light rail station. The vacant building provides an opportunity to consolidate State office space and address State office space deficiencies in downtown Sacramento.

As stated in Governor Brown’s 2016 Five-Year Infrastructure Plan, a study of State office infrastructure in Sacramento (required by Chapter 451, Statutes of 2014 [AB 1656]) documented serious deficiencies with existing downtown buildings that require replacement or renovation. The study found deficiencies in building systems, including inadequate fire and life safety systems, electrical, and plumbing. In addition, the State heavily relies on leased space, which is flexible and necessary to meet short term fluctuation in office space needs, but is more expensive over the long term. To address office infrastructure needs, the Governor proposed a budget and identified initial projects to better use State-owned land; replacement of the CDFA Annex was identified as one of the initial projects. Furthermore, DGS completed a site study of the unoccupied CDFA Annex (DGS 2010) to determine the highest and best use of the property and evaluate the cost to renovate the existing building. The site study concluded that it is not cost-effective to renovate the building and recommended replacing the existing structure with a new 397,400 gross square feet (GSF), 11-story office building with tenant parking, to maximize State office space on the site while maintaining compliance with the Capitol View Protection Act (DGS 2010).
3.2 PROJECT OBJECTIVES

Consistent with, and in furtherance of the CAP (DGS 1997), the 2015 CAP Progress Report (DGS 2015), and Governor Brown’s 2016 Five-Year Infrastructure Plan, the objectives of the 1215 O Street Office Building Project are to:

- consolidate State office space and address State office space deficiencies in downtown Sacramento, prioritizing building on underutilized state property;
- restore functional office space at the vacant California Department of Food and Agriculture Annex at 1215 O Street, while conforming with the Capitol View Protection Act;
- accommodate staff from State-owned office buildings targeted for renovation or replacement (such as the Bateson Building at 1600 9th Street) to vacate such building(s) and allow for their eventual renovation and re-occupation while minimizing the number of disruptive moves for state agencies;
- provide a modern, efficient, and safe environment for State employees and the public they serve;
- integrate the new State development with the existing neighborhood;
- develop a sustainable and energy-efficient building;
- encourage and support the use of alternative commute modes by designing the project to have easy access to multiple transit modes (e.g., bus, light-rail); and
- maximize the effectiveness of the design-build project delivery method by maintaining sufficient flexibility in the performance criteria to support innovation in the design competition.

3.3 DESIGN-BUILD METHOD

The 1215 O Street Office Building Project would be delivered via the design-build method of project delivery. The State’s goal in using this method is to provide a shorter elapsed time from project initiation to building occupancy; provide overall cost savings; provide a more efficient construction process; and promote higher quality and more innovative design solutions. In design-build, a Criteria Architect (or Master Architect) team develops performance criteria to establish the building’s design characteristics, such as:

- maximum height and square footage;
- design mandates such as solar panels, Zero Net Energy, and the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) certification;
- facilities required by anticipated building tenants such as sufficient office space and features; and
- minimum parameters to meet maintenance and functionality requirements.

Many of the project characteristics provided in the following project description would be included in the performance criteria, as well as more detailed and focused criteria not relevant to this EIR’s impact analysis (e.g., characteristics of interior wall coverings, floor coverings, doors). Based on the performance criteria defined for the project, DGS would issue a Request for Qualifications (RFQ) and begin a competitive selection process for design-build teams. DGS would review submittals from prospective teams, hold interviews, and then select three teams to proceed to the Request for Proposal (RFP) phase.

DGS would issue a RFP to the three short-listed design-build teams and accept detailed proposals from each. The proposals would be reviewed and scored based on best value; project features, functions, and life-
cycle costs; team experience; and past performance. Selection of the winning team would be based on its response to the RFP and compliance with the performance criteria. The winning proposal would become the defining contractual document that identifies project quality, scope, cost and schedule. Final project design, and then construction, would be completed by the selected team. It is anticipated that the design-build team selection process would occur in late 2017.

The analysis in this EIR is based on the performance criteria prepared by the Criteria Architect team. This is the typical stage that CEQA review is conducted in a design-build process, in part, so that the future RFQ can include any impact avoidance and mitigation measures that arise out of the CEQA review process. This approach places the CEQA process prior to completion of a final project design. However, the performance criteria are sufficient to support this EIR impact analysis. Where the performance criteria provide a maximum limit to a project characteristic, such as the building not exceeding 150 feet in height (see Section 3.5.3 below), this EIR assumes the project meets that maximum limit. If, ultimately, the selected design-build team can achieve all necessary criteria with a shorter building, the EIR will still be sufficient to support implementation of that design. If the performance criteria identify a range for a particular project characteristic, such as the building providing approximately 300,000 to 350,000 GSF of general purpose office space (see Section 3.5.3 below), where applicable, the EIR impact analysis will generally consider the higher value in the range. Again, if the ultimate project design provides GSF in a lower portion of the range, the EIR would be sufficient to support implementation of that design.

In some cases, to provide a sufficient CEQA impact analysis, the EIR project description identifies project features that are more specific than what is included in the performance criteria. For example, the performance criteria may identify a particular side of the building suitable for vehicle entry; however, the project development scenario evaluated in this EIR identifies a specific location for vehicle entry on that side of the building to allow an adequate analysis of traffic impacts. In this circumstance, if the design-build team ultimately selects a vehicle entry point different from the location evaluated in the EIR, DGS will need to consider whether the EIR adequately addresses the environmental effects that might result from this difference in a project feature, and determine whether the proposal from the design-build team is sufficiently different from what is analyzed in this EIR to warrant preparation of an EIR Addendum, Supplement to the EIR, or a Subsequent EIR consistent with Section 15162 of the CEQA Guidelines. As the selected design-build team completes the project design, DGS will need to consider whether any project elements differ sufficiently from the project scenario analyzed in the EIR to warrant additional CEQA review. If additional CEQA review is required, all elements of the review, including public notices and public involvement, would be implemented consistent with applicable elements of the CEQA Statute and Guidelines.

3.4 PROJECT LOCATION

The proposed 1215 O Street Office Building Project site encompasses areas on the north and south sides of O Street in downtown Sacramento, and the portion of O Street in between, as shown on Exhibits 3-1 and 3-2. On the north side of O Street is the site of the existing vacant 115,000 sq. ft. CDFA Annex building (Exhibit 3-3), located on the southwestern portion of the block bounded by O and N Streets and 12th and 13th Streets. This portion of the site is approximately 1.3 acres (57,600 sq. ft.), and the existing CDFA Annex building footprint is approximately 30,000 sq. ft. (DGS 2017a). This 1215 O Street site would be redeveloped to replace the CDFA Annex with a new State-owned office building. The maximum available building footprint for the proposed project is 38,400 sq. ft. (DGS 2017a). On the south side of O Street, directly across O Street from the CDFA Annex is the State-owned CalVet employee surface parking lot (Exhibit 3-3). This parking lot would be used as a staging area during demolition of the CDFA Annex and construction of the replacement building. This surface parking lot would then be repaved and a solar array would be constructed over the spaces to provide electricity for the new office building. The surface parking lot is approximately 0.8 acre (34,800 sq. ft.) in size. Utility connections and other construction activities for the new office building would result in disturbances to 12th Street, O Street, and Neighbors Alley adjacent to the office building site, and the sky bridge across the alley to the Food and Agriculture Building would be removed and façade improvements would be made to that building. The project also includes limited access, mobility, and safety improvements inside the Food and Agriculture Building. The combined project site disturbance area totals approximately 2.3 acres.
Photo 1: View of CDFA Annex looking northeast from the corner of 12th and O Streets

Photo 2: View of CalVet surface parking lot looking southeast from the corner of 12th and O Streets

Source: Ascent Environmental 2017
3.5 CHARACTERISTICS

3.5.1 Existing Land Uses and Land Use Designation

The State-owned 1215 O Street Office Building site is designated by the CAP Land Use Diagram as “Office” and is currently occupied by the vacant CDFA Annex building. The project would maintain this site as a State-owned office building, consistent with the CAP. Land uses surrounding the building site include the California Department of Transportation (Caltrans) Headquarters to the west across 12th Street; Neighbors Alley and the historic Food and Agriculture Building, then N Street and Capitol Park, to the north; apartments to the northeast at the corner of N Street and 13th Street; and the California Department of Veterans Affairs building directly to the east at the corner of O Street and 13th Street (Exhibit 3-2).

The State-owned CalVet employee surface parking lot directly south across O Street from the building site is designated by the CAP Land Use Diagram as “Residential.” The project would not develop residential units on this site; rather, parking uses would be reinstated after temporary use for construction staging, and the site would be covered by a solar array. Land uses surrounding this surface parking lot include apartments to the east; a surface parking lot to the southeast; apartments directly south; California State Archives to the southwest; and light rail lines on 12th Street and additional surface parking directly to the west (Exhibit 3-2).

3.5.2 Demolition of the CDFA Annex Building

The project would involve demolition of the vacant CDFA Annex building as well as existing asphalt and concrete surrounding the building, including the O Street and 12th Street sidewalks, Neighbors Alley between the project and the Food and Agricultural Building, and portions of O Street and 12th Streets for utility connections. Based on a pre-demolition hazardous materials investigation in December 2016 (Terracon Consultant Inc. 2016), hazardous materials including asbestos, lead, PCBs (polychlorinated biphenyls), and mercury were found within the CDFA Annex building. To reduce disposal fees and protect workers and the public, hazardous materials would be abated and removed prior to demolition. Once this process is complete and the existing building has been certified as free from hazardous materials, demolition would commence. Demolition is estimated to generate approximately 20,000 cubic yards of demolition debris (DGS 2017b). Materials such as concrete and steel would be separated, sorted, and recycled.

The sky bridge that connects the CDFA Annex to the Food and Agriculture Building (1220 N Street) would be removed as part of demolition. Upon such removal, the façade on 1220 N Street building would be restored to match existing façade to the greatest degree feasible (e.g., materials, windows, finishes, paint color). In addition, interior door and corridor renovation would be completed in the Food and Agriculture building to ensure adequate egress systems for all floors with removal of the sky bridge. All work related to the Food and Agriculture Building will meet Secretary of the Interior’s Standards for the Treatment of Historic Properties.

3.5.3 Office Building Program Elements

As proposed in the 1215 O Street Office Building Replacement Project Definition Report (DGS 2017a), the new office building would consist of approximately 300,000 to 350,000 GSF of general purpose office space, designed for a 50- to 100-year lifespan (assessment of the structure based on levels of design, workmanship, maintenance, and the environment). The building, as initially characterized in the Project Definition Report, is identified as being up to 11 stories tall including an enclosed upper level, not exceeding 150 feet in height, with an additional level below grade (Exhibit 3-4). This preliminary building massing would accommodate nine building floors dedicated primarily to office space uses with a capacity of approximately 1,000 to 1,200 office workers. A potential example of the program elements that could be included on each building level are described below. The workstation and office sizes proposed are based on DGS’
Recommended State Administrative Manual (SAM) Standards for workstations and offices by job category (DGS 2017a). This is a conceptual building development scenario to give an indication of building elements and possible locations. As identified previously in Section 3.3, the design-build team that is ultimately selected may provide a project design that varies from this conceptual scenario, while still fulfilling the design criteria included in the RFP.

**Lower Level – Level LL, one level below the street**
- Approximately 34,000 GSF (not including exterior drive to basement)
- Enclosed car parking (approximately 20 spaces)
- Building maintenance vehicle parking (approximately 5 spaces)
- Bicycle parking for employees
- Facility manager, building maintenance, janitorial staff locker room
- Greywater storage
- Fire sprinkler water storage
- Mechanical and electrical rooms

**Ground Level – Level 1, street level**
- Approximately 30,000 total GSF
- Approximately 27,000 total usable sq. ft.
- Main pedestrian entrance on O Street, lobby, and security
- Approximately 6,000 GSF publicly-accessible food court
- Space for retail
- Approximately 4,000 GSF meeting room for approximately 125 occupants
- Loading dock, recycling and solid waste, shipping/receiving, mechanical, and electrical space

**State Office Space – Levels 2 through 10**
- Approximately 260,000 total GSF (approximately 29,000 GSF per typical floor)
- Approximately 220,000 total usable sq. ft. (approximately 24,400 usable sq. ft. per typical floor)
- Approximately 1,200 workspace seats available for employees (based on approximately 137 seats per floor at 178 usable sq. ft. per seat on typical office floors)
- Electrical room, break rooms, and other appurtenant uses on each floor

**Upper Level – Level 11**
- Approximately 20,000 GSF enclosed space above the office floors
- Fitness center for employees, including showers and locker rooms
- Storage, mechanical rooms

**Rooftop**
- Solar (photovoltaic) panel array
- Elevator and ancillary mechanical equipment in rooftop enclosures

### 3.5.4 Staff Relocation and Future Renovation Projects

It is anticipated that staff occupying the 1215 O Street Office Building would primarily be relocated from the State-owned Bateson Building at 1600 9th Street (Exhibit 3-2). These include staff from the California Health and Human Services Agency, the Department of State Hospitals, and the Department of Development Services. An analysis of the Bateson Building tenants slated to relocate to the new office building, considering growth between 2016 and 2021, indicates a need for 1,146 employees in 2021, the estimated occupancy
date. Because office work environments require some vacant seats to accommodate new hires, restructuring, and employee relocations, a capacity of 1,200 seats was determined to be the goal for the new office building.

Vacating the Bateson Building would allow the eventual renovation and re-occupation of that building. This EIR assumes that the Bateson Building would be back-filled with the capacity for approximately 1,000 employees, consistent with its current occupancy level. Because there are no details currently available regarding the timing of renovation and future re-occupation of the Bateson Building, this EIR does not evaluate in detail renovation or reconstruction of that building, nor is approval for such renovation being sought through this environmental document or process. Rather, the Bateson Building renovation, as a reasonably foreseeable indirect effect of the project is addressed herein, but at a level of detail commensurate with what is currently known about the project.

### 3.5.5 Height, Massing, and Architectural Treatments

The Capitol View Protection Act (Government Code Section 8162 et seq.) was enacted in 1992 to provide protection of views to and from the State Capitol building and Capitol Park, to maintain the visual prominence of the Capitol by setting height restrictions in zones surrounding the Capitol building, and to maintain the existing urban edge of surrounding streets with setback requirements. In accordance with the Act’s height restriction map, the 1215 O Street Office Building site is located within the 150-foot height limit. The specified height limit does not apply to decorative building caps or rooftop mechanical equipment that is screened and placed in the farthest possible location when viewed from the State Capitol or Capitol Park. As shown in the conceptual massing (Exhibit 3-5), the proposed office building would comply with the 150-foot height limit. The surface parking lot across O Street (project construction staging and solar panels) is within the 250-foot height limit; the proposed solar array over the surface parking would comply with the 250-foot height limit.

The site design and building construction materials would be consistent with those used for similar high-quality civic buildings in prominent urban environments. Materials would be stable, durable, and timeless in quality, would not be prone to weathering or deterioration, and would require minimal maintenance and little or no replacement or refurbishment for the building life expectancy of the project (150 years). In particular, building finishes at pedestrian levels would present unique and aesthetically interesting surfaces. Appropriate materials include natural stone, precast concrete panels, clear or lightly tinted glass, stainless steel, anodized aluminum, factory-coated metal, and composite panels. Exterior metals would be prefinished or protected to avoid deterioration and repeated maintenance. Types of materials to be avoided include dark tinted or highly reflective glass; materials that can generate substantial glare; painted wood, stucco, and other lightweight commercial materials; and field painted ferrous steel or sheet metal.

### 3.5.6 Landscaping and Lighting

The site design would include human-scale outdoor spaces providing a range of use opportunities, as well as a public art element that reinforces a unique sense of space while complying with the State of California’s Art in Public Spaces requirements. The landscape design proposes maintaining the street tree canopy. However, if street trees need to be removed, or if gaps are created in the canopy, deciduous shade trees would be planted to provide summer shade and winter sun.

The landscape design would minimize life-cycle costs (i.e., costs beyond the initial capital outlay such as costs for maintenance and repairs), while deterring potential vandalism. The project would include repaving portions Neighbors Alley and replacing frontage sidewalks around the new office building, consistent with City of Sacramento standards, allowing for peak pedestrian circulation. The pedestrian hardscape would be finished to meet minimum American with Disabilities Act (ADA) slip resistance.
O Street Office Building
Conceptual Massing

Reflects the height of the existing office building and the maximum height of a new building (blue shading indicates new and white shading indicates existing conditions).

View of O Street Office Building Site from State Capitol looking Southwest

View of O Street Office Building Site looking Northeast
Lighting would be used for safety around the new building, in particular for pedestrian walkways and at the resurfaced CalVet parking lot under the solar array. Exterior lighting would use the lowest possible wattage and energy-efficient luminaire for each application. In addition, exterior light fixtures would be shielded and directed down to preserve the night sky, and directed away from adjacent residential buildings. The new office building would achieve at least the U.S. Green Building Council’s LEED version 4 (v4) Silver certification (see Appendix K for the LEED v4 checklist). Implementing a lighting plan that reduces both the generation of exterior light and the potential for light trespass to affect off-site areas would support meeting or exceeding the LEED v4 Silver rating.

3.5.7 Surface Parking Lot Site

The CalVet surface parking lot across O Street from the office building site would be used as a temporary construction staging area during demolition of the CDFA Annex and construction of the new office building. During demolition and construction, this site would be used for construction vehicle parking, materials and equipment storage, and one or more trailers for temporary construction offices. During construction, the employees that normally utilize the CalVet parking lot would park in a nearby parking garage at 1566 11th Street, which has capacity to temporarily serve these employees with an equivalent number of spaces to those in the surface parking lot.

Once construction of the new office building is complete, this surface parking lot would be repaved and parking spaces painted. The parking lot would continue to serve CalVet. An array of photo-voltaic solar panels (solar panels) would be installed over the parking lot to generate energy for the new 1215 O Street Office Building. The solar array would be installed prior to resurfacing of the parking lot. Foundations for the main panel support posts could be up to 10-feet deep and trenches for wiring connecting the system could be up to 4-feet deep.

3.5.8 Utilities

Existing utility connections would be removed with building demolition and new utility connections would be constructed for the new office building, as described below.

WATER

A new 4-inch domestic water service line and, if needed, a new 1-inch irrigation water service line, both with a meter and backflow device, would be constructed connecting to an existing City of Sacramento water line main either in the Neighbors Alley (6-inch main) or 12th Street (12-inch main).

The office building would include water conservation and reuse measures that exceed 2016 Title 24 water efficiency requirements. All plumbing fixtures in the building would be low-flow/high-efficiency fixtures. A dual pipe water system would be installed. Domestic (potable) water piping would supply drinking fountains, sinks, showers, and ice machines. Greywater would be used for toilet and urinal flushing. Greywater is defined as all wastewater generated in households or office buildings from sources other than toilets. Sources of greywater for the building could include non-food-service sinks, drinking fountain drains, shower drains, air conditioning condensate, and rainwater (collected and stored). The greywater would be stored in an approximately 25,000-gallon cistern and would be treated/sterilized before re-use in the building. The use of greywater would result in a projected water savings of approximately 462,000 gallons per year (DGS 2017b).

A new fire water service with backflow, fire department connection, and a new fire hydrant would be constructed, connecting under 12th Street. Fire protection would comply with the California code for high rise buildings and the City of Sacramento High-Rise Ordinance, including two fire pumps tied to a fire water
storage tank in the basement (separate from the greywater storage tank), a sprinkler system throughout the building, and breathing air systems provided in the building.

WASTEWATER
A new sanitary sewer connection would be constructed to an existing 18-inch combined sewer system (CSS) main within Neighbors Alley. The CSS in downtown Sacramento transports both rainwater and stormwater to the Sacramento Regional County Sanitation District’s wastewater treatment plant for treatment before discharge to the Sacramento River.

DRAINAGE
A new storm drain connection would be constructed to the same 18-inch CSS main within Neighbors Alley, as identified above for wastewater.

HEATING AND COOLING
The new office building would connect to the State-owned and operated Central Plant located at 6th and O Streets (Exhibit 3-2) for steam (heating) and chilled water (cooling). Pipes would be extended from the corner of 12th and O Streets to the basement mechanical room in the new building, which would contain all required pumps, heat exchangers, valves, and controls. The heating, ventilation, and air conditioning (HVAC) system in the new building would be automated and compatible with the State’s system in the Central Plant for monitoring.

ENERGY USE
Electrical service to the new office building would be provided by a 21 kilovolt (kV) Sacramento Municipal Utility District (SMUD) system; the nearest manhole is located at 12th Street and Opera Alley/Carriage Path, which is a block south of the project site. New 21 kV infrastructure would be routed up 12th Street.

The project’s energy goal is to achieve Zero Net Energy. The project would be designed to exceed the 2016 Building Energy Efficiency Standards, to meet or exceed LEED v4 Silver certification (see Appendix K of this DEIR), and is targeted to have an Energy Use Index (EUI) of 25-30. EUI is a measure of the total energy consumed by building in a period, expressed as thousand British thermal units (KBTUs) per gross square foot (calculated by dividing the total energy consumed by a building in one year by the total gross floor area of the building). For comparison, existing buildings within downtown Sacramento often have a baseline EUI score of approximately 100. Energy Star office equipment, energy efficient computer monitors, and LED (light-emitting diode) lighting would need to be used throughout the building to achieve the energy goals. Electrical metering and control systems would be installed to control systems and monitor electrical loads on a per system basis (e.g., lighting, mechanical) and on a per floor basis.

A roof-mounted array of solar panels, approximately 25,000 sq. ft., would be installed on the new office building, and an additional 5,000 sq. ft. of photo-voltaic panels could be located on the south building face. An estimated 40,000 sq. ft. of photo-voltaic would also be installed over the Cal Vet surface parking lot on the south side of O Street across from the office building. Cal Vet has agreed to allow DGS to construct a solar canopy over this parking lot to generate power for the new office building. The performance criteria will require the design builder to use solar panels that generate 2 to 2.5 million kilowatt hours (MKWH) per year. The solar power system would be connected to the SMUD system and any additional energy from SMUD to serve the building (e.g., at night) would be from 100 percent renewable resources.

An emergency diesel generator with an estimated capacity of 550 kilowatts (DGS 2017b) would be located on the ground floor. Electrical loads served by the emergency generator would include egress/exit lighting, elevators, fire alarm system, security system, smoke evacuation fans, and stair pressurization fans.
TELECOMMUNICATIONS

Telecommunications would be provided to the new building via an existing manhole in Neighbors Alley. Minor trenching would be required to establish the connection.

3.5.9 Transportation, Transit, and Parking

Vehicular access to the lower level parking spaces and the truck loading dock would be from 12th Street to the west and Neighbors Alley to the north. Bicycle parking would also be provided, most likely on the lower level.

The State of California owns, leases, and rents parking spaces in various locations in the downtown area. The existing Bateson Building provides a single parking space for use by the building manager. Employees in the Bateson Building currently use other parking spaces provided by the State, arrange for their own parking, or use alternative commute modes. This will not change for employees moving to the new 1215 O Street building, except that the new O Street building would include approximately 20 enclosed car parking spaces for tenant use (accommodating from 2 to 6 percent of the employees, depending on the number of occupants per vehicle) and approximately 5 additional spaces for building maintenance vehicle parking.

Transit availability at State office buildings is required by Government Code Sections 15808.1 and 14660, and Health and Safety Code Section 50093.5, which mandate that State office facilities with more than 200 employees or which directly serve the public be located within a “public transit corridor.” This is defined in Health and Safety Code Section 50093.5 as the area within one-quarter mile of a route on which the level of service is at, or above, the average for the transit system as a whole, according to the transit operator serving the area, and on which regularly scheduled public mass transit stops are located, or within quarter mile of an existing or planned public mass transit guideway or busway station, or within one-quarter mile of a multimodal transportation terminal serving public mass transit operation (DGS 1997). The proposed 1215 O Street Office Building is located within a few hundred feet of Sacramento Regional Transit’s Archives Plaza light rail station and there are also several bus stops for several different routes and transit providers (e.g., Sacramento Regional Transit, El Dorado Transit) within four blocks of the office building site.

3.5.10 Construction Schedule

Project construction is anticipated to begin early 2018. Completion of construction and tenant occupancy is anticipated sometime in 2021. The proposed phasing of demolition and construction is as follows:

- Hazardous Materials Abatement in the Existing Building,
- Demolition of the Existing Building,
- Repairs to the Food and Agriculture Building,
- Excavation/Shoring,
- Utilities Installation,
- Building Construction,
- Repaving, and
- Parking Lot Solar Array Installation

The construction labor force would fluctuate depending on the phase of work. Hazardous materials abatement and demolition would require an estimated 20 to 35 workers. Building construction would range from 25 to 50 workers during initial phases and approximately 175 to 225 workers during the peak of construction (DGS 2017b).

During construction, it may be necessary to restrict or redirect pedestrian, bicycle, or vehicular movements around the site to accommodate demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours, which
would be temporary. It is anticipated that construction would involve closure and construction disturbances to O Street between 12th and 13th Streets; however, this section of O Street is already blocked to through-traffic in both directions. Neighbors Alley would also be disturbed during demolition and construction as would a portion of 12th Street between N and O Streets. However, it is assumed that construction would avoid disturbance of the light rail lines that turn south from O Street down 12th Street. Vehicular, pedestrian, and bicycle access to apartments, offices, and other uses on N Street, 13th Street, and 12th Street would be maintained even if 12th Street between N and O is temporarily blocked off. The project site is located within the downtown street grid, and there are various alternative routes available to access the project site and nearby locations if 12th Street were temporarily closed between N and O Streets.

DGS would prepare a construction traffic control plan, consistent with Section 12.20.20 of the Sacramento City Code, that illustrates the location of the proposed work area; identifies the location of areas where the public right-of-way would be closed or obstructed and the placement of traffic control devices necessary to perform the work; shows the proposed phases of traffic control; and identifies the time periods when the traffic control would be in effect and the time periods when work would prohibit access to private property from a public right-of-way. The plan may be modified by the City at any time in order to eliminate or avoid traffic conditions that are hazardous to the safety of the public. The traffic control plan would also provide information on access for emergency vehicles to prevent interference with emergency response.

### 3.5.11 Construction Methods and Equipment

Construction equipment anticipated to be used throughout the various phases of abatement, demolition, and construction includes the following:

- Concrete/Industrial Saw
- Rubber Tired or Track Dozer
- Tractors/Loaders/Backhoes
- Excavators
- Bobcats
- Drill Rig
- Off-Highway Trucks
- Grader
- Scraper
- Crane
- Tower Crane
- Man-lift
- Boom Lift
- Construction Elevator
- Scissor Lift
- Forklift
- Concrete trucks
- Concrete pump trucks
- Asphalt spreader
- Roller/compactor
- Generator Set
- Welding machine
- Compressor
- Haul Trucks
- Painting equipment

Where feasible and available, diesel construction equipment will be powered by Tier 3 or Tier 4 engines as designated by the California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (USEPA). In addition, if available for on-site delivery, diesel construction equipment will be powered with renewable diesel fuel that is compliant with California’s Low Carbon Fuel Standards and certified as renewable by the California ARB Executive Officer.

It is estimated that there could be approximately 4,500 total haul trips for all phases of construction. In addition, construction is estimated to generate 25,000 to 30,000 cubic yards of solid waste (DGS 2017b).

Measures would be implemented during construction to prevent damage to the adjacent Food and Agriculture Building and other nearby buildings and site features, including ground vibration monitoring. Pile driving or an alternative approach, such as drilled displacement piles, would be utilized during construction of the new office building. The upper 20-feet of piles installed during construction of the existing building would need to be removed as part of excavation for the foundation and basement of the new building. During excavation, it is
anticipated that dewatering will be necessary. The treatment and disposal of any water removed from the excavation would meet Central Valley Regional Water Quality Control Board requirements.

Although not anticipated, it is possible that periods of nighttime construction may be needed. A distinction is made between nighttime construction indoors, within the building after walls and windows are in place, and outdoor construction activities that are not enclosed by the partially completed building. Indoor construction activities, such as installing wiring, drywall, and carpet, would be permitted during nighttime hours. However, the selected design-build team would only be permitted to conduct outdoor construction during the nighttime hours if there are no other reasonable options. For example, some foundation designs require that once the pouring of concrete begins, the pour must continue without pauses until complete. In some instances, such a concrete pour may take 20 or more hours, requiring work to occur during the nighttime hours. It is unknown at this time if the final building design will have any elements that require outdoor nighttime construction. Therefore, to ensure a comprehensive evaluation of potential environmental effects, this EIR assumes the potential for limited outdoor nighttime construction activity.
AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

4.1 APPROACH TO THE ENVIRONMENTAL ANALYSIS

This draft environmental impact report (DEIR) evaluates and discloses the environmental impacts associated with the 1215 O Street Office Building Project, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulation, Title 14, Chapter 3, Section 1500, et seq.). Sections 4.2 through 4.15 of this DEIR present a discussion of regulatory background, existing conditions, environmental impacts associated with construction and operation of the project, mitigation measures to reduce the level of impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Issues evaluated in these sections consist of the environmental topics identified for review in the Notice of Preparation (NOP) prepared for the project (see Appendix A of this DEIR). Chapter 5 of this DEIR, “Cumulative Impacts,” presents an analysis of the project’s impacts considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. Chapter 6, “Other CEQA-Mandated Sections” includes an analysis of the project’s growth inducing impacts, as required by Section 21100(b)(5) of CEQA. Chapter 7, “Project Alternatives,” presents a reasonable range of alternatives and evaluates the environmental effects of those alternatives relative to the proposed project, as required by Section 15126.6 of the State CEQA Guidelines.

Sections 4.2 through 4.15 of this DEIR each include the following components.

Regulatory Background: This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the federal, State, and local levels are each discussed as appropriate.

Existing Conditions: This subsection presents the existing environmental conditions on the project site and in the surrounding area as appropriate, in accordance with State CEQA Guidelines Section 15125. The discussions of the environmental setting focus on information relevant to the issue under evaluation. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, traffic impacts resulting from the proposed project are assessed for the regional roadway network, whereas cultural-resource impacts from the proposed project are assessed for the project site only.

Environmental Impacts and Mitigation Measures: This subsection presents thresholds of significance and discusses potentially significant effects of the 1215 O Street Office Building Project on the existing environment, including the environment beyond the project boundaries, in accordance with State CEQA Guidelines Section 15126.2. The methodology for impact analysis is described, including technical studies upon which the analyses rely. The thresholds of significance are defined and thresholds for which the project would have no impact are disclosed and dismissed from further evaluation. Project impacts and mitigation measures are numbered sequentially in each subsection (Impact 4.2-1, Impact 4.2-2, Impact 4.2-3, etc.). A summary impact statement precedes a more detailed discussion of the environmental impact. The discussion includes the analysis, rationale, and substantial evidence upon which conclusions are drawn. The determination of level of significance of the impact is defined in bold text. A “less-than-significant” impact is one that would not result in a substantial adverse change in the physical environment. A “potentially significant” impact or “significant” impact is one that would result in a substantial adverse change in the physical environment; both are treated the same under CEQA in terms of procedural requirements and the need to identify feasible mitigation. Mitigation measures are identified, as feasible, to avoid, minimize,
rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with the State CEQA Guidelines Section 15126.4. Unless otherwise noted, the mitigation measures presented are recommended in the EIR for consideration by the State to adopt as conditions of approval.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

This subsection also describes whether mitigation measures would reduce project impacts to less-than-significant levels. Significant-and-unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b). Significant-and-unavoidable impacts are also summarized in Chapter 6, “Other CEQA-Mandated Sections.”

References: The full references associated with the parenthetical references found throughout Sections 4.2 through 4.15 can be found in Chapter 9, “References,” organized by section number.
4.2 LAND USE

This land-use analysis evaluates consistency of the 1215 O Street Office Building Project with applicable land-use plans and policies. The physical environmental effects associated with the project, many of which pertain to issues of land use compatibility (e.g., noise, aesthetics, air quality) are evaluated in other sections of Chapter 4 of this DEIR.

4.2.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to land use are applicable to the project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Capitol Area Plan

The Capitol Area Plan (CAP), originally adopted in 1977 and updated in 1997, is the statutory master plan for development on State-owned land surrounding the State Capitol, in accordance with Government Code Section 8160 et seq. The CAP envisions State offices, housing, neighborhood commercial, parking, and multimodal streets creating a vibrant urban district in the heart of Sacramento. The California Department of General Services (DGS) developed the CAP and is responsible for its administration (DGS 1997a). DGS implements the office and parking elements of the CAP and the Capitol Area Development Authority (CADA), a joint powers authority (JPA) between the State of California and the City of Sacramento, implements the housing and retail elements.

The CAP area was bounded by 5th Street on the west, 17th Street on the east, L Street on the north, R Street on the south, and an additional half-block area that lies south of R Street between 11th and 12th Streets (Exhibit 4.2-1). Senate Bill (SB) 1460 was passed by the California Legislature and signed by the Governor in 2002, which resulted in the addition of several blocks to the plan area along R Street. The land use designations of the CAP were not altered by the expansion, however, because no State-owned land lies within the added area.

The State-owned 1215 O Street Office Building site is designated by the CAP Land Use Diagram as “office” and is currently occupied by the vacant California Department of Food and Agriculture Annex Building (CDFA Annex). The State-owned CalVet employee surface parking lot to be used for construction staging and as a site for photovoltaic panels is designated by the CAP Land Use Diagram as “residential” (Exhibit 4.2-1).

Statutory Objectives

The statutory objectives of the CAP are:

- Land Use. To establish patterns of land use in the Capitol Area which are responsive to the goals of the Capitol Area Plan, which provide for flexibility in meeting future State needs, and which protect the State’s long-term interest without inhibiting the development process.

- State Offices. To provide offices and related services to meet present and future space requirements for the State of California near the State Capitol and in the context of metropolitan Sacramento, in the most cost effective manner.
Exhibit 4.2-1

Land Use Diagram

Legend:
- Office Use
- Residential
- Parking
- Other Existing Use
- Project Location
- 1997 Capitol Area Plan Boundary
- Expanded Boundary per SB 1460 (Ch. 468, Stats. of 2002)
- Parks and Open Space
- Light Rail

Source: DGS 2015
- Housing. To foster housing within the Capitol Area meeting a wide range of income levels and restoring the area to a population consistent with its urban surroundings.

- Transportation and Parking. To develop strategies, patterns and systems of movement into and within the Capitol Area that would provide adequate mobility for people that would provide adequate parking and that would enhance the area’s environment.

- Open Space and Public Amenities. To develop within the Capitol Area a network of attractive and convenient open spaces and access routes in order to improve the environment for workers, residents and visitors, and to encourage a favorable response to alternatives for moving within and using the resources of the Capitol Area.

- Development of the Community. To stimulate the development of a community within the Capitol Area which is attractive and comfortable to work in, live in, and visit, which is integrated into the fabric of the rest of the City of Sacramento, and which is physically and economically viable over the long term.

- Energy Conservation. To assure that the evolution and the development of the Capitol Area accomplishes an increase in the intelligent and efficient use of energy resources within the scope of State operations in metropolitan Sacramento.

- State’s Relation to Local Government. To assure the integration of planning and development efforts in the Capitol Area with the activities of all appropriate local governmental agencies.

- Administration and Implementation. To assure the effective implementation of the plan, by providing effective development mechanisms, by maintaining communications and coordination with all agencies and constituencies, and by updating the plan as needed.

**Plan Purposes**

The CAP includes the following purposes:

- to continue development of the Capitol Area as a mixed-use community;

- to offer opportunity sites for office, housing, and commercial development, consistent with the established development patterns in the area;

- to maintain and enhance the historic prominence of State government in the area, consistent with the State’s emphasis on office space consolidation;

- to provide for stately, appropriate development at the east end of Capitol Park that complements the west end setting;

- to plan for appropriate utilization of State-owned real estate assets; and

- to use a transit system significantly expanded in the Capitol Area since the development of the 1977 plan.

**Capitol Area Plan Implementation Program**

The Capitol Area Plan Implementation Program is an accompanying document that identifies recommended actions for carrying out the CAP objectives and principles. The implementation program document identifies specific actions to be taken by DGS, CADA, or other agencies; identifies standards for facilities and services; and provides guidance for monitoring the ongoing progress of implementation. The CAP Implementation Program may be revised periodically to reflect newly identified tasks, to report on completed tasks, or to identify emerging priority action items (DGS 1997b).
The CAP Implementation Program did not identify development guidelines for the CDFA Annex; however, it did propose construction of a high-density residential development (approximately 100 housing units) on the site of the current CalVet surface parking lot (identified in the CAP Implementation Program as “Block 222, along O Street”).

2015 Capitol Area Plan Progress Report

DGS is required to submit on an annual basis a progress report to the California Legislature detailing ongoing progress toward implementation of the CAP, including an assessment of the degree to which State projects have been in conformance with the plan (Government Code Section 8164 et seq.). DGS completed a site study of the unoccupied CDFA Annex (DGS 2010) to determine the highest and best use of the property and evaluate the cost to renovate the existing building. The site study determined that it is not cost-effective to renovate the building, and recommends replacing the existing structure with a new 11-story office building with a floor area of 397,400 gross square feet (GSF) and tenant parking, which would maximize State office space at the site while still conforming to the Capitol View Protection Act (DGS 2010).

Governor Brown’s 2016 Infrastructure Plan

The 2016 Five-Year Infrastructure Plan is the Governor’s proposal for investment in State infrastructure, prepared and submitted for consideration with the annual budget bill. Based on a legislatively mandated DGS study of State office infrastructure in Sacramento (Chapter 451, Statutes of 2014 [AB 1656]), the plan documented serious deficiencies with existing downtown buildings that require replacement or renovation. The study found that multiple buildings in central Sacramento have serious deficiencies in building systems, including inadequate fire and life safety systems, electrical, and plumbing. The CDFA Annex was specifically identified as one such building. In addition, the plan noted that the state relies heavily on leased space, which is flexible and necessary to meet short-term fluctuations in office space needs, but more expensive over the long term. To address office infrastructure needs, the Governor proposed a budget and identified initial projects to better use State-owned land; replacement of the vacant CDFA Annex with a new office building was identified as one of the initial projects.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by DGS. State agencies are not subject to local or county land-use plans, policies, and zoning regulations.

Under CEQA, an EIR must consider the extent to which a project is inconsistent with “applicable general plans” (State CEQA Guidelines Section 15125, subd. [d]; see also State CEQA Guidelines Appendix G, IX[b]). The project is located in the City of Sacramento, but because DGS is a State agency that is not subject to local land-use regulations, City-adopted land-use plans, policies and regulations are not applicable to the project. For this reason, this EIR need not, as a matter of law, consider such plans, policies, and regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local land-use plans, policies, and regulations that are applicable to the 1215 O Street Office Building Project.

DGS takes this approach for several reasons. First, DGS recognizes that such plans, policies, and regulations reflect the local agency’s policy decisions with respect to appropriate uses of land in the area. Consideration of these plans, policies and regulations will therefore assist DGS in determining whether the proposed project may conflict with nearby land uses that could result in potentially significant environmental impacts. Second, the consideration of City plans, policies and regulations is consistent with Government Code Section 8162, which directs DGS to cooperate with City and County officials in connection with implementation of the Capitol Area Plan (see also Government Code Section 8163, subd. [a][2], directing DGS to take into consideration local “ordinances, plans, requirements and proposed improvements”). Finally, the project would require sidewalk, roadway, and alley encroachment permits, and permits for connections to City...
operated utilities (see Streets and Highways Code Section 8300 et seq.). By considering consistency of the project with the City of Sacramento 2035 General Plan, this EIR will provide the City with the information necessary to make the consistency determination related to required encroachment and utility permits.

Sacramento Region Blueprint

The Sacramento Region Blueprint is a transportation and land-use study that was initiated by the Sacramento Area Council of Governments (SACOG) Board of Directors in 2002 to determine alternatives to current and general planned transportation and land-use patterns. The Sacramento Region is defined for the purposes of SACOG and the Blueprint as including El Dorado and Placer Counties (minus the Tahoe area) and Sacramento, Sutter, Yolo, and Yuba Counties. In December 2004, the SACOG Board of Directors adopted the Preferred Blueprint Scenario, a vision for growth that promotes compact, mixed-use development and more transit choices as an alternative to low-density development. The Sacramento Region Blueprint depicts a path to regional growth through the year 2050 that is generally consistent with principles of “smart growth,” which encourage a variety of housing close to employment, shopping, and entertainment and provide options for walking, biking, or taking public transit. The following Blueprint Growth Principles are relevant to the analysis of land use effects: (SACOG 2007).

- Transportation Choices: Developments should be designed to encourage people to sometimes walk, ride bicycles, ride the bus, ride light rail, take the train, or carpool. Use of Blueprint growth concepts for land use and right-of-way design will encourage use of these modes of travel and the remaining auto trips will be, on average, shorter.

- Mixed-Use Developments: Building homes, shops, entertainment, office, and light-industrial uses near each other can encourage active, vital neighborhoods. This mixture of uses can be arranged vertically or horizontally. These types of projects function as local activity centers where people would tend to walk or bike to destinations. Separated land uses, on the other hand, lead to the need to travel more by auto because of the distance between uses.

- Compact Development: Creating environments that are more compactly built and use space in an efficient but aesthetic manner can encourage more walking, biking, and public-transit use, and shorten auto trips.

- Use of Existing Assets: In urbanized areas, development on infill or vacant lands, intensification of the use of underutilized parcels, or redevelopment can make better use of existing public infrastructure. This can also include rehabilitation and reuse of historic buildings, denser clustering of buildings in suburban office parks, and joint use of existing public facilities such as schools and parking garages.

- Quality of Design: design details of any land use development - such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (the sidewalks, connected streets and paths, bike lanes, the width of streets) - are all factors that can influence the attractiveness of living in a compact development and facilitate the ease of walking and biking to work or neighborhood services. Good site and architectural design is an important factor in creating a sense of community and a sense of place.

- Natural Resources Conservation: This principle encourages the incorporation of public use open space (such as parks, town squares, trails, and greenbelts) within development projects, over and above State requirements, along with wildlife and plant habitat preservation, agricultural preservation and promotion of environment-friendly practices such as energy efficient design, water conservation and stormwater management, and shade trees to reduce the ground temperatures in the summer. In addition to conserving resources and protecting species, this principle improves overall quality of life by providing places for everyone to enjoy the outdoors with family outings and by creating a sense of open space.
2016 Metropolitan Transportation Plan/Sustainable Communities Strategy

The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is a long-range plan for transportation in the region following SACOG's adoption of the Blueprint. The 2016 MTP/SCS covers the period from 2012 to 2036. SACOG is required by federal law to update the MTP at least every four years. SACOG uses the MTP/SCS to identify, in collaboration with cities, counties, and transit agencies, near-term (20 years) growth and transportation investment priorities. The City of Sacramento, as well as the other cities and counties in the region, has been updating its general plan and development code to allow and encourage Blueprint-friendly development and transit districts. The buildout assumptions, population projections, and transportation assumptions of the proposed 2035 General Plan are based largely on information provided by SACOG for the 2012 MTP/SCS. In the city, the Preferred Blueprint Scenario provides for higher densities, increased infill development, and a greater variety of housing types as generally described above.

The guiding principles from the MTP/SCS, adopted by SACOG, are:

- **Smart Land Use**: Design a transportation system to support good growth patterns, including increased housing and transportation options, focusing more growth inward and improving the economic viability of rural areas.

- **Environmental Quality and Sustainability**: Minimize direct and indirect transportation impacts on the environment for cleaner air and natural resource protection.

- **Financial Stewardship**: Manage resources for a transportation system that delivers cost-effective results and is feasible to construct and maintain.

- **Economic Vitality**: Efficiently connect people to jobs and get goods to market.

- **Access and Mobility**: Improve opportunities for businesses and citizens to easily access goods, jobs, services and housing.

- **Equity and Choice**: Provide real, viable travel choices for all people throughout our diverse region.

City of Sacramento 2035 General Plan

The 1215 O Street Office Building is located within the plan area of the Sacramento 2035 General Plan, which was adopted on March 3, 2015 in compliance with the requirements of California Government Code Section 65300 et seq. The General Plan is a 20-year policy guide for the physical, economic, and environmental growth and renewal of the city, and it is the principal tool for the City to use in evaluating public and private building projects and municipal-service improvements. The guiding vision of the 2035 General Plan is that Sacramento will be the most livable city in America. The 2035 General Plan favors infill development over expanding outward into “greenfields” on the edge of the city, prioritizing reuse of underutilized properties, intensifying development near transit and mixed-use activity centers, increasing opportunities for pedestrian and bicycle use, and locating jobs closer to housing. The General Plan also calls for reducing carbon emissions that contribute to climate change using solar energy systems and water conservation measures, recycling, and reducing the heat island effect. The general plan buildout assumptions, population projections, and transportation assumptions are based largely on information provided by SACOG for the MTP/SCS.

The following goals and policies in the Land Use and Urban Design Element and the Economic Development Element are relevant to the analysis of land use effects.
**Goal LU 1.1 Growth and Change.** Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.

- **Policy LU 1.1.1 Regional Leadership.** The City shall be the regional leader in sustainable development and encourage compact, higher-density development that conserves land resources, protects habitat, supports transit, reduces vehicle trips, improves air quality, conserves energy and water, and diversifies Sacramento’s housing stock.

- **Policy LU 1.1.4 Leading Infill Growth.** The City shall facilitate infill development through active leadership and the strategic provision of infrastructure and services and supporting land uses.

- **Policy LU 1.1.5 Infill Development.** The City shall promote and provide incentives (e.g., focused infill planning, zoning/rezoning, revised regulations, provision of infrastructure) for infill development, reuse, and growth in existing urbanized areas to enhance community character, optimize City investments in infrastructure and community facilities, support increased transit use, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, and enhance retail viability.

**Goal LU 2.1 City of Neighborhoods.** Maintain a city of diverse, distinct, and well-structured neighborhoods that meet the community’s needs for complete, sustainable, and high-quality living environments, from the historic downtown core to well-integrated new growth areas.

- **Policy LU 2.1.7 Good Neighbors.** The City shall encourage businesses located within and adjacent to residential developments to conduct their business in a courteous manner by limiting disturbances and nuisances from operations and patrons, and to act as members of the community by making themselves available to respond to complaints and by participating in neighborhood/community meetings.

- **Policy LU 2.1.8 Neighborhood Enhancement.** The City shall promote infill development, reuse, rehabilitation, and reuse efforts that contribute positively (e.g., architectural design) to existing neighborhoods and surrounding areas.

**Goal LU 2.5 City Connected and Accessible.** Promote the development of an urban pattern of well-connected, integrated, and accessible neighborhoods, corridors, and centers.

- **Policy LU 2.5.1 Connected Neighborhoods, Corridors, and Centers.** The City shall require that new development, both infill and greenfield, maximizes connections and minimizes barriers between neighborhoods, corridors, and centers within the city.

**Goal LU 2.6 City Sustained and Renewed.** Promote sustainable development and land use practices in both new development, reuse, and reinvestment that provide for the transformation of Sacramento into a sustainable urban city while preserving choices (e.g., where to live, work, and recreate) for future generations.

- **Policy LU 2.6.1 Sustainable Development Patterns.** The City shall promote compact development patterns, mixed use, and higher-development intensities that use land efficiently; reduce pollution and automobile dependence and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use.

- **Policy LU 2.6.2 Transit-Oriented Development.** The City shall actively support and facilitate mixed-use retail, employment, and residential development around existing and future transit stations.

- **Policy LU 2.6.4 Sustainable Building Practices.** The City shall promote and, where appropriate, require sustainable building practices that incorporate a “whole system” approach to designing and constructing buildings that consume less energy, water and other resources, facilitate natural ventilation, use daylight effectively, and are healthy, safe, comfortable, and durable.
Goal LU 5.6 Central Business District. Promote the Central Business District as the regional center of the greater Sacramento area for living, commerce, culture, and government.

- Policy LU 5.6.1 Downtown Center Development. The City shall encourage development that expands the role of the CBD as the regional center for living, commerce, arts, culture, entertainment, and government.

City of Sacramento Central City Community Plan

The project site is located within the Central Business District (CBD) of the Central City Community Plan area, which is the core of the City of Sacramento (City of Sacramento 2015a and b) (Exhibit 4.2-2). The CBD is identified in the 2035 General Plan as a Priority Investment Area (PIA). PIAs are areas of the city that are the highest priority for investment and development through infill, reuse, or redevelopment. The CBD is an urban downtown area that includes State government buildings, corporate offices and businesses, high-rise condominiums, historic neighborhoods, parks and recreational areas, nightlife, restaurants and shops, schools, and industrial and manufacturing complexes all within a tree-lined street grid. The 2035 General Plan vision for the CBD is a vibrant downtown core that will continue to serve as the office, business, governmental, retail, visitor-serving, and entertainment center for the city and the region. The community plan is intended to supplement the citywide policies above. Relevant community plan policies include the following:

- Policy CC.LU 1.4 Office Development. The City shall encourage public and private office development, where compatible with the adjacent land uses and circulation system, in the CBD, Southern Pacific Railyards, and Richards Boulevard area.

- Policy CC.LU 1.5 Central Business District. The City shall improve the physical and social conditions, urban aesthetics, and general safety of the CBD.

Uses identified for the CBD include office, retail, and service uses; condominiums and apartments; and gathering places, such as a plaza, courtyard, or park (City of Sacramento 2014). All development in the CBD should have easy access to transit, and the CBD contemplates office uses with a floor area ratio (FAR) of up to 15.0.

4.2.2 Existing Conditions

The State-owned 1215 O Street Office Building site is designated by the CAP Land Use Diagram as “office” (Exhibit 4.2-1) and is currently occupied by the vacant 115,000 GSF, four-story CDFA Annex office building (Exhibit 3-3). Land uses surrounding the 1215 O Street building site include low-to-midrise State office buildings (low-rise buildings are considered to include those that stand from one to four stories above ground level; mid-rise buildings include those that stand five to 12 stories above ground level): the Department of Transportation (Caltrans) Headquarters to the west across 12th Street; the historic Food and Agriculture building to the north, and the California Department of Veterans Affairs building directly to the east at the corner of O Street and 13th Street. Neighbors Alley runs between the CDFA Annex and the Food and Agriculture building to the north and N Street and Capitol Park are located just north of the Food and Agriculture building. The high-rise (14-story) tower Park Place Affordable Senior Studios and the Westminster Presbyterian Church are located at the intersection of N Street and 13th Street to the northeast of the project site (Exhibit 3-2).

The State-owned CalVet employee surface parking lot directly south of the building site across O Street is designated by the CAP Land Use Diagram as “residential” (Exhibit 4.2-1). Land uses surrounding this surface parking lot include low-rise apartments to the east; a surface parking lot to the southeast; low-rise apartments directly south; California State Archives office building to the southwest; light rail lines on 12th Street to the west; and additional surface parking and a mid-rise parking structure to the west and southwest (Exhibit 3-2).
4.2.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Evaluation of potential land-use impacts is based on a review of the planning documents pertaining to the project study area, including the State’s CAP, the City’s 2035 General Plan and Zoning Code, and the Sacramento Central City Community Plan. The physical layout and other characteristics of the project study area were examined during site visits and in reviews of relevant planning documents to determine whether alterations of the project site would result in physical divisions of established communities.

As described in Section 4.2.1, “Regulatory Background,” DGS developed the Capitol Area Plan and is responsible for its administration, implementation, and necessary revisions (DGS 1997a). The O Street Office Building Project would be under the jurisdiction of DGS. As a State agency, DGS is exempt from complying with local or county plans, policies, or zoning regulations. However, the City may be required to make a finding that the project is consistent with the 2035 General Plan prior to approving any encroachment or utility permits needed to construct the project (Government Code Section 65401). Therefore, the analysis of potential land-use impacts includes a review of principles, goals, and policies contained in applicable local planning documents (listed above under “Local Plans, Policies, Regulations, and Laws”).

THRESHOLDS OF SIGNIFICANCE

A land-use impact is considered significant if implementation of the 1215 O Street Office Building Project would do any of the following:

- physically divide an established community; or
- conflict with applicable land-use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

ENVIRONMENTAL IMPACTS

Impact 4.2-1: Potential to divide an established community

The 1215 O Street Office Building Project would replace the vacant CDFA Annex office building with a new 11-story office building with a floor area of 300,000 to 350,000 GSF, reactivating an under-used State-owned site in Sacramento’s CBD. The proposed office building is consistent with the existing pattern of urban land uses downtown and southwest of the State Capitol. No part of the project would extend beyond the existing urban boundaries, and no part of the project would create a barrier within the established community. The project would have no impact related to dividing an established community.

The project would replace the vacant 115,000 GSF, four-story CDFA Annex office building with a new estimated 11-story office building with a floor area ranging between 300,000 and 350,000 GSF. The project would result in reuse of an under-utilized State-owned site in Sacramento’s CBD, which is a PIA in the city’s downtown core. The project would use the CalVet surface parking lot for temporary construction staging and, after construction is complete, for an array of solar panels over the parking spaces to provide energy to the new building. The existing pattern of land uses in the project vicinity is characterized by public and private office uses, parking lots, residential uses, retail uses, commercial uses, and parks that are typical of urban areas. The project site is surrounded by existing government office and high-density residential buildings, as well as parking facilities. Replacement of the CDFA Annex with a new, larger office building and the addition of solar panels over an existing surface parking lot would be generally consistent with the existing pattern of development downtown and within the project site vicinity. The maximum FAR for the new office building would be approximately 9 (based on the maximum building area of 350,000 GSF and the maximum...
available footprint of 38,400 sq. ft.), which is within the City’s maximum FAR of 15 for office uses within the CBD. The project would not conflict with surrounding land uses. No part of the O Street Office Building Project would extend beyond the existing urban boundaries of downtown Sacramento; no part of the project would create a barrier within the established community; and the project would not conflict with surrounding land uses. The project would have no impact related to dividing an established community.

Mitigation Measures

No mitigation is required.

Impact 4.2-2: Consistency with land-use plans and documents

The 1215 O Street Office Building Project would be consistent with the objectives and purposes of the Capitol Area Plan, the 2015 Capitol Area Plan Progress Report, Governor Brown’s 2016 Five-Year Infrastructure Plan, and with local land use plans. Replacement of the vacant CDFA Annex with a new, larger State office building would not result in any conflicts with environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This impact is less than significant.

The 1215 O Street Office Building Project would demolish the vacant CDFA Annex, construct a new 300,000 to 350,000 GSF office building, and install solar panels over the CalVet surface parking lot across O Street to the south. Both the building site and parking lot are owned by the State and within the CAP boundary. The impact of the project is compared against the CAP and accompanying CAP Implementation Program, which are the entitled land-use plan and implementation guidance, respectively, for development on State-owned land in the Capitol Area.

As of 2015, 1.2 million GSF of office space have been constructed in the Capitol Area, leaving the need to construct 1.3 million GSF to meet the CAP goal of 2.5 million GSF (DGS 2015). Although the 1215 O Street Office Building was not identified as an opportunity site for office development in the State’s CAP (because it was already occupied by the CDFA Annex), the CAP suggests examination of underutilized State properties. The most recent CAP Progress Report (2015) described a feasibility study by DGS that recommended replacing the existing CDFA Annex with a new, larger office building. In addition, replacement of the CDFA Annex was identified as one of the initial projects in Governor Brown’s 2016 Five-Year Infrastructure Plan. The proposed demolition of the CDFA Annex and construction of a new 1215 O Street Office Building would be consistent with the State’s CAP designation as “office,” consistent with the 2015 CAP Progress Report recommendation, and consistent with the Governor’s 2016 Infrastructure Plan (Exhibit 4.2-1). The proposed office building would be larger (approximately 300,000 to 350,000 GSF) than the existing CDFA Annex (115,000 GSF), intensifying office space on the underutilized site and allowing for consolidation of State agencies in the Capitol Area, consistent with the principals of the CAP. The proposed 11-story office building would also be taller than the existing four-story CDFA Annex, but would be consistent with maximum allowable building height of 150 feet, as defined by the Capitol View Protection Act (see Exhibit 4.15-1). The CalVet surface parking lot would remain a surface parking, not “residential” as designated in the CAP and Implementation Plan. The proposed addition of solar panels over the surface parking would not alter the existing land use, nor would it negate the ability of the surface parking lot to be developed in the future for residential use; therefore, the proposed addition of solar panels to the site would not conflict with the residential designation. The proposed solar array over the surface parking would comply with the 250-foot height limit established by the Capitol View Protection Act for that block (see Exhibit 4.15-1). Therefore, the 1215 O Street Office Building Project would be consistent with the State-designated land uses for the project site.

Although the State is not subject to local plans, DGS has considered consistency with the Sacramento Region Blueprint, 2016 MTS/SCS, City of Sacramento 2035 General Plan, and Central City Community Plan. Both the CAP and these local land use plans call for infill development in Sacramento, intensifying uses on underutilized sites near transit, increased opportunities for pedestrian and bicycle use, prioritizing energy and water-efficient buildings and reduction of carbon emissions, and locating jobs closer to housing. The project would replace an older State office building with a new, larger State office building to meet present and future space requirements for the State of California near the State Capitol. The project would intensify
office space on the underutilized (vacant) CDFA Annex site while being integrated into downtown by providing publicly-accessible ground-floor food court, human-scale outdoor spaces, a public art element, and maintenance of publicly accessible sidewalks and the street tree canopy. As stated above, the maximum FAR for the new office building would be approximately 9, which is within the City’s maximum FAR of 15 for office uses within the CBD. The office building would be a Zero Net Energy building through energy-efficient building materials and methods and installation of solar panels, supporting reduction of the city’s carbon footprint. The building would include water conservation and reuse measures that exceed 2016 Title 24 water efficiency requirements including low-flow/high-efficiency fixtures, and the use of greywater for toilet and urinal flushing as well as trap priming. The project site is located within 500 feet of Sacramento Regional Transit’s Archives Plaza light rail station and within four blocks of bus stops for several different routes and transit providers (e.g., Sacramento Regional Transit, El Dorado Transit). The new building would also provide bicycle parking in the basement and an employee fitness center on the upper level, with lockers and shower facilities.

Replacement of the vacant CDFA Annex with a new State office building and installation of solar panels over the CalVet surface parking lot would not result in conflicts with plans, goals, or policies adopted for the purpose of avoiding or mitigating an environmental effect. Rather, the project is consistent with and would support implementation of CAP objectives as well as local land use goals. Therefore, this impact is less than significant.

Mitigation Measures

No mitigation is required.
4.3 POPULATION, EMPLOYMENT, AND HOUSING

This section documents the existing population, employment, and housing conditions in the City and County of Sacramento and assesses changes to those conditions that could result from implementation of the 1215 O Street Office Building Project. This section also characterizes the population, employment, and housing changes that could trigger adverse physical effects in the city or the region.

4.3.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS
No federal plans, policies, regulations, or laws related to population, employment, and housing are applicable to the project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Capitol Area Plan
The 1997 Capitol Area Plan (CAP) is the statutory master plan for development on State-owned land surrounding the State Capitol, in accordance with Government Code Section 8160 et seq. The CAP envisions State offices, housing, neighborhood commercial, parking, and multimodal streets creating a vibrant urban district in the heart of Sacramento. Per the 2015 CAP Progress Report, the State’s portfolio in the Capitol Area includes 33 office buildings that provide over 9.3 million gross square feet (GSF) of office space, as well as sites that are identified for future office development. The CAP identified plans for 2.8 million GSF of state office development within the Capitol Area. As of January 2015, 1.5 million GSF of office development was completed and an additional 1.3 million GSF of development remained to be constructed (DGS 2015:4).

The following CAP objectives are relevant to population, employment, and housing.

State Offices. To provide offices and related services to meet present and future space requirements for the State of California near the State Capitol and in the context of metropolitan Sacramento, in the most cost effective manner.

Development of the Community. To stimulate the development of a community within the Capitol Area which is attractive and comfortable to work in, live in, and visit, which is integrated into the fabric of the rest of the City of Sacramento, and which is physically and economically viable over the long term.

Principle 1: Provide commercial and service facilities to meet the needs of residents, employees, and visitors in the Capitol Area.

Principle 2: Incorporate ground floor commercial into new state office and parking facilities and housing developments as feasible and appropriate, consistent with principles and land use designations, market demand, and other development considerations.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does
reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

Sacramento Region Blueprint
The Sacramento Region Blueprint was initiated in 2002 by the Sacramento Area Council of Governments (SACOG). The Sacramento Region is defined for the purposes of SACOG and the Blueprint as including El Dorado and Placer Counties (minus the Tahoe area) and Sacramento, Sutter, Yolo, and Yuba Counties. In December 2004, the SACOG Board of Directors adopted the Preferred Blueprint Scenario, a vision for growth that promotes compact, mixed-use development and more transit choices as an alternative to low-density development. The Sacramento Region Blueprint depicts a path to growth through the year 2050 that is generally consistent with principles of “Smart Growth” that encourage a variety of housing close to employment, shopping, and entertainment and provides options for walking, biking, or taking public transit. The following Blueprint Growth Principles are applicable to population, employment, and housing (SACOG 2007).

- Mixed-Use Developments: Building homes, shops, entertainment, office, and light-industrial uses near each other can encourage active, vital neighborhoods. This mixture of uses can be arranged vertically or horizontally. These types of projects function as local activity centers where people would tend to walk or bike to destinations. Separated land uses, on the other hand, lead to the need to travel more by auto because of the distance between uses.

- Compact Development: Creating environments that are more compactly built and use space in an efficient but aesthetic manner can encourage more walking, biking, and public-transit use, and shorten auto trips.

- Housing Choice and Diversity: Providing a variety of types of residences where people can live creates opportunities for the variety of people who need them. This issue is of special concern for people with very low, low, and moderate incomes. By providing a diversity of housing options, more people would have a choice of where to live.

- Use of Existing Assets: In urbanized areas, development on infill or vacant lands, intensification of the use of underutilized parcels, or redevelopment can make better use of existing public infrastructure. This can also include rehabilitation and reuse of historic buildings, denser clustering of buildings in suburban office parks, and joint use of existing public facilities such as schools and parking garages.

The preferred Blueprint scenario proposes an even mixture of jobs and housing growth; emphasizes infill development; and proposes balanced housing growth between large-lot single-family units, small-lot single-family units, and attached multifamily units consistent with demographic trends and market conditions.

2016 Metropolitan Transportation Plan/Sustainable Communities Strategy
The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is a long-range plan for transportation in the region following SACOG’s adoption of the Blueprint. The 2016 MTP/SCS covers the period from 2012 to 2036. SACOG is required by federal law to update the MTP at least every four years. SACOG uses the MTP/SCS to identify, in collaboration with cities, counties, transit agencies, near-term (20 years) growth and transportation investment priorities. The City of Sacramento and the other cities and counties in the region have been updating general plans and development codes to allow and encourage Blueprint-friendly development and transit districts. The City’s proposed 2035 General Plan buildout assumptions, population projections, and transportation assumptions are based largely on information provided by SACOG for the 2012 MTP/SCS. In the city, the Preferred Blueprint Scenario provides for higher densities, increased infill development, and a greater variety of housing types, as generally described above.

Long-term population and employment projections that were used in preparation of the 2012 MTP/SCS were prepared by the Center for the Continuing Study of the California Economy in March 2005 for SACOG. For the 2016 MTP/SCS, SACOG conducted a minor refinement of the growth projections based on an assessment of
the long-term economic trends for the region. The differences between the growth forecasts are as follows (SACOG 2016:21 – 22):

- The 2036 population growth projections are expected to reach 811,000 people, whereas the 2012 MTP/SCS reported an estimate of 871,000 people in 2035.
- The 2036 housing growth projection of 285,000 homes identified in the 2016 MTP/SCS was also lower than the 2012 estimate of 303,000 new homes in 2035.
- While the total employment projection for 2036 is the same total employment forecast for 2035 in the previous MTP/SCS, the employment growth shown in the 2016 MTP/SCS shows a greater change as a result of the recovery of jobs lost during the recession.

City of Sacramento 2035 General Plan
The following goals and policies in the Land Use and Urban Design and Economic Development Elements are relevant to the analysis of population and housing effects.

Goal LU 1.1 Growth and Change. Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.

- **Policy LU 1.1.5 Infill Development.** The City shall promote and provide incentives (e.g., focused infill planning, zoning/rezoning, revised regulations, provision of infrastructure) for infill development, reuse, and growth in existing urbanized areas to enhance community character, optimize City investments in infrastructure and community facilities, support increased transit use, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, and enhance retail viability.

- **Policy LU 2.1.7 Good Neighbors.** The City shall encourage businesses located within and adjacent to residential developments to conduct their business in a courteous manner by limiting disturbances and nuisances from operations and patrons, and to act as members of the community by making themselves available to respond to complaints and by participating in neighborhood/community meetings.

Goal LU 2.8 City Fair and Equitable. Ensure fair and equitable access for all citizens to employment, housing, education, recreation, transportation, retail, and public services, including participation in public planning for the future.

- **Policy LU 2.8.6 Jobs Housing Balance.** The City shall encourage a balance between job type, the workforce, and housing development to reduce the negative impacts of long commutes and provide a range of employment opportunities for all city residents.

Goal LU 7.1 Employment Centers. Encourage employee-intensive uses throughout the city in order to strengthen Sacramento’s role as a regional and West Coast employment center and to encourage transit ridership and distribute peak hour commute directions.

- **Policy LU 7.1.1 Employment Intensive Uses.** The City shall encourage employee intensive uses such as medical and professional offices, light industry, research, and skill training.

Goal ED 3.1 Land, Sites, and Opportunity Areas. Retain, attract, expand, and develop businesses by providing readily available and suitable sites with appropriate zoning and access.

**Policy ED 3.1.3 Key Infill and Opportunity Areas.** The City shall facilitate and promote economic development projects in key infill and opportunity areas.
4.3.2 Existing Conditions

The 1215 O Street Office Building Project site is located in downtown Sacramento, within the Central Business District (CBD). The existing citywide and countywide data and future trends regarding population, employment, and housing are presented below.

POPULATION

The SACOG 2016 MTP/SCS projections estimate that the region’s population will reach over 3 million by 2035, resulting in the addition of approximately 810,000 new residents more than the region’s population in 2010. (The region includes El Dorado and Placer Counties [minus the Tahoe area] and Sacramento, Sutter, Yolo, and Yuba Counties.)

During the 10-year period from 2000 to 2010, the population of the City of Sacramento increased from 407,018 to 466,488, or 14.6 percent (U.S. Census Bureau 2001, 2011). Population as of January 1, 2016, is estimated to be 485,683 (California Department of Finance 2016). Between 2010 and 2016, the estimated average population growth rate in Sacramento was less than 1 percent per year ([(485,683 - 466,488) ÷ 466,488 x 100] ÷ 6 years = 0.69 percent), a rate that was slightly lower than that of the county and region but almost half of the growth rate projected for the city. As shown in Table 4.3-1, population growth in the city is projected to continue at an increasing rate between 2020 and 2035, and most growth is expected to occur in the central city (City of Sacramento 2013:H 3-6). City of Sacramento population projections indicate that the city may have about 640,000 residents by 2035, an increase of approximately 174,000 residents, representing 21 percent of the region’s total population (Table 4.3-1).

The project site is located in downtown Sacramento, generally defined as a 4.5 square mile area. The City’s Housing Element estimated that this area had 32,367 residents in 2010, and projected that, by 2025, the central city area would have a total of 109,312 residents (City of Sacramento 2013:H 3-5 and H 3-6).

HOUSING

SACOG estimates needs for housing production based on income and affordability to ensure that regional housing needs are addressed throughout the region. The 2013-2021 Regional Housing Needs Plan (SACOG 2012) anticipates that 24,101 new housing units would be required in the city during the Regional Housing Needs Assessment planning period (2013–2021) to meet regional housing needs.

Data from the 2015 American Community Survey reflect Sacramento as a community with growing housing values, low vacancy, and relatively small households. The number of housing units in the City of Sacramento
has increased from 191,000 in 2010 to 193,298 in 2015 (U.S. Census Bureau 2011, 2016). The city’s housing growth rate was approximately 1.2 percent between 2010 and 2015.

According to real estate and housing professionals, a housing vacancy rate of 5 percent is considered balanced (City of Sacramento 2013:H 3-23). Vacancy rates below 5 percent indicate a housing shortage in a community. The U.S. Census Bureau reports that the city had a vacancy rate of 1.6 percent for owner-occupied units and 5.2 percent for rental units in 2015 (U.S. Census Bureau 2016). Similarly, the county had a vacancy rate of 1.7 percent for owner-occupied units and 5.6 percent for rental units in 2015. These rates indicate that both the city and county have a tight housing market and a housing shortage.

According to the U.S. Census, an average of 460 units were added in the city each year between 2010 and 2015 (see Table 4.3-2). In order to meet projected housing demand for the city and the region, over 68,000 new housing units would need to be constructed between 2012 and 2035 (about 3,000 new units per year), which is a greater pace of housing growth than occurred between 2010 and 2015. As of 2013, 42,362 new housing units were approved and planned in the city, which is 16 percent of the projected 2035 housing units (City of Sacramento 2014a:3-5 and 3-6).

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2012</th>
<th>2015</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>197,900</td>
<td>299,732</td>
<td>213,700</td>
<td>386,215</td>
</tr>
<tr>
<td>Housing Units</td>
<td>191,000</td>
<td>192,352</td>
<td>193,298</td>
<td>260,699</td>
</tr>
<tr>
<td>Jobs/Housing Index</td>
<td>1.04</td>
<td>1.56</td>
<td>1.11</td>
<td>1.48</td>
</tr>
</tbody>
</table>

Source: City of Sacramento 2014a:3-5; EDD 2016a, 2016b; U.S. Census Bureau 2011, 2016

**EMPLOYMENT**

Employment growth is one of the primary determinants of housing demand. Working age individuals often will choose a place to live based on employment prospects in the local area. Therefore, employment trends are an important indicator of housing demand. The rate of employment growth, and the types of jobs most likely to be created, would determine how much housing would be needed by type and cost. For example, an economy based on seasonal tourism will generate different housing needs for local workers than economics based on government, education, research, or technology.

**Sacramento County**

As shown in Table 4.3-3, there were an estimated 564,000 jobs in Sacramento County in 2000 and an estimated 615,600 jobs in 2015 (EDD 2016a, b). In 2015, the unemployment rate for the county was 6.0 percent. The county labor market is dominated by government employment, education and health, and professional and business services. Of the total employment, 26 percent in government, 16 percent was in education and health services, 14 percent in professional and business services, and 12 percent in retail and wholesale trades. Among all employers (public and private), the California Employment Development Department (EDD) found that government agencies, health care and related services firms, manufacturing, educational establishments, and utilities are among the major employers in Sacramento County (EDD 2017).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational &amp; Health Services</td>
<td>55,800</td>
<td>86,400</td>
<td>98,500</td>
<td>76.5%</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>81,300</td>
<td>76,700</td>
<td>87,800</td>
<td>8.0%</td>
</tr>
<tr>
<td>State Government</td>
<td>81,600</td>
<td>85,300</td>
<td>87,400</td>
<td>7.1%</td>
</tr>
</tbody>
</table>
Table 4.3-3  Employment by Industry in Sacramento County 2000–2015\(^1\)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Government</td>
<td>62,500</td>
<td>68,400</td>
<td>65,300</td>
<td>4.5%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>11,300</td>
<td>10,600</td>
<td>10,000</td>
<td>-11.5%</td>
</tr>
<tr>
<td>Wholesale &amp; Retail Trade</td>
<td>77,400</td>
<td>69,700</td>
<td>76,700</td>
<td>-0.9%</td>
</tr>
<tr>
<td>Accommodation &amp; Food Services</td>
<td>38,000</td>
<td>41,200</td>
<td>50,300</td>
<td>32.4%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>40,400</td>
<td>32,100</td>
<td>32,800</td>
<td>-18.8%</td>
</tr>
<tr>
<td>Construction</td>
<td>32,400</td>
<td>23,500</td>
<td>30,700</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>27,000</td>
<td>19,400</td>
<td>20,900</td>
<td>-22.6%</td>
</tr>
<tr>
<td>Other Services</td>
<td>19,100</td>
<td>20,100</td>
<td>20,700</td>
<td>8.4%</td>
</tr>
<tr>
<td>Transportation, Warehousing &amp; Utilities</td>
<td>13,000</td>
<td>11,900</td>
<td>13,700</td>
<td>5.4%</td>
</tr>
<tr>
<td>Information</td>
<td>14,600</td>
<td>13,200</td>
<td>10,100</td>
<td>-30.8%</td>
</tr>
<tr>
<td>Arts, Entertainment &amp; Recreation</td>
<td>6,100</td>
<td>7,300</td>
<td>7,900</td>
<td>29.5%</td>
</tr>
<tr>
<td>Total Farm</td>
<td>3,200</td>
<td>2,600</td>
<td>2,600</td>
<td>-18.8%</td>
</tr>
<tr>
<td>Mining and Logging</td>
<td>300</td>
<td>100</td>
<td>200</td>
<td>-33.3%</td>
</tr>
<tr>
<td>Total(^2)</td>
<td>564,000</td>
<td>568,500</td>
<td>615,600</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

\(^1\) Employment is by place of work; excludes self-employed individuals, unpaid family workers, household domestic workers, and workers on strike.

\(^2\) EDD notes that the employee total from the industry totals reflected herein are not directly comparable to the EDD employment totals in Table 4.3-2.

Source: EDD 2016c

City of Sacramento

The city is the workplace for over 30 percent of all the jobs in Sacramento County and was estimated to have roughly 213,700 employees in 2015 (see Table 4.3-2). In 2015, the unemployment rate for the city was 6.4 percent (EDD 2016b). The SACOG growth forecast used for the 2035 General Plan estimates that the city’s employment is projected to reach 386,215 by 2035, resulting in the addition of approximately 172,515 new jobs over the next 20 years. The city’s projected employment would represent approximately 30 percent of the total jobs in the region (1,327,323 jobs) projected in the 2016 MTP/SCS (SACOG 2016:22).

Government jobs likely will continue to drive the city’s employment base, particularly in the central city area, although growth in other sectors will help to diversify the city’s economy. The number of employees in the central city accounted for nearly half of the city’s total jobs in 2011, with about half of those jobs within government (City of Sacramento 2014b:2-221). Additionally, although difficult to quantify, a significant portion of private-sector jobs are likely associated with lobbying and other government service businesses.

JOBS/HOUSING BALANCE

The concept of jobs/housing balance presumes that the environment and quality of life in a given area benefit when the area has a balance between its housing supply and employment base. An area that has too many jobs relative to its housing supply is likely (in the absence of offsetting factors) to have substantial in-commuting, relatively rapid increases in housing prices, and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to the number of employed residents, many of the workers are required to commute to jobs outside their area of residence. Commuting results in more traffic congestion, air quality degradation, and noise generation.

The simplest measure of jobs/housing balance is an index based on the ratio of employed residents (which is influenced by the number of homes) to jobs in the area, with an index of 1.0 indicating an ideal balance of housing and jobs. An index below 1.0 would indicate that the area has more housing than jobs and may
suggest that many residents are commuting outside the area to their jobs. An index above 1.0 indicates that the area has more jobs than housing and may suggest that many residents are commuting to jobs from outside the community.

It should be noted that jobs/housing indices are more useful for examining the potential for “self-containment” at the regional level than for determining whether this self-sufficiency actually exists in a given community. Even if communities have a statistical balance between jobs and housing, they are still likely to experience in-commuting and out-commuting, given the variety and dispersed nature of employment and residential opportunities elsewhere in the region and the high level of mobility offered by automobiles and regional and subregional public transit, such as Sacramento Regional Transit buses and light rail.

Region

In order to plan for and build a transportation system that meets the needs of the region over the next two decades, SACOG updates the MTP/SCS to include a regional growth forecast for population, housing, and jobs, and the anticipated locations of job-generating development and residences. The 2016 MTP/SCS and its growth forecast was developed in coordination with the local agencies and incorporated the most recent local plans and policies for El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties and the 22 cities within those counties (excluding the Tahoe Basin) (SACOG 2016:14).

A goal of the MTP/SCS is—between baseline and target years of 2012 and 2036—to move communities closer to the regional ratio of 1.2 jobs per household (SACOG 2016:42). As shown in Table 4.3-4, the Sacramento Central Business District (CBD)/Riverfront area, which includes downtown, as well as the county and region are expected to essentially reach the regional jobs/housing index goal of 1.2 in 2036.

City of Sacramento

The anticipated trend in the jobs/housing index for the City of Sacramento, based primarily on data from the City, EDD, and the U.S. Census Bureau, is shown in Table 4.3-2. The jobs/housing index for the City of Sacramento increased from 1.04 in 2010 to an estimated 1.11 in 2015. This increase indicates that the relative imbalance between housing and jobs in the city increased from 2010 to 2015, with employment growth slightly outpacing housing growth. These indices show that Sacramento continued to have more jobs than housing units in 2015 and that the city supports a net in-commuting population. The jobs/housing index for the City of Sacramento is projected to further increase through 2035, indicating continued increase in growth rate of jobs relative to growth in housing. Based on assumptions by the City as part of its 2035 General Plan Update, the jobs/housing index would be approximately 1.48 in 2035 (see Table 4.3-2). Although there would be a greater number of jobs than housing in 2035 compared to 2015, the jobs/housing balance of 1.48 in the City of Sacramento is projected to be somewhat balanced.

Table 4.3-4  Jobs and Households in the Region, 20081 and 2036

<table>
<thead>
<tr>
<th>Area</th>
<th>Jobs 2008</th>
<th>Jobs 2036</th>
<th>Households 2008</th>
<th>Households 2036</th>
<th>Jobs/Housing Index 2008</th>
<th>Jobs/Housing Index 2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento CBD/Riverfront</td>
<td>72,043</td>
<td>86,612</td>
<td>38,548</td>
<td>56,434</td>
<td>1.41</td>
<td>1.22</td>
</tr>
<tr>
<td>Sacramento County</td>
<td>626,155</td>
<td>831,171</td>
<td>511,402</td>
<td>699,811</td>
<td>1.22</td>
<td>1.19</td>
</tr>
<tr>
<td>Region</td>
<td>969,838</td>
<td>1,327,279</td>
<td>819,277</td>
<td>1,140,202</td>
<td>1.18</td>
<td>1.16</td>
</tr>
</tbody>
</table>

1 As described in the 2016 MTP/SCS, a base year of 2008 is used here because it reflects a more normal year in the regional economy than 2012 as that was during the recession.

2 The Sacramento CBD/Riverfront employment center includes downtown Sacramento and adjacent areas. Jobs and households for the Sacramento CBD/Riverfront employment center also include those within a 4-mile radius shed, which is split with neighboring employment center 4-mile radius sheds.

Source: SACOG 2016:220, 226
EXISTING SITE-SPECIFIC CONDITIONS

The existing CDFA Annex is 115,000 square feet and four stories. The building has been vacant since November 2011. The existing surface parking lot directly south across O Street from the building site is a State-owned CalVet employee parking lot.

4.3.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

This examination of population, employment, and housing conditions is based on information obtained from review of the plans for the project; review of available population, employment, and housing projections from the City of Sacramento, SACOG, the U.S. Census Bureau, and other sources; and review of applicable elements and policies from the City of Sacramento 2035 General Plan, the CAP, and 2015 CAP Progress Report.

THRESHOLDS OF SIGNIFICANCE

A population, employment, and housing impact is considered significant if implementation of the 1215 O Street Office Building Project would do any of the following:

- induce substantial population growth in an area, either directly (by proposed new homes and businesses) or indirectly (for example, through the extension of roads, other infrastructure, or provision of additional employment);
- generate a substantial demand for new housing, the construction of which could cause significant environmental impacts; or
- displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The 1215 O Street Office Building Project would replace a vacant office building with a new, larger office building; therefore, it would not displace existing housing or residents. The project would not necessitate construction of replacement housing elsewhere and this issue is not analyzed further in this DEIR.

ENVIRONMENTAL IMPACTS

Impact 4.3-1: Population growth and housing demand during construction

Development of the 1215 O Street Office Building Project would generate a temporary increase in employment in the city of up to 225 construction jobs during the peak construction period. The number of existing construction personnel in the region is sufficient to meet the demand associated with the project; therefore, this temporary increase in employment would not generate any substantial new population growth in the area or generate the need for substantial additional housing for construction workers. This impact would be less than significant.

Construction activities for the 1215 O Street Office Building Project are estimated to begin in 2018 with completion estimated for 2021. A greater number of construction workers would be employed during peak construction periods and fewer workers would be employed during nonpeak periods. It is estimated, based on prior analysis of similar projects, that the project would generate approximately 175-225 construction...
jobs during peak construction periods. According to the latest labor data available from EDD (2016), 30,700 residents in the county are employed in the construction industry (see Table 4.3-3). Based on the 2015 unemployment rate of 6.0 percent for Sacramento County, approximately 1,800 construction employees could be available in Sacramento County to work on the proposed project. This existing number of residents who are in the construction labor force (labor force is defined as all of those people that are employed or are looking for employment), coupled with those of other areas within commute distance (e.g., Yolo, Placer, and El Dorado counties), would be sufficient to meet the demand for construction workers that would be generated by the project. Additionally, it is the nature of the construction industry for construction contractors to bid and work on projects based on their availability and need for work. As existing construction projects near completion, contractors may seek out new construction projects to maintain employment for the same workers. Therefore, it could be reasonably assumed that the project-generated demand for construction workers would not necessarily draw new workers to the area, but would provide continuation of employment for contractors and workers already in the region. Because construction workers serving the project can be expected to come from the local labor force in the City of Sacramento, Sacramento County, and surrounding areas, no substantial population growth or demand for new housing in the region as a result of these jobs would result. Therefore, the project would not generate the need for substantial additional housing in the city during construction. The impact related to population growth and housing demand associated with construction of the project would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.3-2: Increased employment opportunities and housing demand from project development

The 1215 O Street Office Building Project would facilitate relocation of about 1,000 existing State employees in the Bateson Building. In addition, the new O Street office building would support an additional 200 new employees, including approximately 12 new employees in the proposed ground-level food court and a projected increase in State employees. The net increase in employment of 200 employees would be insignificant compared to citywide employment of 213,700 jobs in 2015. The 200 new jobs would be filled by local residents and these jobs are consistent with State and local plans for job growth. The project would not generate new employment that would induce population growth such that there would additional demand for housing that could not be met by existing supply or by planned housing development. This impact is less than significant.

It is anticipated that approximately 1,000 employees from the California Health and Human Services Agency (CHHS), the Department of State Hospitals (CHS), and the Department of Development Services (DDS) occupying the 1215 O Street Office Building would primarily be relocated from the State-owned Bateson Building at 1600 9th Street (Exhibit 3-2). After the Bateson Building is vacated, it would remain vacant until additional studies are completed to evaluate the potential need for rehabilitation and future re-occupation of the building.

The 1215 O Street Office Building would include a food court on the ground level that would serve the tenants of the office building as well as the public. Development of this commercial use as part of the project is estimated to generate approximately 1 job per 500 square feet of commercial space. Based on approximately 6,000 square feet of commercial space for the food court and an employment generation rate of 1 job per 500 square feet of commercial space, this would generate up to 12 full-time equivalent employees. Between now and 2021 (the target year for occupancy of the new O Street office building), there is also a projected increase of approximately 150 employees with CHHS, DSH, and DDS. The new O Street Office Building would be sized to accommodate this growth. The new office building at 1215 O Street would provide space for 1,200 employees, so the project would accommodate an additional 200 employees.
The addition of about 200 new employees in the City of Sacramento would increase the number of jobs in the city by approximately 0.09 percent of the total number of jobs in 2015 (see Table 4.3-2). As discussed under “Housing” in Section 4.3-2, above, the vacancy rates indicate the housing market for homeowners has a limited supply, but the rental market is balanced. The jobs/housing index further supports the limited housing supply in the city. However, the jobs/housing index for Sacramento County and the region indicate that the number of jobs, and amount of housing necessary to meet the demands associated with employment opportunities, is generally balanced. SACOG projections for jobs and housing, which take into account local agency land use plans, indicate jobs/housing index in the region and the county will become more balanced through 2036 (see Table 4.3-4). Furthermore, construction of a new office building in downtown Sacramento on a currently underutilized site is consistent with the CAP and the City of Sacramento 2035 General Plan. In 2015, the unemployment rate in the city was 6.4 percent and the unemployment rate in the county was 6.0 percent, so it can be anticipated that the 200 new jobs created by the project would be filled by existing residents.

As of 2015, 1.3 million GSF remains to be constructed of the original CAP goal of constructing 2.8 million GSF in the Capitol Area. Although the 1215 O Street Office Building was not identified as an opportunity site for office development in the CAP because it was already occupied by the CDFA Annex, the CAP suggests examination of underutilized State properties, including the 1215 O Street site. Replacement of the CDFA Annex was identified as one of the initial projects in Governor Brown’s 20016 Five-Year Infrastructure Plan (a study of State office infrastructure in Sacramento), and as described in the 2015 CAP Progress Report, DGS completed a feasibility study in 2010 for the CDFA Annex that concluded that renovation of the building would not be cost effective. Rather, the feasibility study recommended replacing the existing structure with a new 397,400 GSF, 11-story office building with tenant parking, at an estimated cost of $234 million (DGS 2015:9). The 2015 CAP Progress Report determined that this approach would maximize office space while still conforming to the Capitol View Protection Act. As evaluated in Impact 4.2-2 of this DEIR, the project is consistent with State and local plans to intensify office space use on underutilized sites through renovation or redevelopment of existing buildings. In addition, the project would provide commercial space to serve employees, residents, and visitors in the Capitol Area.

The proposed project was anticipated in State, City, and regional plans. The 200 new jobs would likely be filled by the existing resident labor pool. For these reasons, the project would not generate new employment that would induce population growth such that there would additional demand for housing that could not be met by existing supply or by planned housing development. This impact would be less than significant.

**Mitigation Measures**

No mitigation is required.
4.4 TRANSPORTATION AND CIRCULATION

This section describes the existing transportation system in the vicinity of the project site and evaluates the potential impacts on the system associated with implementation of the project. Roadway, transit, bicycle, and pedestrian components of the overall transportation system are included in the analysis. Impacts are evaluated under near-term (present-day) conditions with and without the project, and cumulative (year 2036) conditions with project. The traffic analysis focuses on a specific project study area for transportation and circulation, which is defined in Section 4.4.2, “Existing Conditions,” below.

ANALYSIS SCENARIOS

The following scenarios are analyzed in this EIR:

- **Existing Conditions** – represents the baseline condition, upon which project impacts are measured. The baseline condition represents conditions in February 2017.

- **Existing-Plus-Project Conditions** – reflects changes in travel conditions associated with implementation of the proposed project.

- **Cumulative-Plus-Project Conditions** – Analyzes conditions for a cumulative scenario, which includes reasonably foreseeable land uses, planned transportation improvement projects, and proposed project implementation.

4.4.1 Regulatory Background

**FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS**

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the 1215 O Street Office Building Project. However, federal regulations relating to the Americans with Disabilities Act, Title VI, and Environmental Justice relate to transit service.

**STATE PLANS, POLICIES, REGULATIONS, AND LAWS**

**Interstate 5 Transportation Corridor Concept Report**

In 2010, Caltrans released the *Interstate 5 Transportation Corridor Concept Report* (TCCR) that includes portions of Interstate 5 (I-5) within the study area. Page 4 of this report shows existing operations on I-5 within the study area as being at level of service (LOS) F. The report also indicates a Concept LOS F for this corridor. The concept LOS represents the minimum acceptable service conditions over the next 20 years. The TCCR indicates that for existing LOS F conditions, no further degradation is permitted as indicated by the applicable performance measure.

**US 50 Transportation Concept Report and Corridor System Management Plan**

In 2014, Caltrans released the *United States Route 50 Transportation Concept Report and Corridor System Management Plan* for portions of United States Route 50 (US 50) within the study area. Table 13 of this report shows existing operations on US 50 as being at LOS F. The report also indicates a Concept LOS E for this corridor.

The above-referenced Caltrans LOS results are based on daily volume-to-capacity comparisons and do not necessarily consider specific operational characteristics (e.g., length of weave sections, peak hour factors, etc.) within the I-5 and US 50 corridors. Nevertheless, these data are valuable in understanding Caltrans’ expectations of their current and projected operating performance.
Senator Bill 743
Senator Bill 743, passed in 2013, requires the California Governor’s Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any.” OPR is currently updating its CEQA Guidelines to implement SB 743 and is proposing that vehicle miles traveled (VMT) be the primary metric used to identify transportation impacts.

Regional Plans and Programs
The Sacramento Area Council of Governments (SACOG) is responsible for the preparation of, and updates to, the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS, SACOG 2016) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP/SCS was adopted by the SACOG board in 2016.

Local Plans, Policies, Regulations, and Laws
City of Sacramento 2035 General Plan
On March 3, 2015, the City of Sacramento City Council adopted the 2035 General Plan. The Mobility Element of the City of Sacramento’s 2035 General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following LOS policy is relevant to this study:

Policy M 1.2.2: The City shall implement a flexible context-sensitive Level of Service (LOS) standard and will measure traffic operations against the vehicle LOS thresholds established in this policy. The City will measure vehicle LOS based on the methodology contained in the latest version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. The City’s specific vehicle LOS thresholds have been defined based on community values with respect to modal priorities, land use context, economic development, and environmental resources and constraints. As such, the City has established variable LOS thresholds appropriate for the unique characteristics of the City’s diverse neighborhoods and communities. The City will strive to operate the roadway network at LOS D or better for vehicles during typical weekday conditions, including AM and PM peak hour, with certain exceptions mapped on Figure M-1 (and listed in the actual General Plan document).

A. Core Area (Central City Community Plan Area) – LOS F allowed

B. Priority Investment Areas – LOS F allowed

C. LOS E roadways (11 distinct segments listed). LOS E is also allowed on all roadway segments and associated intersections located within ½ mile walking distance of a light rail stations.

D. LOS F roadways (24 distinct segments listed)

E. If maintaining the above LOS standards would, in the City’s judgment, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation and/or implement vehicle trip reduction measures as part of a development project or a city-initiated project. Additionally, the City shall not expand the physical capacity of the planned roadway network to accommodate a project beyond that identified in Figure M4 and M4a (2035 General Plan Roadway Classification and Lanes).
According to Figure M1 (Vehicle Level of Service Exception Areas) of the 2035 City of Sacramento General Plan, the proposed project is located within one of three Priority Investment Areas. The project site is also located within the Core Area, which is bounded by the Sacramento River, American River, Broadway, and Alhambra Boulevard. All study intersections are located within the Core Area as well as a Priority Investment Area; therefore, LOS F is allowed at all study locations. The City’s policy was adopted to allow decreased levels of service (i.e., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions). Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area.

The following policies from the City of Sacramento 2035 General Plan are also applicable to this study:

- **Policy M 1.1.1**: Rights-of-Way. The City shall preserve and manage rights-of-way consistent with: the circulation diagram, the City Street Design Standards, the goal to provide Complete Streets as described in Goal M 4.2, and the modal priorities for each street segment and intersection established in Policy M4.4.1: Roadway Network Development, Street Typology System.

- **Policy M 1.2.3**: Transportation Evaluation. The City shall evaluate discretionary projects for potential impacts to traffic operations, traffic safety, transit service, bicycle facilities, and pedestrian facilities, consistent with the City’s Traffic Study Guidelines.

- **Policy M 1.2.4**: Multimodal Access. The City shall facilitate the provision of multimodal access to activity centers such as commercial centers and corridors, employment centers, transit stops / stations, airports, schools, parks, recreation areas, medical centers, and tourist attractions.

- **Policy M 1.3.1**: Grid Network. To promote efficient travel for all modes, the City shall require all new residential, commercial or mixed-use development that proposes or is required to construct or extend streets to develop a transportation network that is well-connected, both internally and to off-site networks preferably with a grid or modified grid-form.

- **Policy M 1.3.2**: Eliminate Gaps. The City shall eliminate “gaps” in roadways, bikeways, and pedestrian networks. To this end:
  
  A. The City shall construct new multi-modal crossings of the Sacramento and American Rivers.

  B. The City shall plan and pursue funding to construct grade-separated crossings of freeways, rail lines, canals, creeks, and other barriers to improve connectivity.

  C. The City shall construct new bikeways and pedestrian paths in existing neighborhoods to improve connectivity.

- **Policy M 1.3.3**: Improve Transit Access. The City shall support the Sacramento Regional Transit District (RT) in addressing identified gaps in public transit networks by working with RT to appropriately locate passenger facilities and stations, pedestrian walkways and bicycle access to transit stations and stops, and public rights-of-way as necessary for transit-only lanes, transit stops, and transit vehicle stations and layover.

- **Policy M 2.1.2**: Sidewalk Design. The City shall require that sidewalks wherever possible be developed at sufficient width to accommodate all users including persons with disabilities and complement the form and function of both the current and planned land use context of each street segment (i.e., necessary buffers, amenities, outdoor seating space).

- **Policy M 2.1.4**: Cohesive and Continuous Network. The City shall develop a pedestrian network of public sidewalks, street crossings, and other pedestrian paths that makes walking a convenient and safe way to travel citywide. The network should include a dense pattern of routes in pedestrian-oriented areas such as the Central City and include wayfinding where appropriate.
Policy M 3.1.12: New Facilities. The City shall work with transit providers and private developers to incorporate transit facilities into new private development and City project designs including incorporation of transit infrastructure (i.e., electricity, fiber-optic cable), alignments for transit route extensions, new station locations, bus stops, and transit patron waiting area amenities (i.e., benches, real-time traveler information screens).

Policy M 3.1.14: Direct Access to stations. The City shall ensure that development projects located in the Central City and within ½ mile walking distance of existing and planned light rail stations provide direct pedestrian and bicycle access to the station area, to the extent feasible.

Policy M 3.1.16: Streetcar Facilities. The City shall support the development of streetcar lines and related infrastructure and services in the Central City and other multi-modal districts.

Policy M 4.2.1: Accommodate All Users. The City shall ensure that all new roadway projects and any reconstruction projects designate sufficient travel space for all users including bicyclists, pedestrians, transit riders, and motorists except where pedestrians and bicyclists are prohibited by law from using a given facility.

Policy M 4.2.2: Pedestrian- and Bicycle-Friendly Streets. In areas with high levels of pedestrian activity (e.g., employment centers, residential areas, mixed-use areas, schools), the City shall ensure that all street projects support pedestrian and bicycle travel. Improvements may include narrow lanes, target speeds less than 35 miles per hour, sidewalk widths consistent with the Pedestrian Master Plan, street trees, high-visibility pedestrian crossings, and bikeways (e.g. Class II and Class III bike lanes, bicycle boulevards, separated bicycle lanes and/or parallel multi-use pathways).

Policy M 4.2.5: Multi-Modal Corridors. Consistent with the Roadway Network and Street Typologies established in this General Plan, the City shall designate multi-modal corridors in the Central City, within and between urban centers, along major transit lines, and/ or along commercial corridors appropriate for comprehensive multimodal corridor planning and targeted investment in transit, bikeway, and pedestrian path improvements if discretionary funds become available.

Policy M 4.4.4: Traffic Signal Management. To improve traffic flow and associated fuel economy of vehicles traveling on city streets, the City shall synchronize the remaining estimated 50 percent of the city’s eligible traffic signals by 2035, while ensuring that signal timing considers safe and efficient travel for all modes.

Policy M 5.1.2: Appropriate Bikeway Facilities. The City shall provide bikeway facilities that are appropriate to the street classifications and type, number of lanes, traffic volume, and speed on all rights-of-way.

Policy M 5.1.3: Continuous Bikeway Network. The City shall provide a continuous bikeway network consisting of bike-friendly facilities connecting residential neighborhoods with key destinations and activity centers (e.g., transit facilities, shopping areas, education institutions, employment centers).

Policy M 5.1.5: Motorists, Bicyclists, and Pedestrian Conflicts. The City shall develop safe and convenient bikeways, streets, roadways, and intersections that reduce conflicts between bicyclists and motor vehicles on streets, between bicyclists and pedestrians on multi-use trails and sidewalk, and between all users at intersections.

Policy M 5.1.6: Connections between New Development and Bicycle Facilities. The City shall require that new development provides connections to and does not interfere with existing and proposed bicycle facilities.

Policy M 5.1.7: Bikeway Requirements. The City shall provide bike lanes on all repaved and/ or reconstructed arterial and collector streets to the maximum extent feasible. The appropriate facility type for each roadway segment shall be consistent with the Roadway Network and Street Typologies defined in this General Plan.
I-5 Freeway Subregional Corridor Mitigation Program

The I-5 Freeway Subregional Corridor Mitigation Program (SCMP) is a voluntary development impact fee for new developments within the I-5 corridor between Elk Grove, Downtown Sacramento, and West Sacramento that is intended to be used to construct a set of transportation improvements identified in the SACOG 2016 MTP/SCS. Under the SCMP, a project applicant whose project would generate vehicle trips over the threshold could choose to either pay the fee, which would constitute mitigation of their development project’s impacts on the freeway mainline, or conduct a Traffic Impact Study, which would evaluate that project’s impact on the freeway system and identify mitigation for those impacts.

According to the Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program (DKS Associates, January 2016), the following roadway improvements would be partially funded by the plan (with the remainder coming from other sources):

- extension of light rail from the Township 9/Richards station to Natomas Center,
- new bridge across the American River,
- two new bridges across the Sacramento River,
- reconstruction of I-5/Richards Boulevard Interchange,
- construction of HOV lanes on I-5 from Elk Grove to US 50, and
- construction of a transition lane on I-5 between the Garden Highway off- and on-ramps.

Page 36 of the study specifies that “Caltrans would consider the fees as an adequate mitigation for freeway mainline impacts.” Table 18 on Page 32 of the Nexus Study shows the proposed fee per dwelling unit, and per thousand square feet of non-residential space.

4.4.2 Existing Conditions

This section describes the existing environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. The baseline for this study represents conditions based on data collection and field observations conducted in February 2017. The environmental setting for transportation includes baseline descriptions for roadway, bicycle, pedestrian, and transit facilities.

PROJECT STUDY AREA

An extensive study area was developed based on collaboration between the EIR consultants and City of Sacramento staff, and took into consideration the Notice of Preparation comment letters. The following factors were considered when developing the study area: the project’s expected travel characteristics (including number of vehicle trips and directionality of those trips), primary travel routes to/from project vicinity, anticipated parking locations, mode split, and other considerations. Exhibit 4.4-1 shows the study area, project site, and 22 study intersections selected for analysis. The study area also includes bicycle, pedestrian, and transit facilities in the project vicinity.

Intersections

1. N Street / 9th Street
2. N Street / 10th Street
3. N Street / 12th Street
4. N Street / 13th Street
5. N Street / 15th Street
6. N Street / 16th Street
7. Neighbors Alley / 12th Street
8. Neighbors Alley / 13th Street
9. Street / 12th Street
10. Street / 13th Street
11. P Street / 3rd Street
12. P Street / 9th Street
13. P Street / 12th Street
14. P Street / 13th Street
15. Q Street / 3rd Street
16. Q Street / 9th Street
17. Q Street / 10th Street
18. W Street / 11th Street
19. W Street / 15th Street
20. W Street / 16th Street
21. X Street / 15th Street
22. X Street / 16th Street
Exhibit 4.4-1

Study Intersection

Project Site

Study Area

Source: Fehr & Peers 2017
Roadway Network
The study area is served by a system of gridded streets comprised of numbered north-south streets and lettered east-west streets, spaced approximately every 400 feet. Most portions of the street grid feature east-west running alleys located halfway between lettered streets, resulting in 200 foot north-south spacing of public roadways. Key roadways within this system that would serve trips associated with the proposed project are described, as follows:

- 9th Street is a primary two-lane, one-way southbound roadway within the study area, and forms a couplet with 10th Street. Bicycle lanes and curbside parking are located on both sides of the roadway.

- 10th Street is a primary one-way northbound roadway within the study area, and forms a couplet with 9th Street. The roadway has two lanes to the south of Q Street, and features bicycle lanes and curbside parking on both sides of the street. The roadway transitions to three lanes without bicycle lanes to the north of Q Street.

- 11th Street is minor two-lane, two-way, north-south roadway within the study area. Bicycle lanes are located on both sides of the street to the south of P Street. Curbside parking is located on both sides of the street throughout the study area.

- 12th Street is a minor two-lane, two-way, north-south roadway within the study area. The roadway includes bicycle lanes to the south of P Street. Curbside parking is located on both sides of the roadway.

- 13th Street is a minor two-lane, two-way, north-south roadway within the study area. The roadway features shared light-rail tracks/vehicle travel lanes between O Street and Q Street. Between Q Street and R Street, the roadway is disconnected for vehicle traffic because of the light-rail. Curbside parking is located on both sides of the roadway.

- 14th Street is a primary three-lane, one-way southbound roadway within the study area, and forms a couplet with 15th Street. The roadway connects to the US 50 westbound on-ramp and eastbound off-ramp in the southern portion of the study area. Curbside parking is located on both sides of the roadway.

- 15th Street is a primary three-lane, one-way northbound roadway within the study area, and forms a couplet with 16th Street. The roadway connects to the US 50 eastbound on-ramp and westbound off-ramp in the southern portion of the study area. To the north, the roadway connects to State Route 160 (SR 160). Curbside parking is located on both sides of the roadway.

- 16th Street is an intermittently connected east-west roadway within the study area. Between 7th Street and 9th Street, the roadway is one-way eastbound and is adjacent to separated light-rail tracks. Between 9th Street and 12th Street, the roadway serves light-rail and is closed to vehicle traffic. Between 12th Street and 13th Street, the roadway is closed to on-street parking. To the east of 13th Street, O Street is a two-lane, two-way street with curbside parking.

- P Street is a primary three-lane, one-way westbound roadway within the study area, and forms a couplet with Q Street. The roadway connects to the Interstate 5 (I-5) on-ramps in the western portion of the study area. Curbside parking is located on both sides of the roadway.

- Q Street is a primary three-lane, one-way eastbound roadway within the study area, and forms a couplet with P Street. The roadway originates from the Interstate 5 (I-5) off-ramps in the western portion of the study area. Curbside parking is located on both sides of the roadway.
W Street is generally a three-lane, one-way westbound roadway within the study area. This roadway functions as the westbound frontage road for the US 50 Freeway. Curbside parking is located on the north side of the roadway.

X Street is generally a three-lane, one-way eastbound roadway within the study area. This roadway functions as the eastbound frontage road for the US 50 Freeway. Curbside parking is located on the south side of the roadway.

Exhibit 4.4-2 illustrates the study roadway facilities including the number and direction of travel lanes, as well as existing traffic controls present at all study intersections.

**Truck Routes**

All federal and state highways within the City of Sacramento have been designated as truck routes by Caltrans, including I-5 and US 50 within the study area, and are included in the National Network for Service Transportation Assistance Act (STAA) of 1982. The City identified 31 two-way streets as City truck routes in a 1983 resolution, in addition to all one-way streets. Refer to the City’s website for a city-wide map of truck routes (at http://portal.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps). Within the study area, the following streets are considered City truck routes:

- 3rd Street
- 5th Street
- 7th Street
- 8th Street
- 9th Street
- 10th Street
- 15th Street
- 16th Street
- N Street
- P Street
- Q Street

**TRAFFIC DATA COLLECTION**

Traffic counts were collected at the study intersections on Wednesday, February 15, 2017 during the AM (7–9) and PM (4–6) peak periods. During all counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the Sacramento City Unified School District was in full session. In addition to collecting vehicle turning movements at the study intersections, all counts included pedestrian and bicycle activity.

**STUDY PERIODS**

Based on the traffic data collection, the AM peak hour within most of the study area occurred from 7:45 to 8:45, and the PM peak hour within the entire study area occurred from 4:30 to 5:30. The AM peak hour for intersections 18–22 in the area of the US 50 on- and off-ramps occurred from 7:30 to 8:30. The AM and PM peak hours coincide with the expected peak commute times for office employees in Downtown Sacramento.

**ROADWAY SYSTEM**

Traffic operations at all study intersections were analyzed under weekday AM and PM peak hour conditions using procedures and methodologies contained in the Highway Capacity Manual (Transportation Research Board 2010) for calculating delay at intersections. These methodologies were applied using the SimTraffic software program, which considers the effects of lane utilization, turn pocket storage lengths, upstream/downstream queue spillbacks, coordinated signal timings, pedestrian crossing activity, and other conditions on intersection and overall corridor operations. Use of SimTraffic microsimulation analysis is appropriate given the presence of coordinated signal timing plans, close spacing of signalized intersections, and overall levels of traffic and peak hour congestion within the study area. Reported results are based on an average of 10 runs. The following procedures and assumptions were applied in the development of the SimTraffic model:

- Roadway geometric data were gathered using aerial photographs and field observations.
Exhibit 4.4-2

Existing Roadway Facilities and Traffic Controls

Source: Fehr & Peers 2017
Peak hour traffic volumes were entered into the model according to the peak hour of the study area.

The peak hour factor was set at 1.0 in accordance with City of Sacramento Traffic Impact Study Guidelines.

The counted pedestrian and bicycle volumes were entered into the model according to the peak hour measurements.

Signal phasing and timings were based on existing signal timing plans provided by the City of Sacramento and field observations.

Speeds for the model network were based on the posted speed limits.

**Level of Service Definitions**

Each study intersection was analyzed using the concept of LOS. LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. Table 4.4-1 displays the delay range associated with each LOS category for signalized and unsignalized intersections.

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description (for Signalized Intersections)</th>
<th>Average Delay (Seconds/Vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Signalized Intersections</td>
</tr>
<tr>
<td>A</td>
<td>Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.</td>
<td>≤ 10.0</td>
</tr>
<tr>
<td>B</td>
<td>Operations with low delay occurring with good progression and/or short cycle lengths.</td>
<td>&gt; 10.0 to 20.0</td>
</tr>
<tr>
<td>C</td>
<td>Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.</td>
<td>&gt; 20.0 to 35.0</td>
</tr>
<tr>
<td>D</td>
<td>Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.</td>
<td>&gt; 35.0 to 55.0</td>
</tr>
<tr>
<td>E</td>
<td>Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.</td>
<td>&gt; 55.0 to 80.0</td>
</tr>
<tr>
<td>F</td>
<td>Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.</td>
<td>&gt; 80.0</td>
</tr>
</tbody>
</table>

Note: LOS = level of service; V/C ratio = volume-to-capacity ratio

LOS at signalized intersections and roundabouts based on average delay for all vehicles. LOS at unsignalized intersections is reported for entire intersection and for minor street movement with greatest delay.

Source: Transportation Research Board 2010

For signalized intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection. For side-street stop controlled intersections, the delay and LOS for the overall intersection is reported along with the delay for the worst-case movement.

**Existing Traffic Volumes**

Exhibits 4.4-3A, 4.4-3B, and 4.4-3C display the existing AM and PM peak hour intersection traffic volumes, traffic controls, and lane configurations.
Exhibit 4.4-3A  Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions, Study Intersections 1 through 8
Exhibit 4.4-3B  Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions, Study Intersections 9 through 16

Exhibit 4.4-3C  Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions, Study Intersections 17 through 22
Existing Intersection Operations

Table 4.4-2 displays the existing peak-hour intersection operations at the study intersections (refer to Appendix B for technical calculations). No vehicle delay or LOS is reported for Intersection 7 because there are no movements at this location that experience delay.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>AM</th>
<th>PM</th>
<th>Existing Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. N Street / 9th Street</td>
<td>Signal</td>
<td>10</td>
<td>13</td>
<td>A</td>
</tr>
<tr>
<td>2. N Street / 10th Street</td>
<td>Signal</td>
<td>11</td>
<td>12</td>
<td>B</td>
</tr>
<tr>
<td>3. N Street / 12th Street</td>
<td>Signal</td>
<td>6</td>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>4. N Street / 13th Street</td>
<td>SSSC</td>
<td>2 (4)</td>
<td>2 (6)</td>
<td>A(A)</td>
</tr>
<tr>
<td>5. N Street / 15th Street</td>
<td>Signal</td>
<td>8</td>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>6. N Street / 16th Street</td>
<td>Signal</td>
<td>14</td>
<td>13</td>
<td>B</td>
</tr>
<tr>
<td>7. Neighbors Alley / 12th Street</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. Neighbors Alley / 13th Street</td>
<td>SSSC</td>
<td>0 (3)</td>
<td>1 (5)</td>
<td>A(A)</td>
</tr>
<tr>
<td>9. O Street / 12th Street</td>
<td>SSSC</td>
<td>3 (6)</td>
<td>3 (5)</td>
<td>A(A)</td>
</tr>
<tr>
<td>10. O Street / 13th Street</td>
<td>SSSC</td>
<td>2 (6)</td>
<td>2 (7)</td>
<td>A(A)</td>
</tr>
<tr>
<td>11. P Street / 3rd Street</td>
<td>Signal</td>
<td>9</td>
<td>13</td>
<td>A</td>
</tr>
<tr>
<td>12. P Street / 9th Street</td>
<td>Signal</td>
<td>11</td>
<td>21</td>
<td>B</td>
</tr>
<tr>
<td>13. P Street / 12th Street</td>
<td>Signal</td>
<td>7</td>
<td>8</td>
<td>A</td>
</tr>
<tr>
<td>14. P Street / 13th Street</td>
<td>SSSC</td>
<td>3 (22)</td>
<td>3 (14)</td>
<td>A(C)</td>
</tr>
<tr>
<td>15. Q Street / 3rd Street</td>
<td>Signal</td>
<td>28</td>
<td>9</td>
<td>C</td>
</tr>
<tr>
<td>16. Q Street / 9th Street</td>
<td>Signal</td>
<td>4</td>
<td>7</td>
<td>A</td>
</tr>
<tr>
<td>17. Q Street / 10th Street</td>
<td>Signal</td>
<td>17</td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>18. W Street / 11th Street</td>
<td>Signal</td>
<td>15</td>
<td>18</td>
<td>B</td>
</tr>
</tbody>
</table>
### Table 4.4-2 Intersection Operations – Existing Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Peak Hour</th>
<th>Existing Conditions</th>
<th>Delay&lt;sup&gt;1&lt;/sup&gt;</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. W Street / 16th Street / US 50 WB Off-Ramp</td>
<td>Signal</td>
<td>AM</td>
<td>26</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>39</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>21. X Street / 15th Street / US 50 EB Off-Ramp</td>
<td>Signal</td>
<td>AM</td>
<td>18</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>31</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>22. X Street / 16th Street / US 50 EB On-Ramp</td>
<td>Signal</td>
<td>AM</td>
<td>13</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>16</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

Notes: LOS = Level of Service. SSSC = Side-Street Stop-Controlled

<sup>1</sup> For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. Intersection LOS and delay is calculated based on the procedures and methodology contained in the HCM 2010 (TRB, 2010). All intersections were analyzed in SimTraffic.

Source: Fehr & Peers 2017

All intersections currently operate at LOS C or better under both peak hours, except for Intersection 20 (W Street/16<sup>th</sup> Street/US 50 Westbound Off-Ramp), which operates at LOS D under the PM peak hour. Overall, the existing roadway system within the area can be characterized as operating efficiently. Motorists typically incur modest delays, do not experience substantial vehicle queues, and benefit from the coordinated traffic signal system along the primary commute corridors that connect Downtown to the regional freeway system. The highest vehicle delays in the study area occur around the US 50 off-ramps during the PM peak hour. The westbound off-ramp intersection at 16<sup>th</sup> Street operates at LOS D with an average delay of 39 seconds, while the eastbound off-ramp intersection at 15<sup>th</sup> Street operates at LOS C with an average delay of 31 seconds.

### Existing Off-Ramp Queues

Table 4.4-3 displays the existing off-ramp queuing within the study area during the AM and PM peak hours. As shown, all study freeway off-ramp queues remain within the available storage area during the both peak hours.

### Table 4.4-3 Off-Ramp Queuing – Existing Conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Available Storage&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Peak Hour</th>
<th>Existing Conditions Queue&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate 5 SB Off-Ramp at Q Street (from Q Street/3rd Street)</td>
<td>1,700 feet</td>
<td>AM</td>
<td>375 feet / 125 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>125 feet / 375 feet</td>
</tr>
<tr>
<td>Interstate 5 NB Off-Ramp at Q Street (from Q Street/3rd Street)</td>
<td>2,075 feet</td>
<td>AM</td>
<td>325 feet / 100 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>100 feet / 325 feet</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 10th Street&lt;sup&gt;3&lt;/sup&gt; (from W Street/11th Street)</td>
<td>2,150 feet</td>
<td>AM</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>-</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 16th Street (from W Street/16th Street)</td>
<td>1,050 feet</td>
<td>AM</td>
<td>225 feet / 250 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>250 feet / 225 feet</td>
</tr>
<tr>
<td>US 50 EB Off-Ramp at 15th Street (from X Street/15th Street)</td>
<td>1,125 feet</td>
<td>AM</td>
<td>175 feet / 275 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>275 feet / 175 feet</td>
</tr>
</tbody>
</table>

Notes:

<sup>1</sup>The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point.

<sup>2</sup>Maximum queue length is based upon output from SimTraffic microsimulation software.

<sup>3</sup>The US WB Off-Ramp at 10<sup>th</sup> Street (as specified by freeway wayfinding signage) is measured from the initial off-ramp terminal intersection of W Street/11<sup>th</sup> Street.

Source: Fehr & Peers 2017
Existing Vehicle Miles Traveled Per Service Population

Table 4.4-4 displays the existing daily VMT per service population (total residents and employees) within the study area. The study area used for the VMT calculations is the Sacramento Core Area, which is bounded by the Sacramento River, American River, Alhambra Boulevard, and Broadway.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sacramento Core Area</th>
<th>Sacramento Core Area Generated</th>
<th>Daily Vehicle Trips</th>
<th>Daily VMT</th>
<th>Daily VMT per Service Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Conditions</td>
<td>25,936</td>
<td>87,641</td>
<td>113,577</td>
<td>534,707</td>
<td>4,189,079</td>
</tr>
</tbody>
</table>

Source: Fehr & Peers 2017

TRANSIT SYSTEM

Local transit service within the study area is provided by Sacramento Regional Transit District (RT), which operates 69 bus routes and 42.9 miles of light rail on three lines (Blue Line, Gold Line, and Green Line) throughout a 418-square-mile service area. Buses and light rail run 365 days a year, using 87 light rail vehicles, 211 buses, and 29 shuttle vans. RT’s annual ridership has steadily increased on both its bus and light rail systems from 14 million passengers in 1987 to more than 25 million passengers in Fiscal Year 2016. Currently, weekday light rail ridership averages about 36,000, and the weekday bus ridership is approximately 38,500 passengers per day.

The project site is located approximately one block from the Archives Plaza Station at 11th Street/O Street. This station is served by all three RT light rail lines. The Blue Line and Gold Line generally operate on 15-minute headways during the day and 30-minute headways in the evening and on weekends and holidays, while the Green Line operates on 30-minute headways throughout the day.

- **Blue Line** – connects to I-80/Watt Avenue to the north and Cosumnes River Collect to the south. The Blue Line operates from about 4:00 AM through 1:00 AM Monday through Friday, from about 4:30 AM through 1:00 AM on Saturday, and from about 5:00 AM through 11:00 PM on Sunday and holidays.

- **Gold Line** – connects to the Sacramento Valley Station (Amtrak) in Downtown Sacramento to region east until Folsom. The Gold Line operates from about 4:00 AM through 12:30 AM Monday through Friday, from about 4:45 AM through 12:30 AM on Saturday, and from about 4:45 AM through 10:30 PM on Sunday and holidays.

- **Green Line** – serves Downtown Sacramento and connects to the 7th & Richards/Township 9 Station in the River District. The Green Line operates from about 6:00 AM through 8:45 PM Monday through Friday. No service is provided on Saturday, Sunday, or holidays.

All three light rail lines travel along the same route near the project site. Dedicated roadway space is allocated for light rail on O Street (between 7th Street and 12th Street), and between Q Street and R Street (from 12th Street to 24th Street). Light rail tracks are shared with vehicle traffic along 12th Street (between O Street and Q Street). Light rail crossings at the intersections along O Street (8th Street, 9th Street, 10th Street, and 11th Street) are at-grade without crossing gates. Light rail crossing between Q Street and R Street (at 11th Street, 13th Street, 14th Street, 15th Street, 16th Street, and 17th Street) are also at-grade, but include crossing gates.

Exhibit 4.4-4 displays the locations of existing rail service within the study area.
Source: Fehr & Peers 2017

Exhibit 4.4-4

Existing Rail Service
Multiple bus lines also serve the study area, including RT Routes 6 and 38, which have stops within ¼ mile of the project site. These routes are described in detail below:

- Route 6-Land Park – provides connections between the Pocket Area, Land Park, and Downtown Sacramento. The Route 6-Land Park route operates every hour on weekdays between 6:15 AM and 8 PM. There is no weekend or holiday service. Route 6 has a stop at the P Street/11th Street and P Street/13th Street intersections, two blocks from the project site.

- Route 38-P/Q Streets – connects Downtown Sacramento with the University/65th Street Light Rail Station and Upper Land Park, providing service every hour on weekdays, weekends, and holidays. Its weekday operation runs from about 6:30 AM to 9:00 PM, its Saturday operation runs from about 7:45 AM to 8:45 PM, and its Sunday/holidays operation runs from about 8 AM to 6:30 PM. Route 38 has a stop at the P Street/11th Street and P Street/13th Street intersections, two blocks from the project site.

Local transit service within the study area is also provided by the Yolo County Transportation District (Yolobus). Yolobus service operates fixed-route bus service between downtown areas of Sacramento, West Sacramento, Davis, and Woodland, and also provides the only fixed-route transit service linking these areas to the Sacramento International Airport. Yolobus also serves Winters, Cache Creek Casino, Esparto, Madison and Knights Landing, and operates non-fixed-route shuttle service between the Southport area and Raley Field for River Cats baseball games.

Exhibit 4.4-5 displays the routes of existing local bus service within the study area.

In addition to RT and Yolobus, multiple other transit agencies including Elk Grove Transit (e-tran), Roseville Transit, El Dorado Transit, Yuba-Sutter Transit, Folsom Stage Lines, the San Joaquin Regional Transit District, and Amador Regional Transit System offer commuter service into downtown Sacramento. These bus routes generally run only during the peak AM and PM commute periods, and serve employees commuting into Downtown Sacramento from surrounding areas beyond RT service.

Exhibit 4.4-6 displays the existing commuter bus routes within the study area.

**BICYCLE SYSTEM**

Exhibit 4.4-7 displays existing bicycle facilities in the study area. The following types of bicycle facilities exist within the study area:

- On-street bike lanes (Class II) – are designated for use by bicycles by striping, pavement legends, and signs.

- On-street bike routes (Class III) – are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width.

As shown, Class II bicycle lanes exist within the study area along 5th Street, 9th Street, 10th Street, 11th Street, and 13th Street in the north/south directions and along T Street, Capitol Mall, and Capitol Avenue in the east/west directions. The 13th Street route is a primary bikeway within Downtown that connects to the project site, and is the only route that travels through Capitol Park. Most of 13th Street features Class II on-street lanes, with a relatively segment of this route (between N Street and P Street) designated as a Class III bicycle route.
Exhibit 4.4-5

Existing Local Bus Service

Source: Fehr & Peers 2017
Exhibit 4.4-6

Existing Commuter Bus Service
Exhibit 4.4-7
Existing Bicycle Facilities

Source: Fehr & Peers 2017
PEDESTRIAN SYSTEM

The high level of connectivity provided by the study area’s gridded street system, concentration of land uses, and provision of consistent high-quality pedestrian facilities results in higher levels of pedestrian travel within the study area relative to other portions of the City. According to data from the 2010 Census, 15 percent of the residents within the Central City (which is comprised of Midtown and Downtown) walk to work on a regular basis, which is approximately five times the rate of the City as a whole.

Nearly all streets in the study area feature sidewalks on both sides of the roadway, and sidewalk widths typically range between 6 and 15 feet. Most sidewalks in Downtown are separated from the roadway by on-street parking and landscaped planter strips, which feature shade trees. These streetscape features increase pedestrian comfort. Crosswalks are typically provided on all approaches to intersections, and intersections between major streets typically feature marked crosswalks on all approaches. Traffic signals within the study area operate on relatively short cycle lengths, and nearly all have automatic walk signals for pedestrians; combined, these features result in low levels of crossing delay for pedestrians.

4.4.3 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the proposed project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

ANALYSIS METHODOLOGY

The transportation and circulation analysis methodology uses the anticipated travel characteristics of the project, trip generation and mode split assumptions, and vehicle trip distribution, as described below.

Project Description

The State’s goal for the project is to provide 1,000 to 1,200 seats for State employees at the O Street building. An analysis of new and relocated staff indicates the need to accommodate 1,146 employees in 2021, the anticipated move-in date. Each employee will occupy a workstation; no workstation sharing or “hoteling” strategies are anticipated. Because office work environments require some vacant seats to accommodate new hires, restructuring, and employee relocations, a capacity of 1,200 seats is being planned in the current conceptual model. This provides a 4.5 percent program flexibility ratio, which yields a manageable number of vacant seats (54 building-wide; average 6 open seats per office floor). For purposes of the traffic analysis, employee projections for O Street are based on the following:

- 1,146 total employees:
  - 1,004 relocated employees
    - 928 employees relocated from Bateson Building (1600 9th Street)
    - 48 employees relocated from 1304 O Street Building
    - 28 employees relocated from 800 Q Street Building
  - 142 new employees

Project Trip Generation and Travel Mode Split

Project trip generation was determined starting with the trip equations from the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition) for office land use (code 710). Based on the 1,146 total employees, the equivalent trip rates under daily, AM peak hour, and PM peak hour are reported in Table 4.4-5.
ITE provides trip rates in units of vehicle trips; however, because the 1215 O Street Building Project is in an urban environment with convenient access to transit, walking, and bicycling as commute options, refined trip generation rates in units of person trips was necessary. The base vehicle trip rates from ITE were converted to person trips using the auto occupancy rate of 1.13 persons per vehicle (calculated from information in the 2016 State Employee Commute Survey). The resulting person-trip rates and person-trip generation is presented in Table 4.4-6.

The expected project travel mode splits are based on the 2016 State Employee Commute Survey. The survey documents that 36 percent of state employees working in the City of Sacramento Core Area commute by transit (State Employee Commute Survey, page 2). More detailed travel mode splits are available for all state employees, but not for state employees working in the Sacramento Core Area. Therefore, drive alone, carpool, and vanpool mode split percentages are based on the percentages for all state employees in the Sacramento region (initially 57.0 percent, 14.3 percent, and 1.4 percent, respectively) factored down to account for the higher transit mode share in the Core Area, where the project site is located. Bicycle and walk travel mode splits are consistent with the percentages for all state employees. The travel mode split percentages and person trips by mode are shown in Table 4.4-7 for total project employees, relocated employees, and new employees.
As shown in Table 4.4-7, 58 percent of the 1215 O Street Building Project employees are expected to commute by vehicle (i.e., drive alone, carpool, or vanpool). The refined number of person trips using a vehicle was converted to vehicle trips using the 1.13 average auto occupancy (persons per vehicle) based on data from the 2016 State Employee Commute Survey. Table 4.4-8 shows the expected number of vehicle trips for the total project, relocated employees, and new employees.

### Table 4.4-7  Project Person Trip Generation By Mode

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>Mode Split</th>
<th>1215 O Street Building Project</th>
<th>Person Trips</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Daily AM Peak Hour</td>
<td>PM Peak Hour</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total In Out</td>
<td>Total In Out</td>
<td></td>
</tr>
<tr>
<td>Drive Alone</td>
<td>45.6%</td>
<td>Total Employees</td>
<td>1,779</td>
<td>280 246</td>
<td>34 249 42</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>1,559</td>
<td>245 216</td>
<td>29 218 37</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>220</td>
<td>35 30</td>
<td>5 31 5</td>
<td>26</td>
</tr>
<tr>
<td>Carpool (2-6 persons)</td>
<td>11.4%</td>
<td>Total Employees</td>
<td>449</td>
<td>71 62</td>
<td>9 63 11</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>393</td>
<td>62 54</td>
<td>8 55 9</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>56</td>
<td>9 8</td>
<td>1 8 2</td>
<td>6</td>
</tr>
<tr>
<td>Vanpool (7+ persons)</td>
<td>1.1%</td>
<td>Total Employees</td>
<td>43</td>
<td>7 6</td>
<td>1 6 1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>38</td>
<td>6 5</td>
<td>1 5 1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>5</td>
<td>1 1</td>
<td>0 1 0</td>
<td>1</td>
</tr>
<tr>
<td>Transit</td>
<td>36.0%</td>
<td>Total Employees</td>
<td>1,405</td>
<td>221 194</td>
<td>27 197 33</td>
<td>164</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>1,230</td>
<td>194 170</td>
<td>24 172 29</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>175</td>
<td>27 24</td>
<td>3 25 4</td>
<td>21</td>
</tr>
<tr>
<td>Bicycle</td>
<td>3.5%</td>
<td>Total Employees</td>
<td>137</td>
<td>21 19</td>
<td>2 19 3</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>120</td>
<td>19 17</td>
<td>2 17 3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>17</td>
<td>2 2</td>
<td>0 2 0</td>
<td>2</td>
</tr>
<tr>
<td>Walk</td>
<td>2.3%</td>
<td>Total Employees</td>
<td>90</td>
<td>14 12</td>
<td>2 13 2</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relocated Employees</td>
<td>79</td>
<td>12 11</td>
<td>1 11 2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Employees</td>
<td>11</td>
<td>2 1</td>
<td>1 2 0</td>
<td>2</td>
</tr>
</tbody>
</table>

Notes: Travel mode split is based on the 2016 State Employee Commute Survey. Mode split percentages are based on the 36 percent transit use noted for employees working in the City of Sacramento Core Area (page 2). Further detailed travel mode splits for state employees in the City of Sacramento Core Area was not available. Therefore, drive alone, carpool, and vanpool mode split percentages are based on all state employees (initially 57.0%, 14.3%, and 1.4% respectively) factored down to account for the higher transit mode share in the Sacramento Core Area, where the project site is located. Bicycle and walk travel mode percentages are based on all state employees.

Source: Fehr & Peers 2017

### Table 4.4-8  Project Vehicle Trip Generation

<table>
<thead>
<tr>
<th>1215 O Street Building Project</th>
<th>Vehicle Trips</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Daily AM Peak Hour</td>
<td>PM Peak Hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total In Out</td>
<td></td>
</tr>
<tr>
<td>Total Employees</td>
<td>2,010</td>
<td>317 278</td>
<td>39 281 48</td>
</tr>
<tr>
<td>Relocated Employees</td>
<td>1,761</td>
<td>277 244</td>
<td>33 246 42</td>
</tr>
<tr>
<td>New Employees</td>
<td>249</td>
<td>40 34</td>
<td>6 35 6</td>
</tr>
</tbody>
</table>

Notes: Vehicle trip generation is based on the combined number of person trips for drive alone/carpool/vanpool travel modes, divided by the average auto occupancy (1.13 persons per vehicle).

Source: Fehr & Peers 2017
On a daily basis, the 1215 O Street Building is expected to generate 2,010 total vehicle trips; however, considering that many of the trips already exist from employees that will be relocated into the project building, only 249 vehicle trips will be added to the study area roadway network with implementation of the proposed project.

**Project Vehicle Trip Distribution**

Project vehicle trip distribution was developed using the following sources:

- 2016 State Employee Commute Survey – employee residences by zip code;
- travel time comparison from Google Maps during peak commute hours for routes to each parking location; and
- parking supply and availability in the vicinity of the project site (as outlined in the Existing Parking Supply and Availability Memorandum, December 16, 2016; see Appendix B).

Exhibits 4.4-8 and 4.4-9 show the expected distribution of inbound and outbound project trips under Existing-Plus-Project conditions. It was necessary to develop separate distributions for inbound and outbound trips because of the number of one-way streets and differing inbound and outbound route travel times.

As noted previously, the State’s current plan is to accommodate 1,146 employees at the O Street building, consisting of 142 new employees and 1,004 employees relocated from the following locations:

- 928 employees relocated from Bateson Building (1600 9th Street),
- 48 employees relocated from 1304 O Street Building, and
- 28 employees relocated from 800 Q Street Building.

The employee parking locations for the new and relocated employees are expected to shift closer to the 1215 O Street site. Exhibit 4.4-10 shows the changes in number of employees under Existing-Plus-Project conditions, and the relative changes in parking with the project based on proximity, parking reservation type, and existing parking availability.
Exhibit 4.4-8  
Inbound Trip Distribution – Existing Plus Project
Exhibit 4.4-9

Outbound Trip Distribution – Existing Plus Project

Source: Fehr & Peers 2017
Exhibit 4.4-10  
Changes in Parking – Existing Conditions to Existing-Plus-Project Conditions
THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate the project impacts to transportation and traffic under CEQA are based on Appendix G of the CEQA Guidelines, and thresholds of significance adopted by the City in applicable general plans and previous environmental documents, including the 2035 General Plan Master EIR (City of Sacramento 2014).

The following describes the significance criteria used to identify project-specific and cumulatively considerable impacts to the transportation and circulation system for the proposed project.

Intersections
Impacts to the roadway system would be significant if:

- traffic generated by the project degrades the overall roadway system operation to the extent that the project would not be consistent with General Plan Policy M 1.2.2 relating to the City’s allowable Level of Service; or
- traffic generated by the project substantially degrades operation of intersections and roadway segments, despite compliance with General Plan policies.

General Plan Mobility Element Policy M 1.2.2 sets forth definitions for what is considered an acceptable LOS. All study intersections are in the Core Area and are governed by Policy M 1.2.2 (A), under which LOS F is acceptable during peak hours, provided the project contribute other acceptable improvements to transportation-system-wide roadway capacity, intersections, or non-auto travel modes in furtherance of General Plan goals. Road widening or other improvements to road segments are not required.

Freeway Facilities
Impacts to the roadway system would be significant if:

- project traffic causes off-ramp traffic to queue back to beyond the freeway gore point, or worsens an existing/projected queuing problem on a freeway off-ramp.

Vehicle Miles Traveled
Impacts related to VMT would be considered significant if the project would:

- substantially increase VMT per service population (total residents and employees) within the Sacramento Core Area.

Transit
Impacts to the transit system would be significant if the project would:

- adversely affect public transit operations, or
- fail to adequately provide access to transit.

Bicycle Facilities
Impacts to bicycle facilities are considered significant if the project would:

- adversely affect existing or planned bicycle facilities, or
- fail to adequately provide for access by bicycle.
Pedestrian Circulation
Impacts to pedestrian circulation are considered significant if the project would:

- adversely affect existing or planned pedestrian facilities, or
- fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts
Construction-related traffic impacts would be significant if they would:

- degrade an intersection or roadway to an unacceptable level;
- cause substantial inconvenience to motorists because of prolonged road closures; or
- result in substantially increased potential for conflicts between vehicles, pedestrians, and bicyclists.

The first significance criterion bullet listed above under “Intersections” is the City’s interpretation of how General Plan Policy M 1.2.2 should be applied in the Core Area and Priority Investment Areas of the City. This policy allows these areas to have intersections that operate at LOS F. However, such conditions should not be detrimental toward other General Plan circulation policies (including but not limited to policies M 1.2.1, 1.2.4, 1.3.3, and 1.3.5), which pertain to providing high-quality transit, walkable neighborhoods and business districts, continuous and connected bikeways, transportation demand management, emergency response, and other circulation considerations. So, while a single intersection operating at LOS F during the peak hour may be considered acceptable, an entire roadway system that experiences severe gridlock, and hampers all modes of travel is generally not considered acceptable. To this end, the evaluation of this significance criterion focuses on the totality of system operations to assess consistency with General Plan Policy M 1.2.2.

In developing Policy M 1.2.2, the City evaluated the benefits of allowing lower levels of service to promote infill development within an urbanized high density area of the city that reduces VMT and supports more transportation alternatives, including biking, walking, and transit, as compared to requiring a higher level of service that would accommodate more cars but may also require widening roads and would result in increased vehicle miles traveled and greenhouse gas emissions. Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area, as long as the project provides acceptable improvements to other parts of the citywide transportation system, as described above.

The City’s LOS policy was adopted to allow decreased levels of service (i.e., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail, and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions).

ENVIRONMENTAL IMPACTS
This section presents the results of the impact analysis, identifies significant impacts, and recommends mitigation measures, where necessary. First, the focus is on presenting the effects of the project on existing conditions (i.e., the Existing-Plus-Project Condition) and addressing these effects. Then, the focus of analysis is on presenting the transportation effects of the project in the context of cumulative conditions and addressing those effects.

Existing-Plus-Project Conditions
Potential impacts of the project on the transportation system are evaluated in this section based on the thresholds of significance and analysis results. Mitigation measures are recommended for any identified significant impacts.
Impact 4.4-1: Impacts to Intersection Operations

Implementation of the project would redistribute traffic of existing employees who would be relocated to the O Street Building from other downtown locations, and would add a modest number of AM and PM peak hour trips from new employees. Based on the traffic modeling and analysis, all study area intersections would operate at acceptable levels of service, with the exception of W Street/16th Street/US 50 Westbound Off-Ramp, which would continue to operate at LOS D in the PM peak hour as it does under existing conditions. With the redistribution of existing traffic, implementation of the project would slightly reduce delay at this location in the PM peak hour. Because the project would not cause any intersection operations to degrade to unacceptable levels, this would be a less-than-significant impact.

Existing-plus-project traffic volumes account for the shifting the vehicle trips associated with the relocated employees to parking areas closer to the 1215 O Street Building site, and the addition of vehicle trips associated with the new employees to the existing volumes in accordance with the trip distribution previously presented. Exhibits 4.4-11A, 4.4-11B, and 4.4-11C display the resulting AM and PM peak hour intersection traffic volumes under existing-plus-project conditions.

Table 4.4-9 shows the existing-plus-project peak-hour intersection operations at the study intersections (refer to Appendix B for technical calculations). No vehicle delay or LOS is reported for Intersection 7 because there are no movements at this location that experience delay under existing conditions.

The project would shift travel patterns within the study area for employees currently working in the Bateson Building (1600 9th Street), and would add 40 AM peak hour and 35 PM peak hour trips from the addition of 142 new employees. All intersections would continue to operate at LOS C or better overall, except for Intersection 20 (W Street/16th Street/US 50 Westbound Off-Ramp) which would operate at LOS D, as it does under existing conditions. In fact, the redistribution of post-project traffic (even with the modest addition), delay at this location is slightly less in the PM peak hour at this location than under existing conditions. LOS for the worst turning movement at SSSC Intersection 14 (P Street/13th Street) degrades from LOS C to LOS E in the AM peak hour, but the overall LOS would remain at LOS A, with very low delay. In general, the project would result in relatively minor changes in traffic operations within the study area. All intersections would maintain the same overall LOS with the addition of the project. This would be a less-than-significant impact.

Mitigation Measures

No mitigation is required.
Exhibit 4.4-11A  Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Project

Source: Fehr & Peers 2017
Exhibit 4.4-11B  Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Project
Exhibit 4.4-11C  Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Project
Table 4.4-9 Intersection Operations – Existing-Plus-Project Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Peak Hour</th>
<th>Existing Conditions</th>
<th>Existing-Plus-Project Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Delay¹</td>
<td>LOS</td>
</tr>
<tr>
<td>1. N Street / 9th Street Signal AM PM</td>
<td></td>
<td></td>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>2. N Street / 10th Street Signal AM PM</td>
<td></td>
<td></td>
<td>11</td>
<td>B</td>
</tr>
<tr>
<td>3. N Street / 12th Street Signal AM PM</td>
<td></td>
<td></td>
<td>6 (4)</td>
<td>A (A)</td>
</tr>
<tr>
<td>4. N Street / 13th Street SSSC AM PM</td>
<td></td>
<td></td>
<td>0 (3)</td>
<td>A (A)</td>
</tr>
<tr>
<td>5. N Street / 15th Street Signal AM PM</td>
<td></td>
<td></td>
<td>3 (6)</td>
<td>A (A)</td>
</tr>
<tr>
<td>6. N Street / 16th Street Signal AM PM</td>
<td></td>
<td></td>
<td>2 (6)</td>
<td>A (A)</td>
</tr>
<tr>
<td>7. Neighbors Alley / 12th Street AM PM</td>
<td></td>
<td></td>
<td>9 (22)</td>
<td>A (C)</td>
</tr>
<tr>
<td>8. Neighbors Alley / 13th Street SSSC AM PM</td>
<td></td>
<td></td>
<td>3 (14)</td>
<td>A (B)</td>
</tr>
<tr>
<td>9. O Street / 12th Street SSSC AM PM</td>
<td></td>
<td></td>
<td>7</td>
<td>A</td>
</tr>
<tr>
<td>10. O Street / 13th Street SSSC AM PM</td>
<td></td>
<td></td>
<td>8</td>
<td>A</td>
</tr>
<tr>
<td>11. P Street / 3rd Street Signal AM PM</td>
<td></td>
<td></td>
<td>17</td>
<td>B</td>
</tr>
<tr>
<td>12. P Street / 9th Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>13. P Street / 12th Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>14. P Street / 13th Street SSSC AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>15. Q Street / 3rd Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>16. Q Street / 9th Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>17. Q Street / 10th Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>18. W Street / 11th Street Signal AM PM</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>20. W Street / 16th Street / US 50 WB Off-Ramp</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>21. X Street / 15th Street / US 50 EB Off-Ramp</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
<tr>
<td>22. X Street / 16th Street / US 50 EB On-Ramp</td>
<td></td>
<td></td>
<td>15</td>
<td>B</td>
</tr>
</tbody>
</table>

Notes: LOS = Level of Service. SSSC = Side-Street Stop-Controlled

¹ For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. Intersection LOS and delay is calculated based on the procedures and methodology contained in the HCM 2010 (TRB, 2010). All intersections were analyzed in SimTraffic.

Source: Fehr & Peers 2017
Impact 4.4-2: Impacts to Freeway Off-Ramp Queuing

Implementation of the proposed project would result in either no change or minor increase (and even a slight decrease at one location in the PM peak hour) in queue lengths at study area freeway off-ramps. The project would not cause queuing at any freeway off-ramps to approach or extend beyond its storage capacity. Therefore, this would be a less-than-significant impact.

Table 4.4-10 displays the existing-plus-project off-ramp queuing results within the study area during the AM and PM peak hours. As shown, the project would result in minor changes in queuing. Queue lengths would either remain the same or slightly increase with implementation of the project. Because of the redistribution of existing downtown traffic from relocation of some State employees, the queue at the I-5 SB off-ramp at Q Street would decrease slightly in the PM peak hour. All study freeway off-ramp queues would continue to remain well within the available storage area with the addition of the project. This would be a less-than-significant impact.

Table 4.4-10  
Off-Ramp Queuing – Existing-Plus-Project Conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Available Storage1</th>
<th>Peak Hour</th>
<th>Existing Conditions</th>
<th>Existing Plus Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate 5 SB Off-Ramp at Q Street</td>
<td>1,700 feet</td>
<td>AM</td>
<td>375 feet</td>
<td>375 feet</td>
</tr>
<tr>
<td>(from Q Street/3rd Street)</td>
<td></td>
<td>PM</td>
<td>125 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>Interstate 5 NB Off-Ramp at Q Street</td>
<td>2,075 feet</td>
<td>AM</td>
<td>325 feet</td>
<td>350 feet</td>
</tr>
<tr>
<td>(from Q Street/3rd Street)</td>
<td></td>
<td>PM</td>
<td>100 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 10th Street3</td>
<td>2,150 feet</td>
<td>AM</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(from W Street/11th Street)</td>
<td></td>
<td>PM</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 16th Street</td>
<td>1,050 feet</td>
<td>AM</td>
<td>225 feet</td>
<td>250 feet</td>
</tr>
<tr>
<td>(from W Street/16th Street)</td>
<td></td>
<td>PM</td>
<td>250 feet</td>
<td>250 feet</td>
</tr>
<tr>
<td>US 50 EB Off-Ramp at 15th Street</td>
<td>1,125 feet</td>
<td>AM</td>
<td>175 feet</td>
<td>200 feet</td>
</tr>
<tr>
<td>(from X Street/15th Street)</td>
<td></td>
<td>PM</td>
<td>275 feet</td>
<td>275 feet</td>
</tr>
</tbody>
</table>

Notes:
1The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point.
2Maximum queue length is based upon output from SimTraffic microsimulation software.
3The US 50 WB Off-Ramp at 10th Street (as specified by freeway wayfinding signage) is measured from the initial off-ramp terminal intersection of W Street/11th Street.
Source: Fehr & Peers 2017

Mitigation Measures
No mitigation is required.

Impact 4.4-3: Impacts to Vehicle Miles Traveled

The proposed project would not increase daily VMT per service population in the study area. Therefore, this would be a less-than-significant impact.

Table 4.4-11 displays the daily VMT per employee generated by the project. Project-generated VMT was estimated using the most recent version of the SACMET regional travel demand model, developed and maintained by SACOG. The project was input into the SACMET base year (2012) travel demand model, which was refined in the study area to reflect 2017 traffic counts. The model was run, and all travel to/from the traffic analysis zone representing the project was tracked throughout the model. The model estimated that the project would generate 15,577 daily VMT under existing-plus-project conditions, which equates to 13.59
VMT per employee. It was assumed that on average, the daily VMT per employee would be consistent between relocated and new employees.

| Table 4.4-11 Project VMT per Employee – Existing-Plus-Project Conditions |
|-------------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| 1215 O Street Building | 1,146 Employees | 2,010 Daily Vehicle Trips | 15,577 Daily VMT | 13.59 Daily VMT per Employee |
| Relocated Employees | 1,004 | 1,761 | 13,647 | 13.59 |
| New Employees | 142 | 249 | 1,930 | 13.59 |

Source: Fehr & Peers 2017

Table 4.4-12 displays the daily VMT per service population (total residents and employees) within the Sacramento Core Area under existing and existing-plus-project conditions. The refined SACMET base year travel demand model was run with and without the project, and all travel to/from the traffic analysis zones representing the Core Area (bounded by the Sacramento River, American River, Alhambra Boulevard, and Broadway) was tracked throughout the model in both scenarios. As shown, the model estimates that the project would result increase daily VMT generated by the Sacramento Core Area from 4,189,079 to 4,192,151; however, this would result in a slight decrease in daily VMT per service population in the area from 36.88 to 36.86. The project would be served by multiple transit, bicycle, and pedestrian facilities in close proximity that would contribute to the lower automobile use and reduction in daily VMT per service population. This would be a less-than-significant impact.

| Table 4.4-12 Sacramento Core Area VMT per Service Population – Existing-Plus-Project Conditions |
|-------------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| Scenario | Sacramento Core Area | Sacramento Core Area Generated | | |
| | Residents | Employees | Service Population | Daily Vehicle Trips | Daily VMT | Daily VMT per Service Population |
| Existing Conditions | 25,936 | 87,641 | 113,577 | 534,707 | 4,189,079 | 36.88 |
| Existing Plus Project | 25,936 | 87,783 | 113,719 | 535,170 | 4,192,151 | 36.86 |

Source: Fehr & Peers 2017

Mitigation Measures
No mitigation is required.

Impact 4.4-4: Impacts to Transit

Implementation of the proposed project would add relatively few new (versus relocated) employees, which would, in turn, generate only modest demand for additional transit trips: 27 additional transit trips during the AM peak hour and 25 additional transit trips during the PM peak hour. Because the project area is served by multiple and substantial transit options, the small increase in demand can be easily accommodated by existing available transit. Adequate access to transit would be available to project employees and the additional transit trips would not adversely affect public transit operations. Therefore, this would be a less-than-significant impact.

Implementation of the project would generate demand for 27 additional transit trips during the AM peak hour and 25 additional transit trips during the PM peak hour as a result of the new employees (see Table 4.4-7). Multiple transit options exist within the study area, including the Blue, Gold, and Green Line light rail.
lines, which all serve a station located approximately one block from the project site (Archives Plaza Station). Multiple RT bus lines also serve the study area, including RT Route 6 and Route 38, as well as the multitude of commuter bus routes that have stops within a ¼ mile of the project site. The small increase in demand generated by the project can be easily accommodated by existing available transit. Further, operations at the study intersections along these bus routes would not deteriorate by more than one second of delay with the addition of the project (and would operate at LOS D or better). Therefore, the proposed project would not disrupt any existing or proposed transit facility, or degrade access to transit. This would be a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.4-5: Impacts to Bicycle Facilities
The proposed project would result in a relatively minor increase in new employees which, based on mode-split assumptions would generate 17 additional bicycle trips per day. The downtown area offers numerous bicycle facilities. Project employees would have adequate access to bicycle facilities, and the additional bicycle trips would not adversely affect existing or planned bicycle facilities. Therefore, this would be a less-than-significant impact.

Implementation of the project would generate approximately 17 new bicycle trips per day (see Table 4.4-7). As previously documented, Class II bicycle lanes exist along 5th Street, 9th Street, 10th Street, 11th Street, and 13th Street in the north/south directions and along T Street, Capitol Mall, and Capitol Avenue in the east/west directions. The 13th Street route, one block from the project site, is a major bikeway and is the only route through Capitol Park. Implementation of the project would not remove any existing bicycle facilities nor interfere with any planned bicycle facilities, including those on N Street, P Street, Q Street, 10th Street, 15th Street, and 16th Street. This would be a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.4-6: Impacts to Pedestrian Facilities
Pedestrian facilities in the vicinity of the proposed project are adequate to accommodate the proposed project. Additional employees would have adequate access to pedestrian facilities and would not adversely affect existing or planned facilities. Therefore, this would be a less-than-significant impact.

Based on mode-split assumptions, implementation of the project would generate approximately 11 new walking trips per day (see Table 4.4-7). All streets adjacent to the project site have continuous sidewalks that provide at least 6-foot-wide clear zones for pedestrian travel adjacent to planter strips that provide a buffer between the sidewalk and vehicular travel lanes/parking lanes. The proposed project would not disrupt any existing or planned pedestrian facilities in the study area. This would be a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.4-7: Construction Related Impacts
Project construction may require restricting or redirecting pedestrian, bicycle, and vehicular movements at locations around the site to accommodate demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours. Construction traffic impacts would be localized and temporary; ample staging area would be
available to the construction contractor reducing the need for use of streets and other active areas; and DGS or its contractor would prepare and implement a Construction Traffic Management Plan to reduce the temporary impacts to the degree feasible. For these reasons, construction traffic impacts would be less than significant.

Project construction is anticipated to begin early 2018 and be complete, with tenant occupancy, sometime in 2021. Construction of the proposed project would generate truck and worker trips during demolition of existing structures on the project site and during construction of the new building and support structures. The construction labor force would fluctuate depending on the phase of work, but is expected to range from 25 to 50 workers during initial phases and approximately 175 to 225 workers during the peak of construction. In addition, approximately 4,500 total haul trips could be required for all phases of construction (see Chapter 3, “Project Description”). Because the magnitude of these trips during peak hours would be less than that of the proposed project, absolute impacts (in terms of delay and queuing) when compared to existing-plus project operations would not be significant.

The California Department of Veterans Affairs (CalVet) employee surface parking lot directly across O Street (to the south) from the California Department Food and Agriculture (CDFA) Annex would be used as a staging area during demolition of the CDFA Annex and construction of the new building. O Street, between the CDFA Annex and CalVet parking lot is currently closed to pedestrian, bicycle, and vehicular traffic between 12th and 13th streets. During construction, employees that normally use the CalVet parking lot would park in a nearby parking garage at 1566 11th Street, which has capacity to temporarily serve these employees with an equivalent number of spaces to those in the surface parking lot. The staging area would be restored to a surface parking lot after construction.

Construction operations may require restricting or redirecting pedestrian, bicycle, and vehicular movements at other locations around the site to accommodate demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours, which would be temporary. Because O Street is already closed to through traffic at the project site, and because of the light rail line turning south from O Street to 12th Street, potential lane restrictions or closures would only affect streets regularly used by vehicles at 12th Street between N and O streets. Vehicular, pedestrian, and bicycle access to apartments, offices, and other uses on N Street, 13th Street, and 12th Street would be maintained even if 12th Street between N and O streets is temporarily blocked off.

Construction staging and lane closures could cause adverse effects, if not carefully planned. In accordance with Sacramento City Code, DGS or its selected contractor will prepare a Construction Traffic Management Plan, which is subject to approval by the City’s Traffic Engineer and subject to review by all affected agencies. The plan will be designed to ensure acceptable operating conditions on local roadways studied as a part of this EIR and affected by construction traffic. At a minimum, the plan shall include a:

- description of trucks, including: number and size of trucks per day, expected arrival/departure times, and truck circulation patterns;
- description of staging area, including: location, maximum number of trucks simultaneously permitted in staging area, use of traffic control personnel, and specific signage;
- description of street closures and/or bicycle and pedestrian facility closures, including: duration, advance warning and posted signage, safe and efficient access routes for emergency vehicles, and use of manual traffic control; and/or
- description of driveway access plan, including: provisions for safe vehicular, pedestrian, and bicycle travel; minimum distance from any open trench; special signage; and private vehicle accesses.

Construction traffic impacts would be localized and temporary. In addition, because the project will use the CalVet lot immediately south of the project site for construction staging, and because O Street between 12th...
and 13th streets (between the project site and CalVet lot) is already closed to through traffic, ample area would be available to the construction contractor, which reduces potential disruption of more actively used streets, alleys, and sidewalks. Finally, DGS or its contractor would prepare and implement a Construction Traffic Management Plan that meets with the approval of the City Traffic Engineer, in accordance with City Code, which would reduce the temporary impact to the degree feasible. For these reasons, construction traffic impacts of the proposed project would be **less than significant**.

**Mitigation Measures**

No mitigation is required.
4.5 UTILITIES AND INFRASTRUCTURE

This section evaluates the availability of existing utility and infrastructure systems (water, wastewater, stormwater, electricity, and natural gas) to serve the 1215 O Street Office Building Project and the impact of the project on these systems. The analysis is based on documents obtained from the City of Sacramento and the Sacramento Regional County Sanitation District (Regional San), and personal communications with representatives of the City, Regional San, Sacramento Municipal Utility District (SMUD), and Pacific Gas and Electric Company (PG&E).

4.5.1 Regulatory Background

DOMESTIC WATER

Federal Plans, Policies, Regulations, and Laws

Safe Drinking Water Act
As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, the Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed every three years. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California’s drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

State Plans, Policies, Regulations, and Laws

Urban Water Management Plan
In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet (af) of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of an Urban Water Management Plan (UWMP) by every urban-water supplier and an update of the plan every 5 years on or before December 31, of every year ending in a five or zero. The UWMPA has been amended several times since 1983 with the most recent amendment occurring with Senate Bill (SB) 318 in 2004. The UWMPA and SB 610, described below, are interrelated; the UWMP is typically relied upon to meet the requirements for SB 610.

The City of Sacramento 2015 UWMP, adopted in June 2016, is based on the Sacramento 2035 General Plan.

California Safe Drinking Water Act
The SWRCB-DDW is responsible for implementing the federal SDWA and its updates, as well as California statutes and regulations related to drinking water. State primary and secondary drinking-water standards are promulgated in California Code of Regulations (CCR) Title 22, Sections 64431–64501.

The California Safe Drinking Water Act (CA SDWA) was passed in 1976 to build on and strengthen the federal SDWA. The CA SDWA authorizes DHS to protect the public from contaminants in drinking water by
establishing maximum contaminant levels (MCLs) that are at least as stringent as those developed by EPA, as required by the federal SDWA.

Local Plans, Policies, Regulations, and Laws
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this EIR, in the discussion of “Local Plans, Policies, Regulations, and Laws” in Section 4.2.1, State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the 1215 O Street Office Building Project.

Water Service System and Fees
Chapter 13.04 of the City Code regulates construction of water distribution facilities; describes requirements for installation and phasing of water meters; establishes the review process for ensuring adequate fire flow and hydrants; and identifies that rates, fees, and charges for sewer service and storm drain service are established and will be updated from time to time by ordinance or resolution of the City Council.

City of Sacramento 2035 General Plan
The following goals and policies from the Sacramento 2035 General Plan Utilities Element relate to water supply and infrastructure.

Goal U 2.1: High-Quality and Reliable Water Service. Provide water supply facilities to meet future growth within the City’s Place of Use and assure a high-quality and reliable supply of water to existing future residents.

- **Policy U 2.1.9 New Development.** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.

- **Policy U 2.1.12 Water Conservation Enforcement.** The city shall continue to enforce City ordinances that prohibit the waste or runoff of water, establish limits on outdoor water use, and specify applicable penalties.

- **Policy U 2.1.14: Rain Capture.** The City shall promote the use of rain barrels and rain gardens to conserve water, while not increasing the occurrence of disease vectors.

- **Policy U 2.1.15 Landscaping.** The City shall continue to require the use of water-efficient and river-friendly landscaping in all new development, and shall use water conservation gardens (e.g., Glen Ellen Water Conservation Office) to demonstrate and promote water conserving landscapes.

- **Policy U 2.1.16 River-Friendly Landscaping.** The City shall promote “River Friendly Landscaping” techniques which include the use of native and climate appropriate plants; sustainable design and maintenance; underground (water-efficient) irrigation; and yard waste reduction practices.

WASTEWATER AND STORMWATER

Federal Plans, Policies, Regulations, and Laws

Clean Water Act
The Clean Water Act (CWA) employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Those portions of the CWA that relate to wastewater and stormwater discharges are discussed below.
National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established under the CWA to regulate municipal and industrial discharges to surface waters of the US. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint sources (nonpoint source discharges are further discussed in Section 4.10, “Hydrology and Water Quality”). Each NPDES permit identifies limits on allowable concentrations and mass loadings of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

NPDES permits cover various industrial and municipal discharges, including discharges from storm sewer systems in larger cities, stormwater generated by industrial activity, runoff from construction sites disturbing more than 1 acre, and mining operations. Point source dischargers must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). So-called “indirect” point source dischargers are not required to obtain NPDES permits. “Indirect” dischargers send their wastewater into a public sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering any surface water.

The CWA was amended in 1987 with Section 402(p) requiring NPDES permits for nonpoint source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of the NPDES stormwater regulations is to improve the water quality of stormwater discharged to receiving waters to the “maximum extent practicable” using structural and nonstructural best management practices (BMPs). BMPs can include educational measures (e.g., workshops informing the public of what impacts can result when household chemicals are dumped into storm drains), regulatory measures (e.g., local authority of drainage-facility design), public-policy measures (e.g., labeling storm-drain inlets as to impacts of dumping on receiving waters) and structural measures (e.g., filter strips, grass swales, and detention ponds).

State Plans, Policies, Regulations, and Laws

NPDES Permit for the Sacramento Regional Water Treatment Plant

In April 2016, the Central Valley RWQCB issued WDR Order No. R5-2016-0020 (NPDES No. CA 0077682) to the Regional San for its Sacramento Regional Wastewater Treatment Plant (SRWWTP), which treats wastewater from its service area before discharging it to the Sacramento River. The original permit for the SRWWTP was issued in October 1974. This is an NPDES self-monitoring permit that outlines performance standards for the effluent into the Sacramento River. The water quality objectives established in the Central Valley RWQCB Basin Plan are protected, in part, by NPDES Permit No. CA 0077682.

The quality of the effluent that can be discharged to waterways within the Sacramento area is established by the Central Valley RWQCB through Waste Discharge Requirements (WDRs) that implement the NPDES permit. WDRs are updated at least every 5 years. A new permit must be issued in the event of a major change or expansion of the facility.

NPDES Permit for the Combined Sewer System

In April 2015, the Central Valley RWQCB issued WDR Order No. R5-2015-0045 (NPDES No. CA 0079111) to the City of Sacramento for its Combined Wastewater Collection and Treatment System (Central Valley RWQCB 2015). The system was previously regulated by Order R5-2010-0004, which expired on January 1, 2010. Depending on flow volumes, wastewater and stormwater flows in this system are conveyed to the SRWWTP, Combined Wastewater Treatment Plant (CWTP) at South Land Park Drive and 35th Avenue, and Pioneer Reservoir at Front and V streets near the Sacramento River. The Order does not apply to operations at SRWWTP.

This Order implements the U.S. EPA Combined Sewer Overflow (CSO) Control Policy, which establishes a consistent national approach for controlling discharges from CSOs to the nation’s water through the NPDES
permit program. This policy requires implementation of a long-term control plan (LTCP) to comply with water quality-based requirements of the CWA. The City of Sacramento adopted their LTCP, also known as the Combined Sewer System Improvement Plan (CSSIP), in 1995, which contained the infrastructure improvement portion of the LTCP.

WDR Order No. R5-2015-0045 identifies effluent limitations and discharge specifications for discharges from the CWTP and Pioneer Reservoir to the Sacramento River. Discharge from the system to surface waters or surface water drainage courses is prohibited during non-storm events. However, in the event that the capacity of the system is exceeded during a storm event, this Order allows for the discharge of overflows into the Sacramento River. The City is required to implement pollution prevention programs to reduce contaminants in CSOs.

Local Plans, Policies, Regulations, and Laws

City of Sacramento Combined System Development Fee
An ordinance amending Chapter 13.08 of the City of Sacramento Code relating to sewer and storm-drain service systems and establishing Combined Sewer System (CSS) development fee amounts was approved by the City’s Law and Legislation Committee on February 15, 2005, and was passed for publication on February 22, 2005. This fee requires new connections to the CSS to pay a development fee to recover an appropriate share of the capital costs of the CSS facilities needed to accommodate new development in the CSS area.

Sacramento Regional County Sanitation District Consolidated Ordinance
The Regional San Consolidated Ordinance sets forth requirements for use of its wastewater collection and treatment system, provides for the enforcement of these requirements, establishes penalties for violations, and establishes the rates and fees for users of Regional San’s sewer facilities.

Stormwater Quality Design Manual

City of Sacramento 2035 General Plan
The following goals and policies from the Sacramento 2035 General Plan Utilities Element relate to stormwater and wastewater management.

Goal U 1.1: High-Quality Infrastructure and Services. Provide and maintain efficient, high quality public infrastructure facilities and services in all areas of the city.

- Policy U 1.1.5: Growth and Level of Service. The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

Goal U 3.1 Adequate and Reliable Sewer and Wastewater Facilities. Provide adequate and reliable sewer and wastewater facilities that collect, treat and safely dispose of wastewater.

- Policy U 3.1.4: In keeping with its CSS Long Term Control Plan (LTCP), the City will continue to rehabilitate the CSS to decrease flooding, CSS outflows and CSOs. Through these improvements and new development requirements the City will also insure that development in the CSS does not result in increased flooding, CSS outflows or CSOs.

Goal U 4.1 Adequate Stormwater Drainage. Provide adequate stormwater drainage facilities and services that are environmentally sensitive, accommodate growth, and protect residents and property.

- Policy U 4.1.5 Green Stormwater Infrastructure. The City shall encourage “green infrastructure” design and Low Impact Development (LID) techniques for stormwater facilities (i.e., using vegetation and soil to
manage stormwater) to achieve multiple benefits (e.g., preserving and creating open space, improving runoff water quality).

**Policy U 4.1.6 New Development.** The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures, including “green infrastructure” and Low Impact Development (LID) techniques, to prevent on- or off-site flooding.

**ENERGY**

**Federal Plans, Policies, Regulations, and Laws**

No federal plans, policies, regulations, or laws are applicable to energy for the 1215 O Street Office Building Project.

**State Plans, Policies, Regulations, and Laws**

**California Environmental Quality Act**

Appendix F of the State CEQA Guidelines sets forth goals for energy conservation, including decreasing per capita energy consumption and reliance on fossil fuels and increasing reliance on renewable energy sources. CEQA requires EIRs to describe potential energy impacts of projects, with an emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code [PRC] Section 21100[b][3]).

The California Energy Commission (CEC) prepares an integrated policy report every two years that assesses major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state’s economy; and protect public health and safety (CEC 2017a). Energy efficiency is one of the key components of the state’s strategy to reduce greenhouse gas emissions (GHGs) and to achieve reduction targets set forth by Assembly Bill (AB) 32, Senate Bill (SB) 32, and Governor Brown’s Executive Order B-30-15. Efficiency achieved through building codes, appliance standards, and ratepayer-funded programs has had a positive impact on GHG emissions in recent years (CEC 2017:10a). The policy report discusses efforts to decarbonize California’s energy system and recognizes transitioning to zero- and near-zero emission vehicles will be a fundamental part of meeting the state’s climate goals.

The California Public Utilities Commission (CPUC) 2008 Energy Efficiency Strategic Plan established goals of having all new residential construction in California be zero net energy (ZNE) by 2020 and all new commercial construction ZNE by 2030 (CPUC 2008).

**Clean Energy and Pollution Reduction Act**

On October 7, 2015, the Clean Energy and Pollution Reduction Act (SB 350) was signed into law, establishing new clean energy, clean air and GHG reduction goals for 2030 and beyond. SB 350 codifies Governor Brown’s clean energy goals to increase California’s renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030, and is part of California’s overall strategy to address climate change (CEC 2017b). SB 350 enhances the state’s ability to meet its long-term climate goal of reducing GHG emissions to 40 percent of 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (CEC 2017b).

**California Code of Regulations, Energy Efficiency Standards**

Energy consumption in new buildings in California is regulated by State Building Energy Efficiency Standards (CALGreen) contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The 2016 Building Energy Efficiency Standards have
improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide consumption reduction (CEC 2015).

**Green Building Initiative**
In 2012, Governor Brown’s Executive Order B-18-12 (State of California Governor Office 2012) and its related Green Building Action Plan state the following energy and water efficiency improvement goals for facilities owned, funded, and leased by the State:

- All new state buildings beginning design after 2025 shall be constructed as ZNE facilities with an interim target for 50 percent of new facilities beginning design after 2020 to be ZNE. State agencies shall also take measures toward achieving ZNE for 50 percent of the square footage of existing state-owned building area by 2025.

- The state shall identify at least three buildings by January 1, 2013, to pursue ZNE as pilot projects.

- New and major renovated state buildings shall be designed and constructed to exceed the applicable version of CCR Title 24, Part 6, by 15 percent or more, and include building commissioning, for buildings authorized to begin design after July 1, 2012.

- Any proposed new or major renovation of state buildings larger than 10,000 square feet shall use clean, onsite power generation such as solar photovoltaic, solar thermal, and wind power generation, and clean backup power supplies, if economically feasible.

- New and major renovated state buildings larger than 10,000 square feet shall obtain Leadership in Energy and Environmental Design (LEED) “Silver” certification or higher.

- State agencies shall reduce water use at the facilities they operate by 10 percent by 2015 and by 20 percent by 2020, as measured against a 2010 baseline.

- All new and renovated state buildings and landscapes shall utilize alternative sources of water wherever cost-effective. Sources may include, but are not limited to: recycled water, graywater, rainwater capture, stormwater retention, and other water conservation measures.

- Landscape plants shall be selected based on their suitability to local climate and site conditions, and reduced water needs and maintenance requirements.

- State agencies shall identify and pursue opportunities to provide electric vehicle charging stations, and accommodate future charging infrastructure demand, at employee parking facilities in new and existing buildings.

**Local Plans, Policies, Regulations, and Laws**

**City of Sacramento 2035 General Plan**
The energy policies of the 2035 General Plan are intended to support an increasing reliance on renewable energy to reduce Sacramento’s dependence on nonrenewable energy sources and the city’s carbon footprint. The following goals and policies are most relevant to the proposed 1215 O Street Office Building Project.

**Goal U 1.1 High-Quality Infrastructure and Services.** Provide and maintain efficient, high-quality public infrastructure facilities and services throughout the city.

- **Policy 1.1.11 Underground Utilities.** The City shall require undergrounding of all new publicly-owned utility lines, encourage undergrounding of all privately-owned utility lines in new developments, and work with electricity and telecommunications providers to underground existing overhead lines.
Goal U 6.1 Adequate Level of Service. Provide for the energy needs of the city and decrease dependence on nonrenewable energy sources through energy conservation, efficiency, and renewable resource strategies.

- **Policy U 6.1.1 Electricity and Natural Gas Services.** The City shall continue to work closely with local utility providers to ensure that adequate electricity and natural gas services are available for existing and newly developing areas.

- **Policy U6.1.5 Energy Consumption per Capita.** The City shall encourage residents and businesses to consume 25 percent less energy by 2030 compared to the baseline year of 2005.

- **Policy U6.1.6 Renewable Energy.** The City shall encourage the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities.

- **Policy U6.1.7 Solar Access.** The City shall ensure, to the extent feasible, that sites, subdivisions, landscaping, and buildings are configured and designed to maximize passive solar access.

- **Policy U6.1.8 Other Energy Generation Systems.** The City shall promote the use of locally shared solar, wind, and other energy generation systems as part of new planned developments.

- **Policy U6.1.15 Energy Efficiency Appliances.** The City shall encourage builders to supply Energy STAR appliances and HVAC systems in all new residential developments, and shall encourage builders to install high-efficiency boilers where applicable, in all new non-residential developments.

### 4.5.2 Existing Conditions

Public utilities in the project area are provided by various entities, as identified in Table 4.5-1 and discussed in detail below.

<table>
<thead>
<tr>
<th>Table 4.5-1 Utilities Providers for the Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utility</strong></td>
</tr>
<tr>
<td>Water Supply</td>
</tr>
<tr>
<td>Wastewater Collection and Conveyance</td>
</tr>
<tr>
<td>Wastewater Treatment</td>
</tr>
<tr>
<td>Stormwater Conveyance</td>
</tr>
<tr>
<td>Solid Waste Collection(^1)</td>
</tr>
<tr>
<td>Electrical Service</td>
</tr>
<tr>
<td>Natural Gas</td>
</tr>
</tbody>
</table>

\(^1\) Discussed in Section 4.14, “Public Services.”

Source: Ascent Environmental, Inc. compiled in 2017

### WATER SUPPLY

The City of Sacramento Department of Utilities is responsible for water services within the city limits, including the 1215 O Street Office Building Project site, with the exception of some city residents who receive their water from Sacramento Suburban Water District. The City provides drinking water from groundwater and surface water resources. Surface water is diverted at two locations: from the American River downstream of the Howe Avenue Bridge, and from the Sacramento River downstream of the confluence of the American and Sacramento Rivers. The City draws groundwater from two subbasins of the Sacramento Valley Groundwater Basin, the North American Subbasin, located north of the American River,
and South American Subbasin, located south of the American River. Surface water and groundwater resources are described in detail in Section 4.10, “Hydrology and Water Quality.”

The City’s retail service area covers approximately 99 square miles (63,182 acres) with 135,830 connections and population of 480,105 as of 2015 (City of Sacramento 2016a:3-1 through 3-2). The City also provides wholesale water supplies to the Sacramento County Water Agency, Sacramento Suburban Water District, California American Water, and Fruitridge Vista Water Company.

**Surface Water Supply**

The City of Sacramento has relied on river water for its primary source of supply since 1854 and claims pre-1914 rights to divert approximately 75 cubic feet per second [cfs] from the Sacramento River (City of Sacramento 2016a:6-6). In addition, the City holds five water rights permits to serve the city: one for diversion of Sacramento River water and four for diversion of American River water. Table 4.5-2 indicates the application number and date, the permit number and date of issue, the rate of diversion in cubic feet per second, annual limit in acre feet, purpose of use, and period of use for each permit.

The Sacramento River permit and two of the American River permits authorize direct diversion of water from its respective source (City of Sacramento 2016a:6-6 through 6-7). The other two permits authorize rediversion for use of American River tributary water diverted by SMUD’s Upper American River Project. Water diverted under these two permits may be rediverted for use at several locations, including the Fairbairn Water Treatment Plant (FWTP) and the Sacramento River Water Treatment Plant (SRWTP).

**Table 4.5-2 Summary of Surface Water Rights Permits for the City of Sacramento**

<table>
<thead>
<tr>
<th>Application Permit and License No.</th>
<th>Priority Date</th>
<th>River Source</th>
<th>Maximum Amount Specified</th>
<th>Purpose of Use</th>
<th>Period of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>cf s</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>af y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A: 1743 P: 992</td>
<td>3/30/1920</td>
<td>Sacramento</td>
<td>225^1</td>
<td>Municipal</td>
<td>Jan 1 to Dec 31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>81,800^1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A: 12140 P: 11358</td>
<td>10/29/1947</td>
<td>American</td>
<td>675^2</td>
<td>Municipal</td>
<td>Nov 1 to Aug 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>245,000^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A: 12321 P: 11359</td>
<td>2/13/1948</td>
<td>Tributaries of American</td>
<td>245,000^3</td>
<td>Municipal</td>
<td>Nov 1 to Aug 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A: 16060 P: 11361</td>
<td>9/22/1954</td>
<td>Tributaries of American</td>
<td>245,000^3</td>
<td>Municipal</td>
<td>Nov 1 to Aug 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- afy = acre-feet per year; cf s = cubic feet per second
- ^1 See Articles 9 and 10 of Contract No. 14-06-200-6497 dated 6-28-57 between the City and the U.S. Bureau of Reclamation. 
- ^2 Combined total 675 cf s diversion. See Articles 9 and 10 of Contract No. 14-06-200-6497 dated 6-28-57 between the City and the U.S. Bureau of Reclamation. 
- ^3 Combined total 245,000 afy diversion. See above contract articles listed in footnote 2.
- ^4 Year-round period for rediversion of water previously diverted by SMUD Upper American River Reservoirs.
- ^5 See Article 9 and 10 of Contract No. 14-06-200-6497 dated 6-28-57 between the City and the U.S. Bureau of Reclamation.

In 1957, the U.S. Bureau of Reclamation (Reclamation) and the City entered into a permanent water rights settlement agreement pertaining to the use of water from the American and Sacramento Rivers. This agreement settled the parties’ competing claims to American River water and backed up the City’s water rights permits by requiring Reclamation to operate its facilities so that the City would always have sufficient water available to meet its needs. Table 4.5-3 shows the City’s schedule of authorized surface water supply over the next approximately 20 years.
Table 4.5-3  Maximum Contracted Annual Surface Water Diversion (afy) for the City of Sacramento

<table>
<thead>
<tr>
<th>Water Source</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Diversion from the Sacramento River²</td>
<td>81,800</td>
<td>81,800</td>
<td>81,800</td>
<td>81,800</td>
<td>81,800</td>
</tr>
<tr>
<td>Maximum Diversion from the American River³</td>
<td>208,500</td>
<td>228,000</td>
<td>245,000</td>
<td>245,000</td>
<td>245,000</td>
</tr>
<tr>
<td>Total</td>
<td>278,000</td>
<td>304,000</td>
<td>326,800</td>
<td>326,800</td>
<td>326,800</td>
</tr>
</tbody>
</table>

Note: afy = acre-feet per year

1 Data obtained from Schedule A of the 1957 Water Rights Settlement Contract between USBR and the City.
2 The City may divert up to 81,800 afy from the Sacramento River as long as the total combined diversion from both the Sacramento and American Rivers does not exceed the Maximum Combined Diversion.
3 The City may divert up to the Maximum Diversion from the American River as long as the total combined diversion from both the Sacramento and American Rivers does not exceed the Maximum Combined Diversion.

Source: City of Sacramento 2016a:6-8

Minimum-Flow Requirements

Current usage and future development must be sensitive to American River stream flows, especially during dry periods. There are two major institutional constraints that limit the FWTP diversion capacity: Hodge Flow conditions and Extremely Dry Year conditions, described below.

Extremely Dry Years (Conference Years)

Extremely dry years (i.e., Conference Years) are defined as years in which Department of Water Resources projects an annual unimpaired flow into Folsom Reservoir of 550,000 afy or less, or the projected March through November unimpaired flow is less than 400,000 afy (City of Sacramento 2016a:6-9). During extremely dry years, the City limits its diversions for water treated at the FWTP to 155 cfs (100 mgd) and 50,000 afy (16,300 million gallons per year [mgy]). Conference Years have occurred on the American River only three times over the recorded hydrologic history: in 1924, 1977, and 2015.

Hodge Flow Conditions

The Water Forum Agreement (WFA) restricts diversions from the American River when flows are below the “Hodge Flow” criteria, as defined in Environmental Defense Fund et al. v. East Bay Municipal Utility District (City of Sacramento 2016a:6-8). The purveyor specific agreement (PSA) established with the City under the WFA, allows the diversion of American River water to the FWTP of up to 310 cfs (200 mgd) when the flow passing the FWTP is greater than the Hodge Flow Criteria and extremely dry year conditions do not exist. Under Hodge Flow Criteria, diversions to the FWTP are limited, as shown in Table 4.5-4. Although Hodge Flow Conditions and Conference Years may reduce the amount of water that can be diverted from the FWTP on the American River, the City can instead divert their remaining American River entitlements downstream at the SRWTP (City of Sacramento 2016a:7-10 through 7-12).

Table 4.5-4  Maximum Rate of Diversion to the FWTP during Hodge Flow Years

<table>
<thead>
<tr>
<th>Period</th>
<th>Maximum Diversion</th>
<th>Cubic Feet per Second (cfs)</th>
<th>Million Gallons per Day (mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January through May</td>
<td>120</td>
<td>77.6</td>
<td></td>
</tr>
<tr>
<td>June through August</td>
<td>155</td>
<td>100.2</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>120</td>
<td>77.6</td>
<td></td>
</tr>
<tr>
<td>October through December</td>
<td>100</td>
<td>64.6</td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Sacramento 2016a:6-9
Groundwater Supply
The City currently operates 22 groundwater supply wells, with the majority of these wells located within the City’s service area north of the American River (City of Sacramento 2016a:3-4). The current total pumping capacity of the City’s municipal supply wells is approximately 20.6 mgd (23,077 afy). The City is conducting a well rehabilitation program that includes projects for improving capacity at several existing wells. Additionally, two new wells are anticipated to supply potable water in 2017-2018. The groundwater pumping capacity is anticipated to increase to approximately 25 mgd (28,006 afy) after the rehabilitation project and new wells are completed.

Water Treatment Plants
The SRWTP, located just east of Interstate 5 and south of Richards Boulevard, treats water pumped from the Sacramento River about one-half mile downstream from the American River confluence (City of Sacramento:3-4). The diversion capacity at the SRWTP is 160 mgd. The City is currently finishing a project to upgrade some of the SRWTP components, including related to filters, the pump system, and solids handling. These upgrades do not expand the treatment plant’s treatment capacity (Ewart, pers. comm., 2017b). The City’s distribution system does not have physical constraints in conveying up to 160 mgd water from the SRWTP. In the 2015/2016 fiscal year, the SRWTP treated a total of 14,502 million gallons for an average of approximately 40 mgd.

The FWTP is located on the south bank of the lower American River, approximately 7 miles upstream from its confluence with the Sacramento River. The City’s FWTP reliable treatment and permitted capacity are both 160 mgd (City of Sacramento 2016a:7-1 through 7-2). However, the pipelines conveying water from the FWTP to the rest of the system are not able to convey the full 160 mgd, and the conveyance of treated water from FWTP is limited to approximately 110 mgd. This physical constraint does not impact existing customers. The City is completing a rehabilitation at the FWTP to increase the reliable treatment capacity to match the permitted capacity of 160 mgd. During extremely dry years, the City agrees to limit diversions for water treated at FWTP to approximately 100 mgd (City of Sacramento 2016a:6-9). During periods when the flow passing the FWTP is less than Hodge Flow Criteria, diversions to the FWTP are limited to between about 64 mgd and 100 mgd depending on the time of year. In 2011-2012, an average of 42 mgd of water was treated at FWTP (City of Sacramento 2014:4-21).

Currently, average treatment volumes at each of these treatment plants are below capacity. As of 2015-2016, using a conservative assumption for low flows during Hodge Flows or extremely dry years for treatment at the FWTP during which treatment capacity is limited to between 64 mgd and 100 mgd, FWTP had 39 mgd to 75 mgd of capacity available to treat additional water demand. As of 2015-2016, the SRWTP had 120 mgd of capacity available to treat additional water demand.

Current and Planned City Water Supply Sources
In 2015, as reported in the 2015 UWMP, water supply and demand was 84,832 af (27,643 mgd) (see Table 4.5-5). Projections of future population within the City’s service area and sphere of influence are based on the 2035 General Plan.

Planned water supplies shown in Table 4.5-5 are based on reasonably available volume, which in some cases is less than the total right or safe yields, which are discussed above. The total right (or safe yield) for the Sacramento River is equal to the reasonably available volume (81,800 afy); for the American River it is 208,500 af in 2020 and increases to 245,000 af in 2030 through 2040; and for groundwater it is 25,205 af.

The planned supplies and demand shown in Table 4.5-5 are representative of anticipated supplies and demand in a normal year, single dry year, and multiple dry years. The supplies also reflect limitations that may occur under Hodge Flow Conditions and Conference Years (City of Sacramento 2016a:7-9 through 7-11). Maintaining the same amount of supply during a normal year, single dry year, and multiple dry years is possible because groundwater levels are not reduced during a drought such that the well capacity is affected and because Hodge Flow Conditions and Conference Years may reduce the amount of water that can be diverted from the FWTP on the American River, but the City can instead divert their remaining American River entitlements downstream at the SRWTP (City of Sacramento 2016a:7-9 through 7-11).
As shown in Table 4.5-5, the City has ample water supplies to meet demand from 2020 through 2040. The surplus water supply, after meeting anticipated demands, represents between 55 percent of the total supply in 2020 and decreases to 45 percent of total supply in 2040.

### Table 4.5-5 City of Sacramento Current and Planned Annual Water Demand and Sources of Supply

<table>
<thead>
<tr>
<th></th>
<th>2015 (af [mg])</th>
<th>2020 (af [mg])</th>
<th>2025 (af [mg])</th>
<th>2030 (af [mg])</th>
<th>2035 (af [mg])</th>
<th>2040 (af [mg])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water Supply</td>
<td>70,467 (22,962)</td>
<td>253,168 (82,495)</td>
<td>267,119 (87,041)</td>
<td>273,507 (89,123)</td>
<td>273,507 (89,123)</td>
<td>273,507 (89,123)</td>
</tr>
<tr>
<td>Groundwater Supply</td>
<td>13,706 (4,466)</td>
<td>21,749 (7,087)</td>
<td>20,169 (6,572)</td>
<td>19,912 (6,488)</td>
<td>19,912 (6,488)</td>
<td>19,912 (6,488)</td>
</tr>
<tr>
<td>Recycled Water Supply</td>
<td>0 (326)</td>
<td>1,000 (326)</td>
<td>1,000 (326)</td>
<td>1,000 (326)</td>
<td>1,000 (326)</td>
<td>1,000 (326)</td>
</tr>
<tr>
<td>Mutal Aid</td>
<td>659 (215)</td>
<td>0 (326)</td>
<td>0 (326)</td>
<td>0 (326)</td>
<td>0 (326)</td>
<td>0 (326)</td>
</tr>
<tr>
<td><strong>Total Water Supply</strong></td>
<td><strong>84,832 (27,643)</strong></td>
<td><strong>275,917 (89,908)</strong></td>
<td><strong>288,288 (93,939)</strong></td>
<td><strong>294,419 (95,937)</strong></td>
<td><strong>294,419 (95,937)</strong></td>
<td><strong>294,419 (95,937)</strong></td>
</tr>
<tr>
<td><strong>Water Demand</strong></td>
<td><strong>84,832 (27,643)</strong></td>
<td><strong>123,229 (40,154)</strong></td>
<td><strong>130,548 (42,539)</strong></td>
<td><strong>139,882 (45,581)</strong></td>
<td><strong>149,213 (48,621)</strong></td>
<td><strong>162,029 (52,797)</strong></td>
</tr>
<tr>
<td>Surplus (+)/Deficit (-)</td>
<td>0 (51,740)</td>
<td>152,688 (49,754)</td>
<td>157,740 (50,356)</td>
<td>154,537 (47,316)</td>
<td>145,206 (43,139)</td>
<td>132,390 (37 mg)</td>
</tr>
</tbody>
</table>

Note: af = acre-feet; mg = million gallons; 1 acre-foot = 325,851 gallons

1 Supplies and demand remain the same during normal, single dry, and multiple dry years because the City of Sacramento has sufficient water supply entitlements.
2 Groundwater supplies are based on the City’s firm capacity, which is 90 percent of the total well capacities.
3 Recycled water is defined in the 2015 UWMP as municipal wastewater that has been treated and discharged from a wastewater facility for beneficial reuse. Recycled water supplies shown here represent projected supplies, but the City does not currently use recycled water.
4 Includes residential, commercial and industrial, institutional/governmental, landscaping, and system losses.

Source: City of Sacramento 2016a:4-3, 6-5, 6-10, 6-18, 7-10 through 7-12

### WASTEWATER AND STORMWATER

Wastewater and stormwater runoff from most of the central area of the city (including the project site) is collected by the City’s CSS. The CSS has a total service area of 7,545 acres. The City of Sacramento Department of Utilities operates and maintains the CSS. The CSS consists of the CWTP, pumping stations (Sumps 1/1A and 2/2A), Pioneer Reservoir, and in-line and off-line storage facilities. The collection system consists of trunks, interceptors, reliefs, force mains, laterals, and other pipelines, and has a total storage capacity of about 115 af (37 mg; City of Sacramento 2013).

The flows in the CSS are conveyed to two pumping stations (Sumps 1/1A and 2/2A) located near the Sacramento River (Central Valley RWQCB 2015:F-4). Up to 60 mgd of wastewater flows in the CSS are conveyed to the Sacramento Regional County Sanitation District (Regional San) Force Main, which carries flows to the Sacramento Regional Wastewater Treatment Plant (Regional San WWTP). When flows are greater than 60 mgd, the additional flows are conveyed to the Combined Wastewater Treatment Plant (CWTP) via the CWTP Force Main and/or to Pioneer Reservoir via the Pioneer Interceptor.

In the vicinity of the project site, components of the CSS include an 8-inch main under 12th Street that flows to an 18-inch main under Neighbors Alley. The main in Neighbors Alley flows to a 30-inch main under 13th Street. The project site currently has service connections to the 8-inch main and the 30-inch main. According to the City of Sacramento Department of Utilities, the CSS mains in the vicinity of the project site have existing available capacity for wastewater during dry weather (Dalrymple, pers. comm., 2017a). The main under 13th Street flows south to a 66-inch main in S Street that flows west towards Sump 1/1a. However, the city’s model indicates that there is existing flooding in the alley during large storm events and, thus, does
Utilities and Infrastructure

not currently have sufficient capacity to handle wastewater and stormwater runoff flows during large storm events. The City of Sacramento Department of Utilities criteria is to allow half of a pipe’s capacity to be used for sewer and the other half for stormwater (Dalrymple, pers. comm., 2017b). The City’s model estimates that approximately 80 equivalent single-family dwelling units (ESDs) currently discharge to the 18-inch main, which has capacity to accommodate over 1,000 ESDs. The model estimates 600 ESDs discharge to the 30-inch main, which has capacity to accommodate 6,000 ESDs. The 18-inch main has capacity for wastewater discharge from an additional 420 ESDs and the 30-inch main has capacity for an additional 2,400 ESDs.

Implementation of the Sacramento 2035 General Plan would not result in a substantial increase in sewage flows to the CSS because the City requires that new project flows be mitigated in accordance with the Combined System Development Fee (City of Sacramento 2014a:4.11-15).

Wastewater Treatment and Disposal

Wastewater treatment within the city is provided by Regional San and the City of Sacramento. Regional San operates all regional interceptors and wastewater treatment plants serving the city except for the combined sewer and storm drain treatment facilities, which are operated by the City of Sacramento.

**Sacramento Regional Wastewater Treatment Plant**

Regional San was formed in the mid-1970s as a result of the Sacramento Regional Wastewater Management Program. The program consolidated more than a dozen treatment facilities and virtually eliminated effluent discharge into local waterways, instead treating all wastewater to a high level and discharging it at one point in the Sacramento River. About 1.4 million people are provided sewer service by the Regional San (Regional San n.d.). Regional San has begun construction on mandated treatment plant upgrades, known as the EchoWater Project, which will improve effluent water quality. Upgrades will be complete by 2023.

The Regional San wastewater conveyance system is comprised of 169 miles of interceptor pipelines, 46 miles of force mains, and 11 pump stations before it reaches the Regional San WWTP near Elk Grove (Regional San n.d.). The Regional San WWTP currently provides secondary treatment of wastewater, has a permitted treatment capacity of 181 mgd of average dry-weather flow, and currently treats approximately 150 million gallons (mg) of wastewater each day. A Wastewater Operating Agreement between Regional San and the City, limits wastewater flows from the city to 60 mgd (City of Sacramento 2014b:4-2). In 2014, dry weather flows to the Regional San WWTP were 18 mgd. The remaining capacity is reserved for stormwater. In 2015, most (94.2 percent) of the combined wastewater and stormwater flows in the CSS, in addition to flows in the City’s separated sewer system, were delivered to the Regional San WWTP (City of Sacramento 2016a:6-10).

During heavy storms where the flows exceed 60 mgd, the CWTP is used to provide primary treatment of an additional 130 mgd. Excess flows beyond 190 mgd are diverted to the Pioneer Reservoir storage and treatment facility that has a capacity of 250 mgd. When all three treatment facilities (Regional San WWTP, CWTP, and Pioneer Reservoir) have reached capacity, excess flows (combined sewer overflows, or CSOs) are directly discharged into the Sacramento River from Sump 2 without treatment. In the central city, when the CSS pipeline system capacities are surpassed, which occurs during storm events, the excess flows flood local streets through maintenance holes and catch basins.

**Combined Wastewater Treatment Plant and Pioneer Reservoir**

During extreme high flow conditions after treatment has been maximized at the Pioneer Reservoir and the CWTP, discharges of untreated combined wastewater may occur at Sump 2/2A through Discharge Points 004 and 005 and at the Sump 1/1A Pioneer Bypass at Discharge Point 007 (Central Valley RWQCB 2015:F-5).

During moderate to large storms when the CSS flows are greater than 60 mgd, the flows greater than 60 mgd are routed to the CWTP and/or Pioneer Reservoir for temporary storage (City of Sacramento 2016a:6-12). When flows exceed storage capacity, the excess flows are released to the Sacramento River after receiving primary treatment, including chlorination and de-chlorination. When the storage and treatment capacities are reached, additional CSS flows are discharged directly to the Sacramento River from Sump 1.
and/or Sump 2. In 2015, Pioneer Reservoir treated 278 af (91 mg) of wastewater that was discharged. The CWTP had no discharges in 2015.

**Combined Sewer Overflows and CSS Improvements**

The majority of the time the CSS treatment facilities, CWTP and Pioneer Reservoir, captures and provides treatment for up to 100 percent of the combined sewer flows (Central Valley RWQCB 2015:F-36). The CSS uses a combination of storage, such as in-line storage, and treatment facilities to manage flows in the CSS and minimize CSOs (Central Valley RWQCB 2015:F-48). There have been infrequent instances where small volumes of untreated overflows have occurred from some of the discharge points into the Sacramento River. The City’s efforts to comply with the CSO Control Policy have resulted in consistent and significant reductions in dry weather and dry season flows over the last 20 years. The overall annual average CSO discharge volume decreased by over 60 percent over the past 24 years. Water conservation, new plumbing codes for redevelopment, and ongoing collection system improvements are all factors in the gradual decrease in dry and wet weather flows over time.

The average number of days that untreated CSOs were discharged per year has also decreased from seven per year in the early 1990s, prior to implementation of the CSSIP, to less than once per year in the past 10 years. The treated CSO discharges have also decreased from 15 times per year on average to an average of four times per year during the same time period. As of June 2015, the last untreated release of CSO occurred in the 2012-2013 storm year (Central Valley RWQCB 2015:F-21).

The CSSIP developed by the City is designed to make progress towards the final goal of minimizing street flooding during a 10-year storm event and to prevent structure flooding during the 100-year storm event (Central Valley RWQCB 2015:F-52). A number of capital improvement projects included in the CSSIP that were designed to reduce discharges from the CS and maximize CSS storage capacity have been completed (Central Valley RWQCB 2015:F-48). For example, in 2014, the City completed construction of the Oak Park Regional Storage Facility that provides an additional 4 mg of regional storage in the CSS. In addition, part of this CSSIP project involves use of a new hydraulic model to optimize system performance and ensure all storage fills completely during major storm events. Many other CSSIP have been completed and other projects are underway or planned as part of the City’s Downtown Combined Sewers Upsizing Project to improve system operations and capacity (City of Sacramento 2017).

**ENERGY**

**Electricity**

SMUD generates, transmits, and distributes electrical power to a 900-square-mile service area that includes Sacramento County and a small portion of Placer County. SMUD’s electricity sources include hydropower generation; cogeneration; advanced and renewable technologies such as wind, solar, and biomass/landfill gas power; and power purchased on the wholesale market.

SMUD transmits power to the downtown Sacramento area by a series of overhead and underground 115-kilovolt (kV) transmission lines that feed 12-kV and 21-kV distribution systems (SMUD 2017). Transmission lines run parallel to R Street east of 19th Street and along 19th and 20th Streets south of R Street. These lines connect to SMUD Station B at 19th and O Streets. An underground 115-kV loop connects SMUD Station D at 8th and R Streets. Station D drops the 115 kV down to 21 kV and 12 kV to serve the overall downtown area. The 12-kV system is a high-reliability network with redundant feeds, intended to serve the high-rise core area where it is important to keep critical government and business facilities operating. This 12-kV network has limited capacity for expansion and is not intended to serve the project area. The 21-kV system serves the balance of the downtown area.

The 1215 O Street Office Building project site is served by distribution lines located in O Street, 12th Street, and the neighborhood alley between the Food and Agriculture building and the CDFA Annex building.
Overhead power lines extend along the surface parking lot portion the project site, parallel to the east side of 12th Street between O and P Streets.

**Natural Gas**

PG&E supplies natural gas to the Sacramento area, and to a larger 70,000 square mile service territory. In downtown Sacramento, PG&E has both high-pressure and low-pressure distribution systems. High-pressure system pipelines, generally 4 inches in diameter and larger, carry gas at approximately 40 pounds per square inch (psi). Low-pressure system pipelines, generally 2 inches in diameter, carry gas at about 0.25 psi. Service is generally provided from the low-pressure system unless usage exceeds about 3,000 cubic feet per hour (cfh). Regulator stations at various locations are used to reduce high pressure to low pressure.

The 1215 O Street Office Building Project site is served by existing 8-inch and 10-inch natural gas service lines in O Street. The nearest high-pressure gas main is located in S Street.

### 4.5.3 Environmental Impacts and Mitigation Measures

**ANALYSIS METHODOLOGY**

**Water Demand**

CEQA Guidelines Section 15155 requires preparation of a water supply assessment (WSA) when a project is of sufficient size to be defined as a “water-demand project.” Because the 1215 O Street Office Building Project proposes to construct an office building with more than 250,000 square feet of office space and would employ more than 1,000 people, it is a water demand project and a WSA was prepared to meet the requirements of Section 15155. A WSA is required to be prepared by the public water system that will serve the project, unless there is no public water system, in which case the WSA is prepared by the CEQA lead agency. A “public water system” is defined in Section 15155 as a system that provides piped water for human consumption and has at least 3,000 connections.

A City of Sacramento SB 610/SB 221 Water Supply Assessment and Certification Form was completed for the proposed project (DGS and City of Sacramento 2017b). This form may be used to complete WSAs for projects located in an area covered by the City’s 2015 UWMP. For a project such as O Street, in the Central Business District, the City uses a water demand factor of 0.02 acre-feet per year per employee. Based on the WSA, the City verified that sufficient water supplies are available for the project during normal, single dry, and multiple dry years over a 20-year period.

**Wastewater Treatment and Disposal**

Impacts related to wastewater conveyance and treatment capacity were evaluated by estimating the project-generated increase in wastewater resulting from the project, and determining whether the existing wastewater treatment and conveyance infrastructure has adequate capacity to accommodate the increase. Wastewater flows for the project are based on the following generation rates for wastewater provided by the Department of Utilities Design and Procedure Manual (Dalrymple, pers. comm., 2017a):

- Restaurants = 2 ESDs/1,000 sq. ft.,
- Office Space = 0.2 ESD/1,000 sq. ft., and
- 1 ESD = 400 gallons per day (gpd) of wastewater flow

**Energy**

**Electricity**

Impacts related to electricity were evaluated by determining whether any new facilities would need to be constructed to serve the project, whether SMUD would be able to serve the project, and whether the
construction of necessary electrical improvements would adversely affect SMUD electrical capacity or infrastructure or interrupt utility service during construction.

**Natural Gas**

Similar to electricity, impacts related to natural gas were evaluated by determining whether any new facilities would need to be constructed to serve the project, and whether any utility services would be interrupted during construction.

**THRESHOLDS OF SIGNIFICANCE**

A utilities and infrastructure impact is considered significant if implementation of the project would do any of the following:

- not comply with wastewater treatment requirements of the applicable RWQCB;
- require or result in the construction of new water- or wastewater-treatment or conveyance facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require new or expanded water-supply entitlements because sufficient water supplies are not available to serve the project from existing entitlements and resources; or
- require or result in the construction of electricity or natural gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

**ENVIRONMENTAL IMPACTS**

**Impact 4.5-1: Increased demand for water supply**

The total new water demand for the 1215 O Street Office Building Project would be 24 afy (21,426 gpd), increasing the overall demand on the City’s water supply by 0.03 percent. When the new office building is ready for occupancy in 2021, the estimated water demand would represent 0.02 percent of the City’s surplus water supply (152,688 afy). The City would have adequate water supply to serve the project. The proposed project would also reduce its water demand through project design and implementation of water conservation measures that would exceed Title 24 requirements and meet LEED v4 Silver standards. This impact would be less than significant.

The existing CDFA Annex building has minimal water use because it is currently vacant and has been since 2011. For this reason, and to provide a conservative analysis of the increase in water demand at the project site, this analysis assumes no existing water demand at the site. Using the water demand factor of 0.02 acre-feet per year per employee provided in the City’s SB 610/SB 221 Water Supply Assessment and Certification Form, the estimated project demand after buildout is 24 afy (21,426 gpd).

The 24-afy demand estimate would represent an increase of approximately 0.03 percent in the City’s overall system demand of 84,832 afy in 2015. As shown in Table 4.5-5, the City provided water supply equal to the demand in 2015. However, as of 2015, the City’s groundwater pumping capacity was 23,077 afy and the City has rights to 326,800 afy of surface water, for an available supply of over 349,000 afy (see Table 4.5-2). The city currently has sufficient supply to meet the project’s water demands.

The City is projected to have a surplus water supply of between 152,688 afy in 2020 and 132,390 afy in 2040 during normal, single dry, and multiple dry years through 2040 (see Table 4.5-5). When the project is
completed and occupied in 2021, the estimated project water demand would represent approximately 0.02 percent of the City’s surplus water supply from 2020 through 2040. The WSA confirms that the City’s planned water supplies would be adequate to serve the proposed project during normal, single dry, and multiple dry years over a 20-year period (DGS and City of Sacramento 2017).

The project would also generate water demand associated with heating and cooling, which is provided to the building by the State’s Central Plant, which provides heating and cooling to a number of State buildings near the project site. Water demand for heating and cooling the new office building would be approximately 2.5 mgd (7.8 afy) (Shields, pers. comm., 2017). The Central Plant is permitted for its full capacity water demand (State of California 2015:6). The full capacity of the Central Plant includes all of the existing buildings it serves, and new State buildings, including the new 1215 O Street office building. Therefore, the water demand associated with the proposed project’s heating and cooling needs would not be considered an increase in water demand at the Central Plant that has not been previously assessed.

The 1215 O Street Office building would include water conservation and reuse measures that exceed 2016 Title 24 water efficiency requirements and meet LEED v4 Silver standards (see Appendix K of this DEIR for LEED v4 checklist). All plumbing fixtures in the building would be low-flow/high-efficiency fixtures. Greywater would be used for flushing toilets and urinals. Sources of greywater for the building would include rainwater (collected and stored), air conditioning condensate, shower and non-food service sinks, and drinking fountain drains. Landscaping on the project site would use drought tolerant native planting as another water-saving design measure of the project. Because the proposed project would implement water efficiency measures beyond those required by Title 24, the estimated water demand of 24 afy for the project is considered to be a conservative estimate. With implementation of the water-saving measures, the proposed project would be consistent with City policies related to reducing water demand through implementation of water conservation measures (Policies U 2.1.10 and U 2.1.12), promotion of rain capture systems (Policy U.2.1.14), and use of native and climate appropriate plants (Policy U 2.1.15).

The City would have adequate water supply to serve the project. Additionally, the project would reduce its water demand through project design and implementation of water conservation measures that would exceed 2016 Title 24 requirements and meet LEED v4 Silver standards. This impact would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.5-2: Effects on water conveyance and treatment infrastructure**

The 1215 O Street Office Building Project would include a new water service connection to the water mains in either Neighbors Alley or 12th Street, and fire water service would connect to the 12-inch main in 12th Street. The existing water delivery infrastructure at the project site includes one water main that could be insufficient to supply water to the 1215 O Street Office Building Project. The City’s water treatment plants have sufficient capacity to serve the water treatment demand for the project. Because one of the potential water mains would be insufficient to serve the project, this impact is potentially significant.

The City’s policy is to require developers to construct all infrastructure necessary to support their projects. To determine whether existing water infrastructure is sufficient to deliver a project’s water needs, a water supply or hydrant flow test is performed on the existing system. If the existing water distribution system is insufficient to meet the needs, no infrastructure upgrades are necessary. If the facilities are found to be insufficient, the developer is required to work with the City to develop an acceptable solution, such as upgrading pipes or paying mitigation fees.

The water supply infrastructure for the project would need to meet the project’s demand for an estimated 24 afy (8 mgd or an average of 22,000 gpd) of water, and meet fire flow pressure requirements of 6,000 gpm (with up to a 75 percent reduction in this standard if sprinklers are installed). Infrastructure to be constructed as part of the project would include a new domestic service line and a new irrigation water
service connecting from either Neighbors Alley or 12th Street to the new building. Additionally, a new fire water service with backflow, fire department connection, and a new fire hydrant would be constructed, connecting under 12th Street.

The City’s 12-inch main in 12th Street and the 24-inch main in 13th Street were recently upgraded. In reviewing the water supply test conducted by the City, the fire connection to the 12-inch main under 12th Street would likely have sufficient capacity to meet the fire water standards for the project (City of Sacramento 2016b; Ewart, pers. comm., 2017a). However, the 6-inch main under Neighbors Alley is part of the City’s old cast-iron infrastructure that is characterized by tuberculation and corrosion and is in hydraulic failure. (Tuberculation is the development of small mounds of corrosion products on the inside of iron pipes.)

As described above under “Water Treatment Plants,” the FWTP has, based on data from 2015-2016, 39 mgd to 75 mgd of available treatment capacity and the SRWTP has 120 mgd of available treatment capacity. Without taking into consideration the project’s proposed water conservation measures, the average daily water treatment demand would be approximately 22,000 gpd, which would be 0.06 percent of the remaining available water treatment capacity at the FWTP during Hodge Flows or extremely dry years. The project’s water treatment demand would be an estimated 0.02 percent of the remaining available water treatment capacity at SRWTP. For these reasons, even in years when treatment capacity is reduced, there would be sufficient water treatment capacity to meet the project need.

Without more information regarding the functional status of the 6-inch main and whether or not the project would have a service connection to that main, it is unclear whether or not the 6-inch main could adequately meet the project’s water conveyance need, including fire flow requirements (Ewart, pers. comm., 2017a). Because the water supply infrastructure that could serve the project may not be adequate to serve the water demand and fire flow needs, this impact is potentially significant.

**Mitigation Measure 4.5-2: Improve water supply infrastructure capacity**

DGS shall complete a water study to identify the best location for the project to connect to the City’s water supply infrastructure. Potential locations include: the 12-inch main in 12th Street, the 6-inch main in Neighbors Alley, and the 24-inch main in 13th Street. The water supply infrastructure must meet the project’s estimated demand for 24 afy of water, and meet fire flow pressure requirements of 6,000 gpm (with up to a 75 percent reduction in this standard if sprinklers are installed). If water infrastructure is determined to be insufficient, the water study shall identify, and DGS shall implement, the improvements necessary to meet the project’s demands and fire flow requirements. Improvements could include replacing the 6-inch cast-iron water main in Neighbors Alley with an 8-inch or 12-inch main. The water study shall be submitted to the City of Sacramento Department of Utilities prior to approval for connection to the City’s water supply infrastructure. Additionally, the Sacramento Fire Department shall conduct a fire flow test prior to issuance of an occupancy permit for the building to ensure the water supply infrastructure for the building meets fire flow standards.

**Significance after Mitigation**

The water study would identify the best location for new service connections for water and fire flow as well as any necessary improvements to the water supply system to ensure that the project would be adequately served and applicable requirements met. With preparation of the water study and implementation of any identified infrastructure improvements, in accordance with Mitigation Measure 4.5-2, the impact on water supply infrastructure capacity would be reduced to a less than significant level.

**Impact 4.5-3: Effects on the combined sewer system conveyance capacity**

Although stormwater runoff would not increase over existing conditions, wastewater generated by the 1215 O Street Office Building Project would exceed the capacity of the City’s combined sewer system during large storm events. Although the existing combined sewer system conveyance pipelines are insufficient to serve the project during large storm events, the project would pay the Combined Sewer Development Fee for the project-related wastewater contributions to the CSS. The fee would be used towards improvements to the CSS planned by the City. This impact would be less than significant.
The 1215 O Street Office Building Project site is served by the City’s CSS. The project would connect to either the 18-inch CSS main within the Neighbors Alley or the 30-inch main under 13th Street for stormwater and wastewater drainage. The project is estimated to generate approximately 81 ESDs. As described above, the 18-inch main has capacity to receive wastewater flows from an additional 420 ESDs, the 30-inch main under 13th Street has capacity for an additional 2,400 ESDs. The City has indicated that the larger CSS mains in the vicinity of the project site, including the 18-inch main in Neighbors Alley, have sufficient capacity to serve the increased wastewater flows from the new office building during dry weather (Dalrymple, pers. comm., 2017a). However, because overflow flooding occurs from the 18-inch CSS main during large storm events, any increase in flows to the CSS during storm events would exacerbate existing combined sewer overflow conditions (Dalrymple, pers. comm., 2017a).

The project site currently has close to 100 percent impervious coverage with mature trees along the 12th Street and O Street sides of the existing building as well as hedges and mature trees along the perimeter of the CalVet parking lot. Because the project would replace the existing CDFA Annex with a new office building, it would not change the impervious surface area on the project site. In addition, rainwater would be collected, treated, and stored for greywater use, which would reduce stormwater runoff. Because the project would not increase impervious surfaces and would collect rainwater for use in the building, the project would not increase stormwater runoff over existing conditions; rather, it is anticipated to reduce stormwater runoff. Therefore, project-related stormwater runoff would not contribute to nor exacerbate the existing flooding that occurs from the CSS main in Neighbors Alley during large storm events.

Because the existing CDFA Annex building is currently vacant, existing wastewater flows from the project site are negligible. At full occupancy, the projected wastewater generation would be approximately 32,320 gpd (see Table 4.5-6). The project’s water conservation measures, including the low-flow fixtures and greywater system (described in Impact 4.5-1), are not accounted for in the wastewater demand estimates and would further reduce the volume of wastewater generated by the new office building.

### Table 4.5-6 Estimated 1215 O Street Office Building Project Wastewater Flows

<table>
<thead>
<tr>
<th>Use</th>
<th>Size (sq. ft.)</th>
<th>ESD Equivalent Rate</th>
<th>Total ESDs</th>
<th>Flow Rate (gpd/ESD)</th>
<th>Estimated Wastewater Flows (gpd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Building Space</td>
<td>344,000</td>
<td>0.2/1,000 sq. ft.</td>
<td>68.8</td>
<td>400</td>
<td>27,520</td>
</tr>
<tr>
<td>Food Court</td>
<td>6,000</td>
<td>2/1,000 sq. ft.</td>
<td>12</td>
<td>400</td>
<td>4,800</td>
</tr>
<tr>
<td>Total</td>
<td>350,000</td>
<td>NA</td>
<td>80.8</td>
<td>NA</td>
<td>32,320</td>
</tr>
</tbody>
</table>

Note: NA = not applicable
Source: Compiled by Ascent Environmental, Inc. in 2017

Prior to connection to the CSS, and to address the project’s increases in sewer flows to the CSS, DGS would pay the City’s Combined Sewer Development Fee as defined in Chapter 13.08 of the City Code. This fee is used to fund an appropriate share of the capital costs of the CSS facilities. The City Department of Utilities is designing the 3rd Street sewer upsizing to handle increased flows from projects in the downtown area (Dalrymple, pers. comm., 2017b). The mitigation fees paid by DGS would be used to pay for the new sewer on 3rd Street. Additionally, projects are only required to analyze existing systems to the nearest 18-inch mainline. Because this project would connect into an existing 18-inch mainline, this project would not be required to prepare hydraulic analysis of the existing system. The CSS Development Fee for the project is estimated to be $75,000 (Mendoza, pers. comm., 2017).

Although the project would not increase stormwater conveyance to the CSS, it would increase wastewater flows to the facility. There is capacity for the project’s wastewater flows during dry weather and the project would include water conservation measures that would further reduce wastewater flows below levels estimated in Table 4.5-6. Although there is existing overflow flooding that occurs from the 18-inch CSS main in Neighbors Alley during large storm events that could be exacerbated by the project, the project proponent would pay the City’s Sewer Development Fee required by the City to mitigate increases in wastewater flows.
to the CSS. The fee would be used for upgrades to the CSS system (Dalrymple, pers. comm., 2017a). Therefore, this would be a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.5-4: Effects to CSS treatment capacity

Wastewater generated by the 1215 O Street Office Building Project combined with stormwater generated from large storm events would, on rare occasions (less than once per year in the past 10 years), exceed the capacity of the CWTP and Pioneer Reservoir treatment capacity. Although the City has an operating agreement with Regional San that allows conveyance of up to 60 mgd to that facility, project-generated wastewater flows combined with stormwater from significant storm events could exceed the capacity of the combined system. However, exceedance of treatment capacity of the combined system is a rare event, the City is implementing the Combined Sewer System Improvement Plan to make improvements throughout the system, and the project would pay the Combined Sewer Development Fee for their wastewater contributions to the CSS. The addition of wastewater flows from the 1215 O Street Office Building Project would therefore be less than significant.

The projected wastewater discharge from the 1215 O Street Office Building Project is estimated to be 32,320 gpd (see Table 4.5-6). Because the existing CDFA Annex is currently vacant, existing flows are negligible. The City of Sacramento’s current average dry weather flow to the Regional San WWTP is 18 mgd, and the City’s operating agreement with Regional San allows the City to convey up to 60 mgd to the facility. Thus, during dry weather, the City’s remaining available capacity at the Regional San WWTP would be 42 mgd, which would be sufficient to serve the project.

During storm events, the wastewater and stormwater flows in the CSS exceed 60 mgd. Excess flows are conveyed to the CWTP and Pioneer Reservoir for treatment before being discharged into the Sacramento River. During peak storm events, the CSS in-line storage and CWTP and Pioneer Reservoir treatment capacities are exceeded, which results in untreated combined sewer overflows being released to the Sacramento River. As described above under “Combined Sewer Overflows and CSS Improvements,” the City has constructed and is planning improvement projects to enhance the CSS capacity and operation, the effect of which has been to decrease overflow events from seven per year in the early 1990s prior to implementation of the CSSIP, to less than once per year in the past 10 years.

Although the number of treated and untreated combined sewer overflows released to the Sacramento River has substantially declined, the CSS, including its treatment plants (i.e., CWTP and Pioneer Reservoir) do not have sufficient capacity to treat wastewater and stormwater flows in the CSS during storm events. However, exceedance of treatment capacity at the CWTP and Pioneer Reservoir is a rare event (once in every 10 years), the City is implementing the Combined Sewer System Improvement Plan to make improvements throughout the system, and the project would pay the Combined Sewer Development Fee for their wastewater contributions to the CSS. For these reasons, and because there is sufficient capacity to treat wastewater flows from the proposed project during dry weather, implementation of the 1215 O Street Office Building Project would not adversely affect the CSS wastewater treatment plant capacity. The addition of wastewater flows from the 1215 O Street Office Building Project would therefore be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.5-5: Increased demand for electrical service

The 1215 O Street Office Building Project would include a 2 to 2.5 million kilowatt hours per year photovoltaic solar energy system (70,000 square feet of solar panels) to provide electricity to the new building and support the project goal of zero net energy. Electrical-infrastructure improvements would be necessary and constructed as part of the project. SMUD has also confirmed that it has adequate capacity and infrastructure to serve the project. This impact would be less than significant.
The project’s estimated annual electrical demand would be approximately 2 million kilowatts (kW) per year and peak electrical demand would be approximately 1,650 kW, an increase in demand relative to existing conditions at the vacant CDFA. Electrical service would be provided by the 21-kV SMUD system; the nearest manhole is located at 12th Street and Opera Alley/Carriage Path, which is a block south of the project site. New 21-kV infrastructure would be routed up 12th Street in underground conduit to replace existing overhead power lines along 12th Street, consistent with Policy 1.1.11 of the 2035 General Plan.

The new office building would be heated and cooled by the State’s Central Plant. A renovation of the Central Plant was completed in 2009 and was constructed to both modernize the plant and increase capacity so that it could continue to provide heating and cooling for existing State facilities and also serve other facilities envisioned in the 1997 Capitol Area Plan. Expansion of the Central Plant to serve long-term loads was analyzed in the Draft Environmental Impact Report for the Capitol West Side Projects Central Plant Renovation and West End Office Complex (DGS 2005:3-19). The 1215 O Street Office Building Project was not identified as an opportunity site for office development in the State’s CAP. At the time the CAP was prepared the 1215 O Street building was operating adequately as a State office building. It was not until 2011 that the building was vacated. However, the CAP suggests examination of underutilized State properties, including the 1215 O Street site. Additionally, 1.3 million GSF remains to be constructed to meet the CAP goal of 2.5 million GSF and the new office building, up to 350,000 square feet, would fall within the amount of State office space planned for by the CAP. Therefore, the 1215 O Street Office Building Project would not generate a demand for heating and cooling services from the Central Plant not already anticipated as part of the renovation, and therefore, would not increase the electrical demand to the Central Plant associated with cooling demand because the project is within the Central Plant’s anticipated long-term loads.

The project’s energy goal is to achieve ZNE consistent with Executive Order B-18-12. The ZNE strategy would be accomplished via a 2 to 2.5 million kilowatt hours (MKWH) per year photo-voltaic (PV) solar energy system that includes an approximately 25,000 square feet roof-mounted array of solar PV panels, an additional 5,000 square feet of PV panels located on the south building face, and approximately 40,000 square feet of PV panels as a canopy above the CalVet surface parking lot (DGS 2017a).

The project would be designed to exceed the 2016 Building Energy Efficiency Standards, to meet or exceed LEED v4 Silver certification (see Appendix K of this DEIR), and is targeted to have an Energy Use Index (EUI) of 25 to 30. EUI is a measure of the total energy consumed by building in a period, expressed as British thermal unit (Btu) per gross square foot (calculated by dividing the total energy consumed by a building in one year by the total gross floor area of the building). For comparison, existing buildings within downtown Sacramento have a baseline EUI score of 100. Energy Star office equipment, energy efficient computer monitors, and LED (light-emitting diode) lighting would be used throughout the building. (DGS 2017a)

SMUD would continue to provide electrical service to the project site. SMUD has acknowledged that it has adequate electrical supplies to serve the project (Shimizu, pers. comm., 2017). A SMUD representative notes that splicing manhole(s), pull boxes, pad mounted (or vaulted) switch(es) and transformer(s) would be required on each parcel. The electrical infrastructure required to serve the new office building would be constructed with the project, the construction of which would cause only a minor disruption to service for the existing CDFA Annex building. The solar PV infrastructure would be connected to the SMUD system and any additional energy from SMUD to serve the building (e.g., during nighttime hours) would be from 100 percent renewable resources. There would also be battery storage of generated energy (DGS 2017b).

Because the project would generate its own electricity through a PV solar array and SMUD has confirmed that, if necessary, it has adequate electrical supply and infrastructure to serve the project, impacts related to providing electrical service would be less than significant.

Mitigation Measures
No mitigation is required.
Impact 4.5-6: Increased demand for natural gas

The State’s Central Plant would provide heating and cooling for the 1215 O Street Office Building Project. The project is within the Central Plant’s approved long-term loads and would not increase the natural gas demand to the Central Plant. No other natural gas infrastructure would be constructed for the new office building. This impact would be less than significant.

The new office building would be heated and cooled by the State’s Central Plant. A renovation of the Central Plant was completed in 2009 and was constructed to both modernize the plant and increase capacity so that it could continue to provide heating and cooling for existing State facilities and also serve other facilities envisioned in the 1997 Capitol Area Plan. Expansion of the Central Plant to serve long-term loads was analyzed in the Draft Environmental Impact Report for the Capitol West Side Projects Central Plant Renovation and West End Office Complex (DGS 2005:3-19). The 1215 O Street Office Building Project was not identified as an opportunity site for office development in the State’s CAP. At the time the CAP was prepared the 1215 O Street building was operating adequately as a State office building. It was not until 2011 that the building was vacated. However, the CAP suggests examination of underutilized State properties, including the 1215 O Street site. Additionally, 1.3 million GSF remains to be constructed to meet the CAP goal of 2.5 million GSF and the new office building, up to 350,000 square feet, would fall within the amount of State office space planned for by the CAP. Therefore, the 1215 O Street Office Building Project would not generate a demand for heating and cooling services from the Central Plant not already anticipated as part of the renovation, and therefore would not increase the natural gas demand to the Central Plant because the project is within the Central Plant’s anticipated long-term loads.

Because there is adequate natural gas infrastructure and capacity to serve the Central Plant and no other natural gas infrastructure would be constructed for the new office building, this impact be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.5-7: Result in inefficient and wasteful consumption of energy

The project would increase electricity consumption at the site relative to existing conditions. However, electricity would be generated on-site photo-voltaic solar panels and any additional energy from SMUD (e.g., during nighttime hours) would be from 100 percent renewable resources. While the project would increase the overall energy demand at the project site, the project would reduce per capita energy use compared to other similar projects through implementation of energy efficiency measures that would meet LEED v4 Silver standards and would exceed Title 24 requirements, thereby providing an energy-efficient office and commercial project. The project would not result in an inefficient or wasteful consumption of energy. This impact would be less than significant.

Appendix F of the State CEQA Guidelines requires the consideration of the energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usage (Public Resources Code Section 21100, subdivision (b)(3)). Neither the law nor the State CEQA Guidelines establish thresholds that define wasteful, inefficient, or unnecessary use. Compliance with California’s Title 24 Energy Efficiency Standards would generally promote efficiency of structures during operation. However, compliance with building codes does not adequately address all potential energy impacts during project construction and operation. For example, energy would be required to transport people to and from the 1215 O Street Office Building project site.

Energy would be required to construct project elements, operate and maintain construction equipment, and produce and transport construction materials. The one-time energy expenditure required to construct the physical infrastructure associated with the project would be nonrecoverable. Most energy consumption
would result from operation of construction equipment and actual indirect energy consumption (e.g., waste transport and disposal). The energy needs for project construction would be temporary and is not anticipated to require significant additional capacity or significantly increase peak or base period demands for electricity and other forms of energy. Construction equipment use and associated energy consumption would be typical of that associated with office and commercial projects in an urban setting. Non-renewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction sites in the region.

Operation of the project would be typical of office and commercial uses requiring electricity for lighting, climate control, kitchen facilities, and day-to-day activities. Indirect energy use would include wastewater treatment and solid waste removal. As described in Impacts 4.5-5 and 4.5-6, above, electricity and natural gas services (to the Central Plant for heating and cooling) would be provided by SMUD and PG&E, respectively. The project would increase electricity consumption relative to existing conditions and would construct new utility connections to existing electrical lines. As stated in Impact 4.5-6, above, the 1215 O Street Office Building Project would not generate a demand for heating and cooling services from the Central Plant not already anticipated, and therefore would not increase the natural gas demand to the Central Plant associated because the project is within the Central Plant’s anticipated long-term loads.

In addition to meeting the Title 24 standards for energy efficiency, the project’s energy goal is to achieve ZNE, consistent with Executive Order B-18-12. The project would achieve this goal by constructing a 2 to 2.5 MKWH per year PV solar system and any additional energy from SMUD (e.g., during nighttime hours) would be from 100 percent renewable resources. The project would exceed the 2016 Building Energy Efficiency Standards, would meet or exceed LEED v4 Silver certification (see Appendix K of this DEIR), and is targeted to have an EUI of 25 to 30, well below the EUI for other buildings in the area. Energy Star office equipment, energy efficient computer monitors, and LED (light-emitting diode) lighting would be used throughout the building (DGS 2017a). Building standards and energy efficiency features included in the project would be expected to reduce per capita energy use compared to similar developments.

Fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. An estimated 18,350,824 gallons of gasoline and an estimated 949,204 gallons of diesel would be used during construction of the project. Based on the estimated annual vehicle miles traveled (704,411 miles) the project would generate during operation, diesel consumption is estimated at 2,305 gallons per year and gasoline consumption is estimated at 28,464 gallons per year. Fuel use estimates are calculated from the combination of fuel consumption rates and fuel mix by vehicle class from the California Air Resources Board’s EMFAC2014 model with overall vehicle mile traveled and mode share by vehicle class modeled for the proposed project in CalEEMod (see Section 4.6, Air Quality, and Appendix D of this EIR). State and federal regulations regarding fuel efficiency standards for vehicles in California are designed to reduce wasteful, unnecessary, and inefficient use of energy for transportation. The project involves redevelopment of an existing site located within 500 feet of a Regional Transit light rail station. There are also various bus lines that serve project vicinity, bike parking would be provided in the basement of the new building, and shower and locker facilities would be provided in the building’s fitness center.

According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The electricity generated for the project, by on-site sources or from SMUD, would be from 100 percent renewable resources. While the project would increase the overall energy demand at the project site, the project would reduce per capita energy use compared to other similar projects through implementation of energy efficiency measures that would meet LEED v4 standards (see Appendix K of this DEIR) and would exceed Title 24 requirements, thereby providing a relatively energy efficient office and commercial project, and would encourage use of renewable energy sources. The project would not result in an inefficient or wasteful consumption of energy. This impact would be less than significant.
Mitigation Measures

No mitigation is required.

Impact 4.5-8: Potential interruption of utility service during construction

The State would coordinate with utility providers and the City throughout the 1215 O Street Office Building Project design, demolition, and construction process, as necessary, to ensure minimal disruption of utility services and minimal inconvenience to existing utility customers. This impact would be less than significant.

Construction activities for the 1215 O Street Office Building Project could potentially interrupt utility services to existing land uses if such activities were to inadvertently damage existing infrastructure or create the need to reroute existing lines. In addition, a minor service disruption to the adjacent Food and Agriculture building may be necessary as the feeder to the Annex, which is to be demolished, is disconnected (DGS, pers. comm., 2017). The State would coordinate with utility providers throughout the design and construction process, as necessary, to ensure minimal disruption of utility services and minimal inconvenience to existing utility customers. In addition, DGS would obtain encroachment permits from the City of Sacramento Department of Public Works prior to grading, excavation, construction, and utility connections or improvements within City rights-of-way. This requirement would avoid the potential for damage of existing utility lines and would provide adequate coordination for any required interim rerouting, thus avoiding the potential for interruption of existing utility service. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation is required.
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AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable air quality regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the 1215 O Street Office Building Project. The methods of analysis for short-term construction, long-term regional (operational), local mobile-source, and toxic air emissions are consistent with the recommendations of the Sacramento Metropolitan Air Quality Management District (SMAQMD), the California Air Resources Board (ARB), and the U.S. Environmental Protection Agency (EPA).

4.6.1 Regulatory Background

Air quality surrounding the project site is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work to improve air quality through legislation, planning, policymaking, education, and a variety of other programs. The agencies responsible for improving the air quality within the air basins are discussed below.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

U.S. Environmental Protection Agency

The EPA has been charged with implementing national air quality programs. EPA’s air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress were in 1990.

Criteria Air Pollutants

The CAA required EPA to establish national ambient air quality standards (NAAQS). As shown in Table 4.6-1, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM₂.₅), and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 (CAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.
Table 4.6-1  National and California Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California (CAQS)(^{a,b})</th>
<th>National (NAAQS)(^{c})</th>
<th>Secondary(^{a,e})</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary(^{d})</td>
<td></td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary(^{e})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ozone</td>
<td>1-hour</td>
<td>0.09 ppm (180 μg/m(^3))</td>
<td>-e</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>8-hour</td>
<td>0.070 ppm (137 μg/m(^3))</td>
<td>0.070 ppm (147 μg/m(^3))</td>
<td></td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>1-hour</td>
<td>20 ppm (23 mg/m(^3))</td>
<td>35 ppm (40 mg/m(^3))</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>8-hour</td>
<td>9 ppm (10 mg/m(^3))</td>
<td>9 ppm (10 mg/m(^3))</td>
<td></td>
</tr>
<tr>
<td>Nitrogen dioxide (NO(_2))</td>
<td>Annual arithmetic mean</td>
<td>0.030 ppm (57 μg/m(^3))</td>
<td>53 ppb (100 μg/m(^3))</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>0.18 ppm (339 μg/m(^3))</td>
<td>100 ppb (188 μg/m(^3))</td>
<td>-</td>
</tr>
<tr>
<td>Sulfur dioxide (SO(_2))</td>
<td>24-hour</td>
<td>0.04 ppm (105 μg/m(^3))</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3-hour</td>
<td>-</td>
<td>-</td>
<td>0.5 ppm (1300 μg/m(^3))</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>0.25 ppm (655 μg/m(^3))</td>
<td>75 ppb (196 μg/m(^3))</td>
<td>-</td>
</tr>
<tr>
<td>Respirable particulate matter (PM(_{10}))</td>
<td>Annual arithmetic mean</td>
<td>20 μg/m(^3)</td>
<td>-</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>50 μg/m(^3)</td>
<td>150 μg/m(^3)</td>
<td></td>
</tr>
<tr>
<td>Fine particulate matter (PM(_{2.5}))</td>
<td>Annual arithmetic mean</td>
<td>12 μg/m(^3)</td>
<td>12.0 μg/m(^3)</td>
<td>15.0 μg/m(^3)</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>-</td>
<td>35 μg/m(^3)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td>Lead (^{f})</td>
<td>Calendar quarter</td>
<td>-</td>
<td>1.5 μg/m(^3)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>30-Day average</td>
<td>1.5 μg/m(^3)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Rolling 3-Month Average</td>
<td>-</td>
<td>0.15 μg/m(^3)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td>Hydrogen sulfide</td>
<td>1-hour</td>
<td>0.03 ppm (42 μg/m(^3))</td>
<td>-</td>
<td>No national standards</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24-hour</td>
<td>25 μg/m(^3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinyl chloride(^{f})</td>
<td>24-hour</td>
<td>0.01 ppm (26 μg/m(^3))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility-reducing particulate matter</td>
<td>8-hour</td>
<td>Extinction of 0.23 per km</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: μg/m\(^3\) = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million (by volume).

- California standards for ozone, carbon monoxide, 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.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 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 three years, is equal to or less than the standard. The PM\(_{10}\) 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m\(^3\) is equal to or less than one. The PM\(_{2.5}\) 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: ARB 2016a

**Toxic Air Contaminants/Hazardous Air Pollutants**

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

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

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established (Table 4.6-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and, in California, ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for toxics to limit emissions.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

ARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required ARB to establish California ambient air quality standards (CAAQS) (Table 4.6-1).

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

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

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

After a TAC is identified, ARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.
The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

ARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of ARB’s Risk Reduction Plan, it is expected that diesel PM concentrations will be 85 percent less in 2020 in comparison to year 2000 (ARB 2000). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2, “Land Use,” of this DEIR, under Section 4.2.1, “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

Sacramento Metropolitan Air Quality Management District

Criteria Air Pollutants

SMAQMD is the primary agency responsible for planning to meet NAAQS and CAAQS in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region’s portion of the SIP for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the NAAQS for ozone. The Sacramento Region has been designated as a “severe” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019.

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

All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include but are not limited to the following:

- **Rule 201:** General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators,
compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or ARB portable equipment registration.

- **Rule 202:** New Source Review. The purpose of this rule is to provide for the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

- **Rule 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 902:** Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

In addition, if modeled construction-generated emissions for a project are not reduced to less than SMAQMD’s mass emission threshold (85 pounds per day [lb/day]) after the standard construction mitigation is applied, then SMAQMD recommends using an offsite construction mitigation fee. The fee must be paid before SMAQMD can issue a grading permit. This fee is used by SMAQMD to purchase offsite emissions reductions. Such purchases are made through SMAQMD’s Heavy Duty Incentive Program, through which select owners of heavy-duty equipment in Sacramento County can repower or retrofit their old engines with cleaner engines or technologies.

**Toxic Air Contaminants**
At the local level, air districts may adopt and enforce ARB control measures for TACs. Under SMAQMD Rule 201 (“General Permit Requirements”), Rule 202 (“New Source Review”), and Rule 207 (“Federal Operating Permit”), all sources that possess the potential to emit TACs are required to obtain permits from SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SMAQMD limits emissions and public exposure to TACs through a number of programs. SMAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

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

**City of Sacramento 2035 General Plan**
The following policies in the Environmental Resources Element of the City of Sacramento 2035 General Plan are relevant to the analysis air quality effects.

- **Policy ER 6.1.1 Maintain Ambient Air Quality Standards.** The City shall work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet State and Federal ambient air quality standards in order to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution.
Policy ER 6.1.2 New Development. The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides, and particulate matter (PM$_{10}$ and PM$_{2.5}$) through project design.

Policy ER 6.1.3 Emissions Reduction. The City shall require development projects that exceed [SMAQMD-adopted] ROG and NO$_x$ operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

Policy ER 6.1.4 Sensitive Uses. The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose appropriate conditions on projects to protect public health and safety.

### 4.6.2 Existing Conditions

The 1215 O Street Office Building Project site is located in the Sacramento Valley Air Basin (SVAB). The SVAB includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County. The ambient concentrations of air 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.

#### CLIMATE, METEOROLOGY, AND TOPOGRAPHY

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

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

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

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between ROG and NO$_x$, which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the...
SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and blow air pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to the area violating the ambient-air quality standards.

The local meteorology of the project site and surrounding area is represented by measurements recorded at the Western Regional Climate Center (WRCC) Sacramento Executive Airport Station. The normal annual precipitation is approximately 17 inches. January temperatures range from a normal minimum of 37.5 °F to a normal maximum of 53.5 °F. July temperatures range from a normal minimum of 58.2 °F to a normal maximum of 92.7 °F (WRCC 2016). The prevailing wind direction is from the south (WRCC 2002).

**CRITERIA AIR POLLUTANTS**

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the SVAB is provided below. Emission source types and health effects are summarized in Table 4.6-2. Sacramento County’s attainment status for the CAAQS and the NAAQS are shown in Table 4.6-3. Monitoring data applicable to the project site is provided in Table 4.6-4.

**Ozone**

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and 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 NOX 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. NOX are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels.

Emissions of the ozone precursors ROG and NOX have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Emissions of ROG and NOX decreased from 2000 to 2010 and are projected to continue decreasing from 2010 to 2035 (ARB 2013).

**Nitrogen Dioxide**

NO2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO2. The combined emissions of NO and NO2 are referred to as NOX and are reported as equivalent NO2. Because NO2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO2 concentration in a particular geographical area may not be representative of the local sources of NOX emissions (EPA 2012).

**Particulate Matter**

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM10. PM10 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 reaction of gaseous precursors (ARB 2013). Fine particulate matter (PM2.5) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM10 emissions in the SVAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and demolition, and particles from residential fuel combustion. Direct emissions of PM10 are projected to remain relatively constant through 2035. Direct emissions of PM2.5 have steadily declined in the SVAB between 2000 and 2010 and then are projected to increase very slightly through 2035. Emissions of PM2.5 in the SVAB are dominated by the same sources as emissions of PM10 (ARB 2013).
### Table 4.6-2  Sources and Health Effects of Criteria Air Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sources</th>
<th>Acute(^1) Health Effects</th>
<th>Chronic(^2) Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>Secondary pollutant resulting from reaction of ROG and NO(_x) in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO(_x) results from the combustion of fuels</td>
<td>increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation</td>
<td>permeability of respiratory epithelia, possibility of permanent lung impairment</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>Incomplete combustion of fuels; motor vehicle exhaust</td>
<td>headache, dizziness, fatigue, nausea, vomiting, death</td>
<td>permanent heart and brain damage</td>
</tr>
<tr>
<td>Nitrogen dioxide (NO(_2))</td>
<td>combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines</td>
<td>coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death</td>
<td>chronic bronchitis, decreased lung function</td>
</tr>
<tr>
<td>Sulfur dioxide (SO(_2))</td>
<td>coal and oil combustion, steel mills, refineries, and pulp and paper mills</td>
<td>Irritation of upper respiratory tract, increased asthma symptoms</td>
<td>Insufficient evidence linking SO(_2) exposure to chronic health impacts</td>
</tr>
<tr>
<td>Respirable particulate matter (PM(<em>{10})) Fine particulate matter (PM(</em>{2.5}))</td>
<td>fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO(_2) and ROG</td>
<td>breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death</td>
<td>alterations to the immune system, carcinogenesis</td>
</tr>
<tr>
<td>Lead</td>
<td>metal processing</td>
<td>reproductive/developmental effects (fetuses and children)</td>
<td>numerous effects including neurological, endocrine, and cardiovascular effects</td>
</tr>
</tbody>
</table>

Notes: NO\(_x\) = oxides of nitrogen; ROG = reactive organic gases.

1 “Acute” refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

2 “Chronic” refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Sources: EPA 2016

### Table 4.6-3  Attainment Status Designations for Sacramento County

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>National Ambient Air Quality Standard</th>
<th>California Ambient Air Quality Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>Attainment (1-hour)(^1)</td>
<td>Nonattainment (1-hour) Classification-Serious(^2)</td>
</tr>
<tr>
<td></td>
<td>Nonattainment (8-hour)(^3) Classification=Severe</td>
<td>Nonattainment (8-hour)</td>
</tr>
<tr>
<td>Respirable particulate matter (PM(_{10}))</td>
<td>Attainment (24-hour)</td>
<td>Nonattainment (24-hour)</td>
</tr>
<tr>
<td>Fine particulate matter (PM(_{2.5}))</td>
<td>Nonattainment (24-hour)</td>
<td>(No State Standard for 24-Hour)</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>Attainment (Annual)</td>
<td>Attainment (Annual)</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>Attainment (Annual)</td>
<td>Attainment (Annual)</td>
</tr>
<tr>
<td>Nitrogen dioxide (NO(_2))</td>
<td>Unclassified/Attainment (1-hour)</td>
<td>Attainment (1-hour)</td>
</tr>
<tr>
<td>Sulfur dioxide (SO(_2))(^5)</td>
<td>(Attainment Pending) (1-Hour)</td>
<td>Attainment (1-hour)</td>
</tr>
</tbody>
</table>

\(^1\) “Acute” refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

\(^2\) “Chronic” refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

\(^3\) Attainment status is based on concentrations for 8-hour averaging period.

\(^5\) Sulfur dioxide attainment status is pending further review by the California Air Resources Board.
Table 4.6-3  

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>National Ambient Air Quality Standard</th>
<th>California Ambient Air Quality Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (Particulate)</td>
<td>Attainment (3-month rolling avg.)</td>
<td>Attainment (30 day average)</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td></td>
<td>Unclassified (1-hour)</td>
</tr>
<tr>
<td>Sulfates</td>
<td>No Federal Standard</td>
<td>Attainment (24-hour)</td>
</tr>
<tr>
<td>Visibly Reducing Particles</td>
<td></td>
<td>Unclassified (8-hour)</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td></td>
<td>Unclassified (24-hour)</td>
</tr>
</tbody>
</table>

Notes:
1  Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.
2  Per Health and Safety Code (HSC) § 40921.5(c), the classification is based on 1989 – 1991 data, and therefore does not change.
3  1997 Standard.
4  2008 Standard.
5  2010 Standard.
Source: SMAQMD 2016a

Table 4.6-4  

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum concentration (1-hr/8-hr avg, ppm)</td>
<td>0.091/0.081</td>
<td>0.085/0.080</td>
<td>0.092/0.079</td>
</tr>
<tr>
<td>Number of days state standard exceeded (1-hr/8-hr)</td>
<td>0/0</td>
<td>0/4</td>
<td>0/4</td>
</tr>
<tr>
<td>Number of days national standard exceeded (8-hr)</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM2.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum concentration (24-hour μg/m³)</td>
<td>40.2</td>
<td>33.2</td>
<td>42.1</td>
</tr>
<tr>
<td>Number of days national standard exceeded (24-hour measured²)</td>
<td>6.1</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum concentration (μg/m³)</td>
<td>77.8²</td>
<td>70.6²</td>
<td>71.6²</td>
</tr>
<tr>
<td>Number of days state standard exceeded</td>
<td>23.0²</td>
<td>0²</td>
<td>6.1²</td>
</tr>
<tr>
<td>Number of days national standard exceeded</td>
<td>0²</td>
<td>0²</td>
<td>0²</td>
</tr>
</tbody>
</table>

Notes: μg/m³ = micrograms per cubic meter; ppm = parts per million
1 Measurements from the Sacramento-T Street station for ozone, respirable particulate matter (PM10), and fine particulate matter (PM2.5).
2 Data was unavailable for Sacramento-T Street station, thus next closest station data was used (West Sacramento-15th Street station).
Source: ARB 2016b

MONITORING STATION DATA AND ATTAINMENT DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The Sacramento-T Street station is the closest and most representative station to the project area with recent data for ozone and PM2.5. Table 4.6-4 summarizes the air quality data from the last three years (2013-2015). Because no PM10 concentrations are collected at the Sacramento-T Street station, measured concentrations from the next closest station, West Sacramento-15th Street, is presented in Table 4.6-4.

Both ARB and EPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants (attainment designations are summarized above in Table 4.6-2).
TOXIC AIR CONTAMINANTS

According to the California Almanac of Emissions and Air Quality (ARB 2013), the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being 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 emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. 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, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these 10 TACs mentioned. Based on receptor modeling techniques, ARB estimated the average cancer risk associated with diesel PM concentrations in the SVAB to be 360 excess cancer cases per million people in the year 2000. Overall, levels of most TACs, except para-dichlorobenzene and formaldehyde, have decreased since 1990 (ARB 2013).

ODORS

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

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants (SMAQMD 2016b). None of these odorous land uses are within proximity to the project site.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

The closest residences to the office building portion of the project site are approximately 50 and 100 feet northeast of, and 125 feet to the southeast of the building. Additionally, Westminster Presbyterian Church is located approximately 250 feet northeast of the office building site, and Forever Young Child Care Center is located approximately 350 feet south of, and has a direct line of sight to the office building site. See Exhibit 4.8-1 for locations of all nearby sensitive land uses.
4.6.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors were assessed in accordance with SMAQMD-recommended methodologies. The project’s emissions are compared to SMAQMD-adopted thresholds.

Construction and operational emissions of criteria air pollutants and precursors were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program, as recommended by SMAQMD. Modeling was based on project-specific information (e.g., size, area to be graded, area to be paved) where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project’s location and land use type. Construction would begin as early as 2018. The project would accommodate approximately 1,000 relocated employees from the Bateson Building, along with space for up to 200 new employees at 1215 O Street.

For the purposes of this analysis, the mobile sector emissions accounts for only the 150 to 200 new employees that would occupy the 1215 O Street Office Building, as these new employees would be the source of any net new mobile source emissions in the downtown area. The cumulative assessment of mobile source emissions (see Chapter 5, “Cumulative Impacts”) includes both the new employees at the 1215 O Street Office Building, and the backfilling of the renovated Bateson Building (approximately 1,000 employees). The transfer of existing employees from the Bateson Building to the 1215 O Street Office Building would not change the total number of employees in the downtown area. The 1215 O Street Office Building is anticipated to accommodate 150-200 additional employees. The vehicle trips and associated emissions from this increase in employees in the downtown area is attributed to the 1215 O Street Office Building Project. Then, the eventual re-occupation of the Bateson Building would bring approximately 1,000 net new employees to the downtown area compared to existing conditions. In the cumulative assessment of mobile source emissions provided in Chapter 5, the vehicle trips and associated emissions from these employees is added to the mobile source GHG emissions attributable to the 1215 O Street Office Building Project. However, the estimate of operational emissions does not include emissions from the renovated Bateson Building itself. The currently occupied Bateson Building is generating criteria pollutant emissions as part of building operation. The renovation of the Bateson Building would allow it to operate in a more energy- and emissions-efficient manner. A renovated Bateson Building would result in lower building operation emissions of criteria pollutants than under existing conditions. Rather than “take credit” for future reduced criteria pollutant emissions at the Bateson Building, the analysis takes a conservative approach and assumes there would be no change in criteria pollutant emissions from existing conditions; and therefore, no net gain or decline in criteria pollutant emissions to incorporate into the emission calculations.

Specific model assumptions and inputs for these calculations can be found in Appendix C.

CO impacts were assessed qualitatively, using the screening criteria set forth by SMAQMD and results from the project-specific traffic study. The level of health risk from exposure to construction- and operation-related TAC emissions was assessed qualitatively. This assessment was based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure.

Impacts related to odors were also assessed qualitatively, based on proposed construction activities, equipment types and duration of use, overall construction schedule, and distance to nearby sensitive receptors. To evaluate an odor impact, SMAQMD recommends the lead agency provide the buffer distance and a description of the land features and topography in the buffer zone that separates nearby sensitive receptors and the odor source. The focus of the analysis is construction related odors as the 1215 O Street Office Building Project does not include any uses that would generate odors different from typical existing urban development in the area.
THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines and SMAQMD recommendations, a project’s impact to air quality is considered significant if it would do any of the following:

- cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 lb/day for NO\textsubscript{X}, 80 lb/day or 14.6 tons/year for PM\textsubscript{10}, and 82 lb/day or 15 tons/year for PM\textsubscript{2.5};

- result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO\textsubscript{X}, 80 lb/day and 14.6 tons/year for PM\textsubscript{10}, and 82 lb/day or 15 tons/year for PM\textsubscript{2.5};

- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm;

- expose sensitive receptors to a substantial incremental increase in TAC emissions that exceed 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or

- create objectionable odors affecting a substantial number of people.

ENVIRONMENTAL IMPACTS

Impact 4.6-1: Construction emissions of criteria air pollutants and precursors (ROG, NO\textsubscript{X}, PM\textsubscript{10}, and PM\textsubscript{2.5})

Construction of the 1215 O Street Office Building Project would result in project-generated emissions of ROG, NO\textsubscript{X}, PM\textsubscript{10}, and PM\textsubscript{2.5} from demolition, site preparation (e.g., excavation, clearing), off-road equipment, material and equipment delivery trips, worker commute trips, and other miscellaneous activities (e.g., asphalt paving, application of architectural coatings). Construction activities would not result in daily emissions of ROG, PM\textsubscript{10}, or PM\textsubscript{2.5} and annual emissions of PM\textsubscript{10} and PM\textsubscript{2.5} that would exceed the respective SMAQMD thresholds. However, daily emissions of NO\textsubscript{X} would exceed SMAQMD’s threshold of 85 lb/day. Therefore, construction-generated emissions of NO\textsubscript{X} would contribute to existing nonattainment status of the SVAB for ozone. This impact would be significant.

Construction-related activities would result in project-generated emissions of ROG, NO\textsubscript{X}, PM\textsubscript{10}, and PM\textsubscript{2.5} (a subset of PM\textsubscript{10}) from demolition, site preparation (e.g., excavation, clearing), off-road equipment, material delivery, worker commute trips, and other miscellaneous activities (e.g., asphalt paving, application of architectural coatings). Fugitive dust emissions of PM\textsubscript{10} and PM\textsubscript{2.5} are associated primarily with demolition and site preparation and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and vehicle miles traveled on and off the site. Emissions of ozone precursors, ROG and NO\textsubscript{X}, are primarily associated with construction equipment and on-road mobile exhaust. Paving and the application of architectural coatings result in off-gas emissions of ROG. PM\textsubscript{10} and PM\textsubscript{2.5} are also contained in vehicle exhaust.

Typical construction activities would require forklifts, cranes, compressors, loaders, backhoes, excavators, dozers, scrapers, pavement compactors, welders, concrete pumps, concrete trucks, and off-road haul trucks, as well as other diesel-fueled equipment as necessary. Construction activities could begin as early as October 2018 and is assumed to be complete by early 2021. Conservative assumptions were used to model construction emissions and individual phases were overlapped (e.g., site preparation, grading, building construction) to account for construction activities occurring simultaneously (although such overlapping is unlikely given the relatively small size of the project site and the difficulty in operating multiple pieces of
machinery in the available space). As such, reported emissions represent a conservative estimate of maximum daily emissions (i.e., likely higher than actual emissions). For specific assumptions and modeling inputs, refer to Appendix C.

Table 4.6-5 summarizes the modeled maximum daily emissions from construction activities, by year, over the estimated 4-year buildout period (ending in 2021). Maximum daily emissions of NOX could potentially exceed applicable thresholds through during part of the construction period. Daily emissions of ROG, PM10, and PM2.5 and annual emissions of PM10 and PM2.5 would not exceed the respective thresholds. Because the SMAQMD suggested threshold for daily emission of NOX could be exceeded, construction emissions could contribute to the existing nonattainment condition of the SVAB with respect to CAAQS and NAAQS for ozone. This would be a significant impact.

<table>
<thead>
<tr>
<th>Construction Year</th>
<th>ROG lb/day</th>
<th>NOX lb/day</th>
<th>PM10 lb/day (fugitive/exhaust/total)</th>
<th>PM10 tons/year (fugitive/exhaust/total)</th>
<th>PM2.5 lb/day (fugitive/exhaust/total)</th>
<th>PM2.5 tons/year (fugitive/exhaust/total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>7</td>
<td>74</td>
<td>14/3/17</td>
<td>&lt;1/&lt;1/&lt;1</td>
<td>6/3/9</td>
<td>&lt;1/&lt;1/&lt;1</td>
</tr>
<tr>
<td>2019</td>
<td>11</td>
<td>105</td>
<td>10/4/14</td>
<td>&lt;1/&lt;1/&lt;1</td>
<td>4/4/8</td>
<td>&lt;1/&lt;1/&lt;1</td>
</tr>
<tr>
<td>2020</td>
<td>6</td>
<td>52</td>
<td>2/2/4</td>
<td>&lt;1/&lt;1/&lt;1</td>
<td>0.6/2/3</td>
<td>&lt;1/&lt;1/&lt;1</td>
</tr>
<tr>
<td>2021</td>
<td>192</td>
<td>59</td>
<td>8/3/11</td>
<td>&lt;1/&lt;1/&lt;1</td>
<td>2/2/4</td>
<td>&lt;1/&lt;1/&lt;1</td>
</tr>
<tr>
<td>SMAQMD Threshold of Significance</td>
<td>NONE</td>
<td>85</td>
<td>&lt;80</td>
<td>14.6</td>
<td>&lt;82</td>
<td>15</td>
</tr>
</tbody>
</table>

Exceed Significance Threshold?

| Notes: CO = carbon monoxide; lb/day = pounds per day; N/A = not applicable; NOX = oxides of nitrogen; PM10 = respirable particulate matter; PM2.5 = fine particulate matter; ROG = reactive organic gases.

Bold values indicate emissions that would exceed local significance criteria. Total values may not add correctly due to rounding. See Appendix C for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental 2017

Mitigation Measure 4.6-1: Construction-related exhaust emission controls

To reduce construction-related exhaust emissions, and thus emissions of NOX, DGS shall ensure that the following measures are adhered to by the Design-Build Team during all construction activities.

**Exhaust Emissions Reduction Measures**

- Minimize idling time 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]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Maintain all construction equipment in proper working condition according to manufacturer’s specifications. Before delivery to the project site, the equipment must be checked by a certified mechanic and determined to be running in proper condition.

- The Design-Build Team shall submit to DGS and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The inventory shall also identify the anticipated construction timeline including start date, and name and phone number of the
project manager and on-site foreman. The information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.

The Design-Build Team shall provide a plan for approval by DGS and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction compared to the most recent ARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

**Significance after Mitigation**
Implementation of Mitigation Measure 4.6-1 would reduce exhaust emissions generated by construction of the project. Implementation of exhaust control measures would reduce NOx emissions from off-road equipment by a minimum of 20 percent. This would lower the maximum daily NOx emissions below the 85 lb/day threshold for all years of construction, regardless of simultaneous construction phases occurring. Thus, construction-generated NOx levels would be reduced to a **less than significant** level.

**Impact 4.6-2: Long-term operational emissions of ROG, NOx, PM10, and PM2.5**

Implementation of the 1215 O Street Office Building Project would not result in long-term operational emissions of ROG, NOx, PM10, or PM2.5, or PM2.5 that exceed SMAQMD’s thresholds of significance (65 lb/day for ROG, 65 lb/day for NOx, 80 lb/day for PM10, and 82 lb/day for PM2.5). Therefore, operational-related emissions would not conflict with the air quality planning efforts or conflict substantially with the nonattainment status of Sacramento County with respect to ozone and PM10. This impact would be **less than significant**.

Project operations would result in the generation of long-term operational emissions of ROG, NOx, and particulate matter (PM10 and PM2.5) as a result of mobile, stationary, and area-wide sources. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips generated by new employees occupying the 1215 O Street Office Building. Stationary and area-wide sources would include the combustion of natural gas for space and water heating (i.e., energy use), the regular testing of the emergency backup generator and occasional operation during power outages, the use of landscaping equipment and other small equipment, the periodic application of architectural coatings, and generation of ROG from the use of consumer products.

Table 4.6-6 summarizes the maximum daily operational-related emissions of criteria air pollutants during the summer season (higher emissions scenario), as well as annual emissions of PM10 and PM2.5, at full buildout. Emissions were calculated based on proposed land uses and adjusted trip lengths to match project-specific vehicle miles traveled (VMT), as reported in the traffic study (Section 4.4, “Transportation and Circulation”). As shown in Table 4.6-6, operational-related activities would not result in project-generated daily emissions of ROG, NOx, PM10, or PM2.5 that exceed the SMAQMD-recommended thresholds of significance. Thus, ROG, NOx, PM10, and PM2.5 emissions generated under full buildout of the project would not conflict with long-term ozone and PM10 planning efforts or contribute substantially to a net increase in concentrations of ozone and PM10 for which Sacramento County is in nonattainment. This impact would be **less than significant**.

**Mitigation Measures**
No mitigation is required.
### Table 4.6-6: Summary of Maximum (Unmitigated) Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2021)

<table>
<thead>
<tr>
<th>Source Type</th>
<th>ROG</th>
<th>NOX</th>
<th>PM_{10}</th>
<th>PM_{2.5}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>10</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy</td>
<td>&lt;1</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Mobile</td>
<td>7</td>
<td>15</td>
<td>2</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>17</td>
<td>17</td>
<td>2</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Annual Emissions (tons/year)</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>80 lb/day and 14.6 tons/year</td>
<td>82 lb/day and 15 tons/year</td>
</tr>
</tbody>
</table>

SMAQMD Threshold of Significance: 65 lb/day and 14.6 tons/year

Exceed Significance Threshold? No No No No

Notes: CO = carbon monoxide; lb/day = pounds per day; N/A = not applicable; NOX = oxides of nitrogen; PM_{10} = respirable particulate matter; PM_{2.5} = fine particulate matter; ROG = reactive organic gases.

Total values may not add correctly due to rounding. See Appendix C for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental 2017

### Impact 4.6-3: Mobile-source CO concentrations

Long-term operation-related local mobile-source emissions of CO generated by the implementation of the 1215 O Street Office Building Project would not result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm. Therefore, project operation would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial CO. As a result, this impact would be less than significant.

Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels at nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. As a result, it is recommended that CO not be analyzed at the regional level, but at the local level.

Construction would occur over 4 years and therefore traffic related to construction activities would also be spread over the duration of construction activities. As such, construction-generated traffic is not anticipated to result in large peaks at any one time over the course of construction. This analysis focuses on operational-related traffic.

Project-generated traffic would be associated primarily with the operational phase. At complete buildout, the project would generate up to 249 daily trips, including up to 40 trips during the a.m. peak hour and up to 35 during the p.m. peak hour. This is a result of the 142 new employees that would occupy the 1215 O Street building, upon building completion.

SMAQMD provides a screening methodology to determine whether CO emissions generated by traffic at congested intersections have the potential to exceed, or contribute to an exceedance of, the 8-hour CAAQS of 9.0 ppm or the 1-hour CAAQS of 20.0 ppm. The screening methodology has two tiers of screening criteria. If the first set is not met, then the second tier may be applied. It states that the following criteria must be met:
First-Tier
A project will result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the project will not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project will not contribute additional traffic to an intersection that already operates at LOS E or F.

Second-Tier
If all the following criteria are met, a project will result in a less-than-significant impact to air quality for local CO.

- The project will result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project will not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by CalEEMod model).

Based on the traffic study conducted for the project (see Section 4.4, Transportation and Circulation), if traffic generated by the proposed project is added to existing traffic conditions (existing plus project conditions) the project would not result in the downgrading of a project-affected intersection to the level E or F. All intersections would continue to operate at LOS C or better overall, except for the intersection of W Street/16th Street/U.S. 50 westbound off-ramp, which would operate at LOS D. Refer to Section 4.4, “Transportation and Circulation” for traffic intersection details. Because the traffic generated by the project will not result in deterioration of LOS to E or F, based on the SMAQMD CO screening methodology, operation-related local mobile-source emissions of CO generated by the proposed project would not result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm. Therefore, project operation would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial CO concentrations. This impact is less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.6-4: Exposure of sensitive receptors to TACs

Construction- and operation-related emissions of TACs associated with the implementation of 1215 O Street Building Project would not result an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 at existing or future sensitive receptors. Therefore, this impact would be less than significant.

Particulate exhaust emissions from diesel fueled engines (i.e., diesel PM) was identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed above in Section 4.6.2, “Existing Conditions,” outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (ARB 2003). With regards to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, when a Health Risk Assessment is prepared to project the results of exposure of
sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed project if emissions occur for shorter periods (OEHHA 2012:11-3).

The exposure of sensitive receptors to TAC emissions from project-generated construction and operational sources are discussed separately below. The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction and operation. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project site would not include any industrial sources of other TACs.

**Construction**

Construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used during site preparation (e.g., demolition, clearing, grading); paving; on-road truck travel; and other miscellaneous activities. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions. This analysis focuses primarily on heavy-duty construction equipment used onsite that may affect nearby offsite existing land uses.

As shown in Exhibit 4.6-1, there are several sensitive receptors near the project site. These include residences, a childcare center, and a church. Residences are as close as 50 feet from the project site. The staging area for the project would be the parking lot directly south of the project. The construction activities would begin in 2018, starting with hazardous materials abatement and demolition of the existing office building. The construction of the project would include activities such as site preparation, excavation, grading, building construction, and paving. Construction would be complete by early 2021, resulting in construction occurring over four separate calendar years. Relative to the 30-year and 70-year exposure periods suggested for conducting a Health Risk Assessment, construction-generated emissions of diesel PM would be short-term and intermittent and would not occur for an extended period of time.

As noted above, the diesel PM is considered to be the pollutant of concern for this analysis. Based on the emission modeling conducted and presented in Table 4.6-5, above, maximum daily emissions of diesel exhaust PM_{10}, considered a surrogate for diesel PM, would not exceed 4 lb/day during the most intense season of construction activity. This is below the SMAQMD-recommended threshold of 80 lb/day. In addition, Mitigation Measure 4.6-1 is in place which would further reduce exhaust emissions from onsite construction equipment. Further, the majority of the construction would occur during daytime hours, which is when many residents who are employed or are students typically are not home, thus limiting exposure from construction-related emissions to these receptors.

Therefore, considering the relatively low mass of diesel PM emissions that would be generated by construction, the relatively short duration of diesel PM-emitting construction activity at the project site, mitigation measures in place to further reduce exhaust emission, and the highly dispersive properties of diesel PM, construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0.

**Long-Term Operation**

The project would not locate new residences or other sensitive land uses in proximity to existing TAC sources associated with surrounding land uses and roadways.

Operation of the 1215 O Street Office Building may result in stationary sources of TACs, including back-up diesel generators and commercial loading docks where delivery trucks may idle. The back-up diesel generator would only operate during power failures and periodic testing. Idling time of delivery trucks would be limited to 5 minutes by the California airborne toxics control measure incorporated in Title 13, Section 2485 of CCR. These types of uses are common in urban settings and considered compatible with various...
urban land uses, including residential. Stationary TAC sources associated with the project would not result in a substantial increase in TAC emissions compared to existing conditions.

In addition to stationary sources, the project would result in increases in mobile-source emissions on local roadways associated with project-generated traffic. These include Interstate 5 (I-5) and US Route 50 (US-50). Traffic volumes on I-5 are approximately 181,700 per day, while traffic volumes on US-50 are approximately 258,000 per day (Caltrans 2015). Guidance from SMAQMD’s Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways and ARB’s Air Quality and Land Use Handbook recommends that new sensitive receptors should not be placed within 500 feet of freeways or urban streets with volumes that exceed 100,000 per day (ARB 2005). Some of the project-generated traffic would occur on nearby freeways experiencing volumes greater than 100,000 vehicles per day, contributing to an already adverse condition with regards to mobile TACs in the area.

Based on the traffic study conducted, the project would result in a maximum of 249 daily trips (i.e., new TAC sources), traveling through 22 different intersections (see Table 4.4-9 in Section 4.4, “Transportation and Circulation”) and many roads. Total project-trips dispersed over many intersections and roadways throughout the project area would result in fewer vehicles than 249 on any given road, and therefore; would not be considered a substantial increase in mobile-source TACs. In addition, vehicle types associated with office buildings include primarily non-diesel passenger vehicles. Although these vehicle types still generate TAC emissions, they do not generate diesel PM, the TAC of primary concern with respect to mobile-sources. Given that project-generated vehicle trips would not result in a substantial increase in mobile-source TACs and diesel PM would not be a predominate pollutant, project-related increases in TACs would not result in a substantial increase to existing TAC levels on existing roadways.

In summary, construction- and operation-related emissions of TACs associated with the implementation of 1215 O Street Building Project would be minimal and would not result an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 at existing or future sensitive receptors. Therefore, this impact would be less than significant.

**Mitigation Measures**
No mitigation is required.

**Impact 4.6-5: Exposure of sensitive receptors to odors**

The project would introduce new odor sources into the area (e.g., temporary diesel exhaust emissions during construction and delivery truck associated with commercial land uses). Construction and long-term operation of the project would not result in the exposure of sensitive receptors to excessive odors. Therefore, this impact would be less than significant.

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the affected receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generate citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose a substantial number of people to objectionable odors would be deemed to have a significant impact.

Minor odors from the use of heavy-duty diesel equipment, and the laying of asphalt during project related construction activities would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. Exhibit 4.6-1 details the sensitive receptors in proximity to the project site. This includes residences, a child care center, and a church. Construction activities would primarily occur during daytime hours, when many residents who are employed or are students typically are not home and thus, would not be subject to potential objectionable odors.
Operation of the office building would not generate substantial objectionable odors. The proposed office building would contain uses that are common in the surrounding urbanized area (e.g., office, food service). No major odor sources (i.e., dairy, wastewater treatment plant, landfill, etc.) exist in the immediate vicinity of the project site. Further, the proposed land use is not considered a sensitive receptor. Therefore, the implementation of the 1215 O Street Office Building would not result in exposure of a substantial number of people to objectionable odors. This impact is less than significant.

**Mitigation Measures**

No mitigation is required.
4.7 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This chapter presents a summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of project-generated GHG emissions and discussion about their potential contribution to global climate change; and analysis of the project’s resiliency to climate change-related risks.

4.7.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks

On August 28, 2014, the U.S. Environmental Protection Agency (EPA) and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) finalized a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the U.S. (NHTSA 2012). EPA proposed the first-ever national GHG emissions standards under the federal Clean Air Act, and NHTSA proposed Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program will increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) for the fleet of cars and light-duty trucks by model year 2025, and, as of 2016, NHTSA and EPA are developing additional phases to address GHG emission standards for new medium- and heavy-duty trucks (NHTSA 2016). This program is currently under review by EPA, but at the time of publication of this DEIR had not been changed.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this executive order remains relevant because a more recent California Appellate Court decision, Cleveland National Forest Foundation v. San Diego Association of Governments (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. The case was reviewed by the California Supreme Court in January 2017 and a decision had not been released at the time of writing this DEIR. Therefore, the Appellate Court decision is not currently considered a citable precedent.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006, Assembly Bill (AB) 32. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that these reductions “…shall remain in effect unless otherwise amended or repealed. (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue
reductions in emissions of greenhouse gases beyond 2020. (c) The [Air Resources Board] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.” [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

Assembly Bill 32 Climate Change Scoping Plan and Updates
In December 2008, ARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of CO₂-equivalent (CO₂e) emissions, or approximately 21.7 percent from the State’s projected 2020 emission level of 545 MMT of CO₂e under a business-as-usual scenario (this is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions). In May 2014, ARB released and subsequently adopted the First Update to the Climate Change Scoping Plan to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (ARB 2014a:4 and 5). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (ARB 2014a:ES-2). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

On January 20, 2017, ARB released its proposed 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

The proposed update also identifies how GHGs associated with proposed projects could be evaluated under CEQA. Specifically, it states that achieving “no net increase” in GHG emissions is the correct overall objective of projects evaluated under CEQA if conformity with an applicable local GHG reduction plan cannot be demonstrated. ARB recognizes that it may not be appropriate or feasible for every development project to mitigate its GHG emissions to no net increase and that this may not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change. In terms of current project-level thresholds, neither the Sacramento Metropolitan Air Quality Management District (SMAQMD) nor the City of Sacramento have developed an evidenced-based, bright-line numeric threshold consistent with the State’s long-term 2030 GHG goal. At the time of writing this environmental document, ARB has not yet approved its proposed 2017 Scoping Plan Update.

Senate Bill 375
Senate Bill (SB) 375, signed by Governor Schwarzenegger in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO’s Regional Transportation Plan. ARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035.

The Sacramento Area Council of Governments (SACOG) serves as the MPO for Sacramento, Placer, El Dorado, Yuba, Sutter, and Yolo Counties, excluding those lands located in the Lake Tahoe Basin. The 1215 O Street Office Building Project site is in Sacramento County. SACOG adopted its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) 2035 in 2012, and completed an update adopted on February 18, 2016. SACOG was tasked by ARB to achieve a 9 percent per capita reduction compared to 2012 emissions by 2020 and a 16 percent per capita reduction by 2035, which ARB confirmed the region would achieve by implementing its SCS (ARB 2013).

Executive Order B-30-15
On April 20, 2015 Governor Brown signed Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor’s executive order aligns California’s GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of
reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (Assembly Bill 32, discussed above). California’s new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

**Senate Bill 32 and Assembly Bill 197 of 2016**

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California’s GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize ARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State’s continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

**Advanced Clean Cars Program**

In January 2012, ARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program’s zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California’s new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (ARB 2012).

**Senate Bill X1-2 of 2011 and Senate Bill 350 of 2015**

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond. In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030.

**California Building Efficiency Standards of 2016 (Title 24, Part 6)**

Buildings in California are required to comply with California’s Energy Efficiency Standards for Residential and Nonresidential Buildings established by the CEC regarding energy conservation standards and found in Title 24, Part 6 of the California Code of Regulations. These standards were first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2017 must follow the 2016 standards (CEC 2015). Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.
California Integrated Waste Management Act
To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally-safe transformation and land disposal. Per capita disposal rates for the City of Sacramento are below the target disposal rates established by AB 939 (1989; CalRecycle 2017).

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that on and after July 1, 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act.

Executive Order B-18-12
In April 2012, Governor Brown signed Executive Order B-18-12 requiring State agencies to implement green building practices to improve energy, water and materials efficiency, improve air quality and working conditions for State employees, reduce costs to the State and reduce environmental impacts from State operations. Among other actions, EO B-18-12 requires State agencies to reduce agency-wide water use by 10 percent by 2015 and 20 percent by 2020, as measured against a 2010 baseline. The Executive Order directs that new State buildings larger than 10,000 square feet use clean, on-site power generation and obtain the U.S. Green Building Council’s Leadership in Energy and Environmental (LEED) Silver certification. Further, EO B-18-12 states that all new State buildings beginning design after 2025 be constructed as Zero Net Energy (ZNE) facilities, with an interim target of 50 percent of new facilities beginning design after 2020 to be ZNE. The Executive Order also calls for State agencies to identify and pursue opportunities to provide electric vehicle charging stations at employee parking facilities in new buildings.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

Sacramento Metropolitan Air Quality Management District
SMAQMD is the primary agency responsible for addressing air quality concerns in all of Sacramento County—its role is discussed further in Section 4.6, “Air Quality.” SMAQMD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SMAQMD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SMAQMD’s goals in developing GHG thresholds include ease of implementation; use of standard analysis tools; and emissions mitigation consistent with AB 32. However, since the passage of SB 32 and AB 197 and the associated adoption of a revised statewide emissions target of 40 percent below 1990 levels by 2030, SMAQMD has not developed new thresholds in compliance with this target.
City of Sacramento

City of Sacramento 2035 General Plan
The City of Sacramento 2035 General Plan includes the following policies related to reducing GHG emissions in Sacramento (City of Sacramento 2015).

- **Policy ER 6.1.5.** The City shall reduce community GHG emissions by 15 percent below 2005 baseline levels by 2020, and strive to reduce community emissions by 49 percent and 83 percent by 2035 and 2050, respectively.

- **Policy ER 6.1.7.** The City shall reduce greenhouse gas emissions from new development by discouraging auto-dependent sprawl and dependence on the private automobile; promoting water conservation and recycling; promoting development that is compact, mixed use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the job/housing ratio in each community; and other methods of reducing emissions.

Sacramento Climate Action Plan
The Sacramento Climate Action Plan (CAP) was adopted on February 14, 2012 by the Sacramento City Council and was incorporated into the 2035 General Plan. The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the city reach these targets. Reduction strategies address GHG emissions associated with transportation and land use, energy, water, waste management and recycling, agriculture, and open space. The City’s goals related to transportation and energy use are described below.

- Improve accessibility and system connectivity by removing physical and operational barriers to safe travel.

- Reduce reliance on the private automobile.

- Use emerging transportation technologies and services to increase transportation system efficiency.

- Design, construct, and maintain a universally accessible, safe, convenient, integrated and well-connected pedestrian system that promotes walking.

- Create and maintain a safe, comprehensive, and integrated transit system as an essential component of a multimodal transportation system.

- Support the development and provision of privately funded and/or privately-operated transit services that support citywide and regional goals by reducing single-occupant vehicle (SOV) trips, vehicle miles traveled and greenhouse gas (GHG) emissions.

- The City and other agencies within jurisdiction over roadways within City limits shall plan, design, operate and maintain all streets and roadways to accommodate and promote safe and convenient travel for all users – pedestrians, bicyclists, transit riders, and persons of all abilities, as well as freight and motor vehicle drivers.

- Enhance the quality of life within existing neighborhoods through the use of neighborhood traffic management and traffic calming techniques, while recognizing the City’s desire to provide a grid system that creates a high level of connectivity.

- Maintain an interconnected system of streets that allows travel on multiple routes by multiple modes, balancing access, mobility and place-making functions with sensitivity to the existing and planned land use context of each corridor and major street segment.
Create and maintain a safe, comprehensive, and integrated bicycle system and set of support facilities throughout the city that encourage bicycling that is accessible to all. Provide bicycle facilities, programs and services and implement other transportation and land use policies as necessary to achieve the City’s bicycle mode share goal as documented in the Bicycle Master Plan.

Provide and manage parking such that it balances the citywide goal of economic development, livable neighborhoods, sustainability, and public safety with the compact multi-modal urban environment prescribed by the General Plan.

Provide for the energy needs of the city and decrease dependence on nonrenewable energy sources through energy conservation, efficiency, and renewable resource strategies.

### 4.7.2 Existing Conditions

#### GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

**The Physical Scientific Basis**

Certain gases in the earth’s atmosphere, classified as GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane, nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (Intergovernmental Panel on Climate Change [IPCC] 2014:3, 4).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent is estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013:467).

The quantity of GHGs in the atmosphere that ultimately result in climate change is not precisely known, but is enormous; no single project alone would measurably contribute to an incremental change in the global average temperature, or to global, local, or micro climates. Thus, from the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.
GREENHOUSE GAS EMISSION SOURCES
GHG emissions are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural emissions sectors (ARB 2014a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (ARB 2014b). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT
According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3 to 7 degrees Fahrenheit (°F) by the end of the century, depending on future GHG emission scenarios (IPCC 2007). According to the California Natural Resources Agency (CNRA), temperatures in California are projected to increase 2 to 5 °F by 2050 and by 4 to 9 °F by 2100 (CNRA 2009).

Other environmental resources could be indirectly affected by the accumulation of GHG emissions and resulting rise in global average temperature. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. According to “Our Changing Climate” (CNRA 2012), the snowpack portion of the state’s water supply could potentially decline 30 to 90 percent by the end of the 21st century. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the snowpack of the Sierra Nevada until spring would flow into the Central Valley concurrently with winter rainstorm events. This scenario would place more pressure on California’s levee/flood control system.

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available (CNRA 2012).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes are expected to lead to increased frequency and intensity of wildfires (CNRA 2012).

Another outcome of global climate change is sea level rise. Sea level rose approximately seven inches during the last century and it is predicted to rise an additional seven to 22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). CNRA projects that sea levels along California will rise 5 to 24 inches by 2050 and 17 to 66 inches by 2100 (CNRA 2012).

Cal-Adapt is a climate change scenario planning tool developed by the California Energy Commission (CEC) that downscales global climate model data to local and regional resolution under two emissions scenarios: the A-2 scenario represents a business-as-usual future emissions scenario, and the B-1 scenario represents a lower GHG emissions future. According to Cal-Adapt, annual average temperatures in the project area are projected to rise by 3.6 to 6.3 °F by 2090, with the range based on low and high emissions scenarios (Cal-Adapt 2017).
4.7.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

GHG emissions associated with the proposed project would be generated during project construction and by operation of the facility after it is built. Estimated levels of construction- and operation-related GHGs are presented below. The project is evaluated for its consistency with adopted regulations, plans, and policies aimed at reducing GHG emissions. These include the proposed 2017 Scoping Plan Update, Executive Order B-18-12, the California Integrated Waste Management Act, and the City of Sacramento General Plan and Climate Action Plan.

Construction-Related Greenhouse Gas Emissions
Short-term construction-generated GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program (CAPCOA 2016), as recommended by SMAQMD and other air districts in California. Modeling was based on project-specific information (e.g., building size, area to be graded, area to be paved, energy information) where available; assumptions based on typical construction activities; and default values in CalEEMod that are based on the project’s location and land use type. Construction of the project was assumed to begin in 2018 and end in 2021, when the project would become operational.

Operational Greenhouse Gas Emissions
Project-related operational emissions of GHGs were estimated for the following sources: area sources (e.g., landscaping-related fuel combustion sources, emergency backup generator operation), energy use (i.e., electricity and natural gas consumption), water use, solid waste, and mobile sources. Operational mobile-source GHG emissions were modeled based on the estimated level of vehicle miles traveled (VMT) by employees and vendor deliveries. VMT estimates include new State and private sector employees (above existing staffing levels) that would occupy the 1215 O Street Office Building (approximately 150 - 200) and those who would backfill the renovated Bateson Building (approximately 1,000). VMT estimates were derived from data generated in the traffic impact analysis conducted for the project (See Section 4.4, “Transportation and Circulation”). Mobile-source emissions were calculated using CalEEMod Version 2016.3.1. Indirect emissions associated with electricity and natural gas consumption were estimated using GHG emissions factors for Sacramento Municipal Utility District (SMUD). The project’s level of electricity and natural gas usage were based on 2016 Title 24-adjusted consumption rates provided by CalEEMod for a general office building land use type. GHG estimates also accounted for the supply of renewable electricity from on-site 70,000-square-feet solar array, which is estimated to supply 2 million to 2.5 million kilowatt hours of electricity annually to the project, as well as greywater accounting for 6 percent of the building’s demand (provides 426,000 gallons/year). Project design features such as water-efficient plumbing fixtures, improved lighting efficiency, and waste diversion rates were accounted for in the emissions estimates.

Detailed model assumptions and inputs for these calculations can be found in Appendix E.

THRESHOLDS OF SIGNIFICANCE

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

CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project’s consistency with relevant, adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. In Appendix G of the State CEQA Guidelines, two questions are provided to help assess if the project would result in a potentially significant impact on climate change. These questions ask whether the project would:
generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or

conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

This approach is consistent with one of the pathways to compliance presented in the recent California Supreme Court (Court) ruling, Center for Biological Diversity v. California Department of Fish and Wildlife. The Court identified three pathways to evaluate the cumulative significance of a proposed land use development. One pathway suggests looking at compliance with regulatory programs designed to reduce GHG emissions from particular activities, especially in regards to the goals of AB 32.

ENVIRONMENTAL IMPACTS

Impact 4.7-1: Project-generated GHG emissions

The level of annual GHG emissions associated with the proposed project, including amortized construction-related emissions, would be approximately 3,797 MT CO2e/year. Both construction and operation of the proposed project would include GHG efficiency measures consistent with all State and local polices and regulations for the purpose of reducing GHG emissions and enabling achievement of the statewide reduction targets of AB 32 of 2006 and SB 32 and AB 197 of 2016. The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Therefore, this impact would be less than significant.

GHG emissions associated with the proposed project would be generated during project construction and by operation of the facility after it is built. Estimated levels of construction- and operation-related GHGs are presented below, followed by a discussion of the project’s consistency with applicable regulations and policies established to enable the achievement of mandated statewide GHG reduction goals.

Construction-Generated Greenhouse Gas Emissions

Project-related construction activities would result in the generation of GHG emissions. Heavy-duty off-road construction equipment, materials transport, and worker commute during construction of the project would result in exhaust emissions of GHGs. Modeling results are shown below in Table 4.7-1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual MT CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>267</td>
</tr>
<tr>
<td>2019</td>
<td>1,267</td>
</tr>
<tr>
<td>2020</td>
<td>1,322</td>
</tr>
<tr>
<td>2021</td>
<td>52</td>
</tr>
<tr>
<td>Total Construction GHG Emissions</td>
<td>2,908</td>
</tr>
<tr>
<td>Amortized over 25 Years</td>
<td>116</td>
</tr>
</tbody>
</table>

Notes:
- Totals may not add due to rounding.
- CO2e = carbon dioxide equivalent
- MT = metric tons
- Emissions estimates do not account for the use of high-performance renewable diesel fuel or the use of higher Tier diesel engines. These measures would be implemented if feasible and would result in lower construction-generated GHG emissions than identified in this table.

Source: Modeled by Ascent Environmental, Inc. 2017

As shown in Table 4.7-1, project construction is estimated to generate a total of 2,908 MT CO2e over the duration of construction activities (2018-2021). Total construction emissions were amortized over a 25-year period, consistent with guidance from SMAQMD (SMAQMD 2016), resulting in annualized emissions of 116
MT CO₂e. If the construction emissions were amortized over the anticipated 50- to 100-year project lifespan, the annualized construction emissions would be 29.1 MT CO₂e. The project may use high-performance renewable diesel as well as higher EPA diesel engine Tier levels (i.e., newer, more efficient engines with lower emission levels) for construction equipment. These measures were not accounted for in the construction GHG emissions estimates, as feasibility for these measures remains unknown. Thus, construction GHG emissions represent a conservative estimation and would be less if these measures were implemented.

**Operational Greenhouse Gas Emissions**

Operation of the project would result in mobile-source GHG emissions associated with vehicle trips to and from the project (i.e., project-generated VMT); area-source emissions from the combustion of natural gas for space and water heating and operation of landscape maintenance equipment; energy-source emissions from the consumption of electricity; stationary-source emissions from the use of an emergency diesel generator; water-source emissions from water use and the conveyance and treatment of wastewater; waste-source emissions from the transport and disposal of solid waste. Emissions generated from project operation are reported in Table 4.7-2.

These operational emissions include VMT from employees assumed to re-occupy the Bateson Building after some future renovation. The re-occupation of the Bateson building would result in a net increase in State employees in the downtown area compared to existing conditions. The transfer of existing employees from the Bateson Building to the 1215 O Street Office Building would not change the total number of employees in the downtown area. The 1215 O Street Office Building is anticipated to accommodate 150-200 additional employees. The VMT and associated GHG emissions from this increase in employees in the downtown area is attributed to the 1215 O Street Office Building. Then, the eventual re-occupation of the Bateson Building would bring approximately 1,000 net new employees to the downtown area. The VMT and associated GHG emissions from these employees is added to the mobile source GHG emissions identified in Table 4.7-2. However, the estimate of operational GHG emissions do not include emissions from the renovated Bateson Building itself. The currently occupied Bateson Building is generating GHG emissions as part of building operation. The renovation of the Bateson Building would allow it to operate in a more energy- and GHG-efficient manner. A renovated Bateson Building would result in lower building operation emissions than under existing conditions. Rather than “take credit” for future reduced GHG emissions at the Bateson Building, the analysis takes a conservative approach and assumes there would be no change in GHG emissions from existing conditions; and therefore, no net gain or decline in GHG emissions to incorporate into the emission calculations.

### Table 4.7-2  Operational Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>MT CO₂e (MT/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Energy</td>
<td>1,108</td>
</tr>
<tr>
<td>Mobile¹</td>
<td>2,206</td>
</tr>
<tr>
<td>Stationary</td>
<td>141</td>
</tr>
<tr>
<td>Waste</td>
<td>93</td>
</tr>
<tr>
<td>Water</td>
<td>134</td>
</tr>
<tr>
<td>Amortized Construction Emissions</td>
<td>116</td>
</tr>
<tr>
<td><strong>Total Operational GHG Emissions</strong></td>
<td>3,797</td>
</tr>
</tbody>
</table>

Notes: Totals may not add due to rounding.
CO₂e = carbon dioxide equivalent
MT = metric tons
¹Includes VMT from approximately 150-200 new employees occupying 1215 O Street and approximately 1,000 employees re-occupying a renovated Bateson Building.
Source: Modeled by Ascent Environmental, Inc. 2017
Thus, the level of annual GHG emissions associated with the proposed project, including amortized construction-related emissions, is estimated to be approximately 3,797 MTCO₂e/year. This estimate is considered to be conservative for the reasons identified above.

**Consistency with Applicable Plans, Policies, and Regulations for the Purpose of Reducing Greenhouse Gas Emissions**

**Consistency with the 2017 Scoping Plan Update**

Although the 2017 Scoping Plan Update has not been approved by ARB at the time of writing this environmental document, it is the most up to date material available supporting the statewide compliance with emissions levels identified in SB 32 and AB 197 of 2016. Consistency with the emissions targets provided by SB 32 and AB 197 would also result in consistency with emissions targets provided by AB 32 of 2006, which are less stringent. The proposed 2017 Scoping Plan Update lays out the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The update includes an appendix that details local actions that land use development projects and municipalities can implement to support the statewide goal. For project-level CEQA analyses, the proposed 2017 Scoping Plan states that projects should implement feasible mitigation, preferably measures that can be implemented on-site. Many of the project features of the 1215 O Street Office Building align with these actions and would consist of on-site GHG reduction measures.

Construction of the project would include a recycling program for both construction and demolition waste, a measure that is detailed in Appendix B of the proposed 2017 Scoping Plan Update. The project may use high-performance renewable diesel fuel and higher EPA diesel Tier engines in construction equipment. The project would achieve or exceed LEED version 4 (v4) Silver certification (version 4 is the current version of the certification standards), which reduces building energy and water consumption, resulting in a decrease in GHG emissions. Further, the project would be built to achieve zero net energy requirements, which involves the installation of an onsite solar panel array that would generate renewable electricity used by the project. During the nighttime hours and during cloudy days when the solar panels do not provide sufficient energy to support building operations, energy would be provided by SMUD through a contract with the State requiring that energy provided to State buildings by SMUD be from 100 percent renewable sources. Other energy-efficient design features include energy-efficient interior lighting (i.e., light-emitting diodes [LED]), energy-efficient exterior lighting, and Energy Star™-certified computer monitors and office equipment. Refer to Section 3, “Project Description” for all project design features. The project would also maintain a street tree canopy surrounding the project, which helps to cool the building and decreases energy consumption and GHG emissions. If any of the existing shade trees on the project site need to be removed for construction, or there is a gap in the canopy, deciduous trees would be planted.

The project would also feature transportation-related emissions reduction measures that are listed as local actions in the proposed 2017 Scoping Plan Update. These include bicycle parking for employees, access to light-rail and bus stops, limited onsite parking (i.e., 20 parking spaces for a building with capacity for approximately 1,200-employees), and electric vehicle charging stations. Lockers and showers would be available to employees to support bike riding. The project would include water efficiency measures, which would decrease indirect GHG emissions associated with the treatment and distribution of potable water. These measures, which are also highlighted as local actions in the proposed 2017 Scoping Plan Update, include greywater storage and usage in toilets, and low-flow energy-efficient plumbing fixtures that exceed 2016 Title 24 water efficiency standards.

**Consistency with Executive Order B-18-12**

Executive Order B-18-12 requires State agencies to implement green building practices to improve energy, water, and materials efficiency. The Executive Order applies to both renovated and new State buildings with a floor area greater than 10,000 square feet and specifies that buildings must use clean, on-site power generation. The 1215 O Street Office Building, which would include approximately 300,000 to 350,000 gross square feet of general purpose office space, plus additional square footage for amenities and building operations space. Therefore, the proposed project is subject to this Executive Order and would implement all of these green building practices. The project would align with this Executive Order through achieving or
Consistency with the California Integrated Waste Management Act
The project would achieve a waste diversion rate of at least 50 percent, which is required for all State agencies, thereby reducing the level of GHGs associated with solid waste.

Consistency with Greenhouse Gas Policies in the City of Sacramento General Plan and Climate Action Plan
The City of Sacramento General Plan includes a policy that aims to reduce GHG emissions through “discouraging auto-dependent sprawl and dependence on the private automobile; promoting water conservation and recycling; promoting development that is compact, mixed use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the job/housing ratio in each community; and other methods of reducing emissions” (City of Sacramento 2015). The Sacramento Climate Action Plan, which is incorporated into the City’s General Plan, include strategies to address GHG emissions associated with transportation and land use, energy, water, waste management and recycling, agriculture, and open space. The project aligns with these plans due to its downtown location (preventing sprawl), the compact design (up to 150 feet tall on roughly ¼ city block), mixed-use elements (i.e., includes publicly assessible food service); the inclusion of human-scale outdoor spaces supporting pedestrian use outside the building, and its proximity to multiple modes of public transit (e.g., light rail and bus stops). The project features energy-efficient design through its achievement of ZNE, exceeding 2016 Title 24 building energy efficiency standards. The project would also exceed 2016 Title 24 water efficiency standards and use low-flow plumbing fixtures. As is required by State agencies, at least a 50 percent waste diversion rate would be achieved.

Summary
The level of annual GHG emissions associated with the proposed office building, including amortized construction-related emissions, is conservatively estimated to be approximately 3,797 MTCO2e/year, while supporting an employment center for up to approximately 1,200 employees. Both construction and operation of the proposed office building would include GHG efficiency measures consistent with all State and local polices and regulations for reducing GHG emissions and enabling achievement of the statewide reduction targets of AB 32 of 2006 and SB 32 and AB 197 of 2016. Thus, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. This impact would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.7-2: Impacts of climate change on the project
Climate change is expected to result in a variety of effects that would influence conditions in the Sacramento area. However, the proposed project includes various features that would increase resiliency to the effects of climate change. These features would reduce the extent and severity of climate change-related impacts to the project. For these reasons, this impact would be less than significant.

Human-induced increases in GHG concentrations in the atmosphere have led to increased global average temperatures (climate change) through the intensification of the greenhouse effect, and associated changes in local, regional, and global average climatic conditions. Although there is strong scientific consensus that global climate change is occurring and is influenced by human activity, there is less certainty as to the timing, severity, and potential consequences of the climate phenomena. Scientists have identified several ways in which global climate change could alter the physical environment in California (CNRA 2012, DWR 2006, IPCC 2007). These include:

- increased average temperatures;
modifications to the timing, amount, and form (rain vs. snow) of precipitation;
changes in the timing and amount of runoff;
reduced water supply;
deterioration of water quality; and
elevated sea level.

Many of these phenomena would translate into a variety of issues and concerns that may affect the project area, including but not limited to:

- increased frequency and intensity of extreme heat days;
- more intense variability in water supply, including more frequent or intense periods of drought;
- increased stormwater runoff associated with changes to precipitation patterns; and
- increased risk of flooding associated with changes to precipitation patterns.

The project would include features that enable adaptation and resiliency in the face of climate change-associated impacts. These features include:

- Rooftop solar panels that would provide a cool-roof effect, and tree canopy around the site, to protect the building and exterior walkways during extreme heat events;

- Water efficiency features, including low-flow plumbing fixtures and a greywater system, resulting in exceedance of the 2016 Title 24 water efficiency requirements and resiliency to changes in water supply;

- Drainage features for handling storm water runoff during extreme storm events; and

- The location of the project results in it benefiting from improvements to the flood protection system intended to protect facilities and development in the entire downtown Sacramento area.

These design features would reduce the extent and severity of climate change-related impacts to the project. For these reasons, this impact would be less than significant.

**Mitigation Measures**

No mitigation would be required.
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4.8 NOISE

This section includes a summary of applicable regulations related to noise and vibration, a description of ambient-noise conditions, and an analysis of potential short-term construction and long-term operational-source noise impacts of the 1215 O Street Office Building Project. Mitigation measures are recommended as necessary to reduce significant noise impacts. Additional data is provided in Appendix E, “Noise Measurement Data and Noise Modeling Calculations.”

4.8.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

U.S. Environmental Protection Agency Office of Noise Abatement and Control

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration (FTA) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 4.8-1.

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>GVB Impact Levels (VdB re 1 micro-inch/second)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequent Events¹</td>
</tr>
<tr>
<td>Category 1: Buildings where vibration would interfere with interior operations.</td>
<td>65 ⁴</td>
</tr>
<tr>
<td>Category 2: Residences and buildings where people normally sleep.</td>
<td>72</td>
</tr>
<tr>
<td>Category 3: Institutional land uses with primarily daytime uses.</td>
<td>75</td>
</tr>
</tbody>
</table>

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day.

² "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

³ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

⁴ This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels.

Source: FTA 2006

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California General Plan Guidelines

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor’s Office of Planning and Research (2003), provide guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities.
In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA materials and the State Sound Transmissions Control Standards, the State’s general plan guidelines recommend interior and exterior noise standards of 45 and 60 dBA CNEL for residential units, respectively (OPR 2003: 253-254).

California Department of Transportation

In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual (Caltrans 2013a). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 4.8-2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

<table>
<thead>
<tr>
<th>PPV (in/sec)</th>
<th>Effect on Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4-0.6</td>
<td>Architectural damage and possible minor structural damage</td>
</tr>
<tr>
<td>0.2</td>
<td>Risk of architectural damage to normal dwelling houses</td>
</tr>
<tr>
<td>0.1</td>
<td>Virtually no risk of architectural damage to normal buildings</td>
</tr>
<tr>
<td>0.08</td>
<td>Recommended upper limit of vibration to which ruins and ancient monuments should be subjected</td>
</tr>
<tr>
<td>0.006-0.019</td>
<td>Vibration unlikely to cause damage of any type</td>
</tr>
</tbody>
</table>

Notes: PPV= Peak Particle Velocity; in/sec = inches per second
Source: Caltrans 2013a

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and addresses local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit process, the project’s consistency with local plans, policies, and regulations.

City of Sacramento 2035 General Plan

The Noise section within the Environmental Constraints Element of the City of Sacramento 2035 General Plan establishes the following standards and policies that are relevant to the analysis of the noise effects of the project:

- **EC 3.1.1 Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in Table EC 1 (presented as Table 4.8-3, below), to the extent feasible.
Table 4.8-3  Exterior Noise Compatibility Standards for Various Land Uses

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Highest Level of Noise Exposure that is Regarded as “Normally Acceptable” ( \text{a} (L_{dn} \text{ b or CNEL} \text{ c}) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential—Low Density Single Family, Duplex, Mobile Homes</td>
<td>60 dBA ( \text{d,e} )</td>
</tr>
<tr>
<td>Residential—Multi-family ( \text{f} )</td>
<td>65 dBA</td>
</tr>
<tr>
<td>Urban Residential Infill ( \text{g} ) and Mixed-Use Projects ( \text{i,j} )</td>
<td>70 dBA</td>
</tr>
<tr>
<td>Transient Lodging—Motels, Hotels</td>
<td>65 dBA</td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Hospitals, Nursing Homes</td>
<td>70 dBA</td>
</tr>
<tr>
<td>Auditoriums, Concert Halls, Amphitheaters</td>
<td>Mitigation based on site-specific study</td>
</tr>
<tr>
<td>Sports Arena, Outdoor Spectator Sports</td>
<td>Mitigation based on site-specific study</td>
</tr>
<tr>
<td>Playgrounds, Neighborhood Parks</td>
<td>70 dBA</td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries</td>
<td>75 dBA</td>
</tr>
<tr>
<td>Office Buildings—Business, Commercial and Professional</td>
<td>70 dBA</td>
</tr>
<tr>
<td>Industrial, Manufacturing, Utilities, Agriculture</td>
<td>75 dBA</td>
</tr>
</tbody>
</table>

Notes:
\( \text{a} \) As defined in the Guidelines, “Normally Acceptable” means that the “specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.”
\( \text{b} \) \( L_{dn} \) or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.
\( \text{c} \) CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
\( \text{d} \) Applies to the primary open space area of a detached single-family home, duplex, or mobile home, which is typically the backyard or fenced side yard, as measured from the center of the primary open space area (not the property line). This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.
\( \text{e} \) dBA or A-weighted decibel scale is a measurement of noise levels.
\( \text{f} \) The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
\( \text{g} \) Applies to the primary open space areas of townhomes and multi-family apartments or condominiums (private year yards for townhomes; common courtyards, roof gardens, or gathering spaces for multi-family developments). These standards shall not apply to balconies or small attached patios in multistoried multi-family structures.
\( \text{h} \) With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
\( \text{i} \) All mixed-use projects located anywhere in the City of Sacramento
\( \text{j} \) See notes \( \text{d} \) and \( \text{g} \) above for definition of primary open space areas for single-family and multi-family developments.

Source: OPR 2003, cited in City of Sacramento 2015, 2035 General Plan Table EC 1

EC 3.1.2 Exterior Incremental Noise Standards. The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in Table EC 2 (presented as Table 4.8-4, below), to the extent feasible.

Table 4.8-4  Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dBA)

<table>
<thead>
<tr>
<th>Residences and Buildings where People Normally Sleep(^1)</th>
<th>Institutional Land Uses with Primarily Daytime and Evening Uses(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing ( L_{dn} )</td>
<td>Existing Peak Hour ( L_{eq} )</td>
</tr>
<tr>
<td>Allowable Noise Increment</td>
<td>Allowable Noise Increment</td>
</tr>
<tr>
<td>45</td>
<td>8</td>
</tr>
<tr>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>55</td>
<td>3</td>
</tr>
<tr>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>65</td>
<td>1</td>
</tr>
<tr>
<td>70</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 4.8-4  Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dBA)

<table>
<thead>
<tr>
<th></th>
<th>Residences and Buildings where People Normally Sleep</th>
<th>Institutional Land Uses with Primarily Daytime and Evening Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing Ldn</td>
<td>Allowable Noise Increment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residences and Buildings where People Normally Sleep¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence or absence</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>Existing Ldn</td>
<td>80</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes:

¹ This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.

² The category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Source: FTA 2006, cited in City of Sacramento 2015, 2035 General Plan Table EC 2

- **EC 3.1.3 Interior Noise Standards.** The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} (with windows closed) for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour with windows closed) for office buildings and similar uses.

- **EC 3.1.5 Interior Vibration Standards.** The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

- **EC 3.1.6 Effects of Vibration.** The City shall consider potential effects of vibration when reviewing new residential and commercial projects that are proposed in the vicinity of rail lines or light rail lines.

- **EC 3.1.7 Vibration.** The City shall require an assessment of the damage potential of vibration-induced construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites and require all feasible measures be implemented to ensure no damage would occur.

- **EC 3.1.8 Operational Noise.** The City shall require mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.

- **EC 3.1.10 Construction Noise.** The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

- **EC 3.1.11 Alternatives to Sound Walls.** The City shall encourage the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics.

City of Sacramento Noise Control Ordinance

The City’s Noise Control Ordinance establishes the following standards related to noise that may be applicable to the project:

8.68.060 Exterior noise standards.

A. The following noise standards, unless otherwise specifically indicated in this article, shall apply to all agricultural and residential properties.

1. From seven a.m. to ten p.m. the exterior noise standard shall be fifty-five (55) dBA.

2. From ten p.m. to seven a.m. the exterior noise standard shall be fifty (50) dBA.
B. It is unlawful for any person at any location to create any noise which causes the noise levels when measured on agricultural or residential property to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by:

<table>
<thead>
<tr>
<th>Cumulative Duration of the Intrusive Sound</th>
<th>Allowance Decibels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative period of 30 minutes per hour</td>
<td>0</td>
</tr>
<tr>
<td>Cumulative period of 15 minutes per hour</td>
<td>+5</td>
</tr>
<tr>
<td>Cumulative period of 5 minutes per hour</td>
<td>+10</td>
</tr>
<tr>
<td>Cumulative period of 1 minute per hour</td>
<td>+15</td>
</tr>
<tr>
<td>Level not to be exceeded for any time per hour</td>
<td>+20</td>
</tr>
</tbody>
</table>

C. Each of the noise limits specified in subsection B. of this section shall be reduced by 5 dBA for impulsive or simple tone noises, or for noises consisting of speech or music.

D. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection B of this section, the allowable noise limit shall be increased in 5 dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

**8.68.070 Interior noise standards.**

A. In any apartment, condominium, townhouse, duplex or multiple dwelling unit it is unlawful for any person to create any noise from inside his or her unit that causes the noise level when measured in a neighboring unit during the periods ten p.m. to seven a.m. to exceed:

1. Forty five (45) dBA for a cumulative period of more than five minutes in any hour;
2. Fifty (50) dBA for a cumulative period of more than one minute in any hour;
3. Fifty five (55) dBA for any period of time.

B. If the ambient noise level exceeds that permitted by any of the noise level categories specified in subsection A of this section, the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level.

**8.68.080 Exemptions.**

The following activities shall be exempted from the provisions of this chapter:

D. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections, may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.
4.8.2 Existing Conditions

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the project, background information on sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms and regulations referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dBA increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dBA higher than if only one of the sound sources was producing sound under the same conditions. For example, if one automobile produces an SPL of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA; rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted,
depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels or dBA. All sound levels discussed in this section are A-weighted decibels. Table 4.8-5 describes typical A-weighted noise levels for various noise sources.

<table>
<thead>
<tr>
<th>Table 4.8-5 Typical A-Weighted Noise Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Outdoor Activities</td>
</tr>
<tr>
<td>Jet fly-over at 1,000 feet</td>
</tr>
<tr>
<td>Gas lawn mower at 3 feet</td>
</tr>
<tr>
<td>Diesel truck at 50 feet at 50 miles per hour</td>
</tr>
<tr>
<td>Noisy urban area, daytime, Gas lawn mower at 100 feet</td>
</tr>
<tr>
<td>Commercial area, Heavy traffic at 300 feet</td>
</tr>
<tr>
<td>Quiet urban daytime</td>
</tr>
<tr>
<td>Quiet urban nighttime</td>
</tr>
<tr>
<td>Quiet suburban nighttime</td>
</tr>
<tr>
<td>Quiet rural nighttime</td>
</tr>
<tr>
<td>Lowest threshold of human hearing</td>
</tr>
<tr>
<td>Lowest threshold of human hearing</td>
</tr>
</tbody>
</table>

Source: Caltrans 2013b: Table 2-5

Human Response to Changes in Noise Levels
As discussed above, the doubling of sound energy results in a 3-dBA increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dBA changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1–2 dBA are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dBA increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dBA increase in sound would generally be perceived as barely detectable.

Vibration
Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.
Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second (mm/s). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2006:7-5, Caltrans 2013b:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2006:7-5). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006:7-7).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006:7-5).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Table 4.8-6 describes the general human response to different ground vibration-velocity levels.

<table>
<thead>
<tr>
<th>Vibration-Velocity Level</th>
<th>Human Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 VdB</td>
<td>Approximate threshold of perception.</td>
</tr>
<tr>
<td>75 VdB</td>
<td>Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.</td>
</tr>
<tr>
<td>85 VdB</td>
<td>Vibration acceptable only if there are an infrequent number of events per day.</td>
</tr>
</tbody>
</table>

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.
Source: FTA 2006:7-8

**Common Noise Descriptors**

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

**Equivalent Continuous Sound Level** (Leq): Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level (Leq[h]) is the energy average of A-weighted sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by Caltrans and Federal Highway Administration (FHWA).
Percentile-Exceeded Sound Level \((L_{xx})\): \(L_{xx}\) represents the sound level exceeded for a given percentage of a specified period (e.g., \(L_{10}\) is the sound level exceeded 10 percent of the time, and \(L_{90}\) is the sound level exceeded 90 percent of the time).

Maximum Sound Level \((L_{\text{max}})\): \(L_{\text{max}}\) is the highest instantaneous sound level measured during a specified period.

Day-Night Level \((L_{\text{dn}})\): \(L_{\text{dn}}\) is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dBA “penalty” applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

Community Noise Equivalent Level \((\text{CNEL})\) or Day-Evening-Night Level \((L_{\text{den}})\): Similar to \(L_{\text{dn}}\), \(\text{CNEL}\) or \(L_{\text{den}}\) is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dBA penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m. and a 5-dBA penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

**Geometric Spreading**

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dBA for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dBA for each doubling of distance from a line source.

**Ground Absorption**

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dBA per doubling of distance.

**Atmospheric Effects**

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased at large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

**Shielding by Natural or Human-Made Features**

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between
a source and a receiver will typically result in at least 5 dBA of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier.

EXISTING NOISE ENVIRONMENT

Existing Noise- and Vibration-Sensitive Land Uses
Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship and transit lodging, and other places where low interior noise levels are essential are also considered noise-sensitive. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

Existing noise- and vibration-sensitive land uses in the vicinity of the project site include several multi-family residential buildings, a child care center, and a church. The nearest sensitive receptors to the office building portion of the project site (where most noise generating activity would occur) are two multi-family residential buildings located approximately 50 and 100 feet northeast of perimeter of the site respectively. An additional residential receptor is located approximately 125 feet to the southeast of the office building portion of project site. Westminster Presbyterian Church is located approximately 250 feet northeast of the project. Forever Young Child Care Center is located approximately 350 feet south of, and has a direct line of sight to the office building portion of the project site. See Exhibit 4.8-1 for locations of all nearby sensitive land uses.

Existing Noise Sources and Ambient Levels

Transportation Noise
The existing noise environment in the project area is primarily influenced by transportation noise from vehicular traffic on the surrounding roadway network (e.g., 12th Street, 13th Street, O Street, N Street, P Street) and the Sacramento Regional Transit District (SacRT) light rail which travels along 12th Street and O Street, approximately 100 feet southwest of the office building site boundary. Noise associated with the light rail operations near the project consists of warning bells, wheels squealing during cornering, public address announcements, mechanical rooftop equipment, and idling.

Table 4.8-7 summarizes the modeled existing traffic noise levels at 50 feet from the centerline of each roadway segment analyzed, and lists distances from each roadway centerline to the 70, 65, and 60 CNEL traffic noise contours. Traffic noise modeling results are based on existing peak-hour traffic volumes contained within the traffic analysis conducted by Fehr and Peers and summarized in Section 4.4, “Transportation and Circulation,” and in Appendix B of this DEIR.
### Table 4.8-7  Summary of Modeled Existing Traffic Noise Levels

<table>
<thead>
<tr>
<th>Roadway Segment/Segment Description</th>
<th>CNEL at 50 feet from Roadway Centerline</th>
<th>Distance (feet) from Roadway Centerline to CNEL Contour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>N Street (10th Street to 12th Street)</td>
<td>60.2</td>
<td>5</td>
</tr>
<tr>
<td>N Street (12th Street to 13th Street)</td>
<td>60.5</td>
<td>6</td>
</tr>
<tr>
<td>N Street (13th Street to 15th Street)</td>
<td>60.8</td>
<td>6</td>
</tr>
<tr>
<td>12th Street (N Street to Neighbors Alley)</td>
<td>53.0</td>
<td>1</td>
</tr>
<tr>
<td>12th Street (Neighbors Alley to O Street)</td>
<td>53.1</td>
<td>1</td>
</tr>
<tr>
<td>12th Street (O Street to P Street)</td>
<td>56.4</td>
<td>2</td>
</tr>
<tr>
<td>P Street (12th Street to 13th Street)</td>
<td>63.1</td>
<td>10</td>
</tr>
<tr>
<td>13th Street (N Street to Neighbors Alley)</td>
<td>52.8</td>
<td>1</td>
</tr>
<tr>
<td>13th Street (Neighbors Alley to O Street)</td>
<td>53.1</td>
<td>1</td>
</tr>
<tr>
<td>13th Street (O Street to P Street)</td>
<td>57.2</td>
<td>3</td>
</tr>
<tr>
<td>15th Street (N Street to W Street)</td>
<td>65.3</td>
<td>17</td>
</tr>
<tr>
<td>16th Street (N Street to W Street)</td>
<td>64.3</td>
<td>13</td>
</tr>
<tr>
<td>10th Street (South of Q Street)</td>
<td>60.4</td>
<td>5</td>
</tr>
<tr>
<td>9th Street (South of Q Street)</td>
<td>63.8</td>
<td>12</td>
</tr>
<tr>
<td>Q Street (3rd Street to 9th Street)</td>
<td>63.2</td>
<td>11</td>
</tr>
<tr>
<td>P Street (3rd Street to 9th Street)</td>
<td>66.0</td>
<td>20</td>
</tr>
<tr>
<td>O Street (12th Street to 13th Street)</td>
<td>49.4</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes: CNEL = Community Noise Equivalent Level
All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. All noise levels are reported as A-weighted noise levels. For additional details, refer to Appendix B for detailed traffic data, and traffic-noise modeling input data and output results.
Source: Data modeled by Ascent Environmental in 2017

As shown in Table 4.8-7, the 70 CNEL contours along the roadway segment bordering the project site (12th Street between Neighbors Alley and O Street) would extend 1 foot from the roadway centerline and not extend into the project site. Additionally, none of the 70 CNEL contours along the roadway segments analyzed would extend past 20 feet from the roadway centerline.
EXISTING NOISE SURVEY

Long-term noise measurements were conducted at three locations around the project study area. The noise measurements were taken starting on November 10, 2016 and ending on November 12, 2016. Cesva SC-160 Type 2 sound level meters were deployed, and each meter was equipped with a windscreen. Meteorological conditions during the measurement period were adequate for reliable noise measurements, with partly cloudy skies, temperatures ranging from 49 degrees Fahrenheit (°F) to 76 °F, light winds averaging 0 to 3 miles per hour (mph), and no precipitation. Results of the noise survey are shown in Table 4.8-8.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Start (Date/Time)</th>
<th>Stop (Date/Time)</th>
<th>A-Weighted Sound Level (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Leq</td>
</tr>
<tr>
<td>Location 1</td>
<td>11/11/16, 8 a.m.</td>
<td>11/11/16, 9 a.m.</td>
<td>64.1</td>
</tr>
<tr>
<td>Location 2</td>
<td>11/11/16, 8 a.m.</td>
<td>11/11/16, 9 a.m.</td>
<td>70.5</td>
</tr>
<tr>
<td>Location 3</td>
<td>11/11/16, 8 a.m.</td>
<td>11/11/16, 9 a.m.</td>
<td>69.5</td>
</tr>
</tbody>
</table>

Long-Term

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Start (Date/Time)</th>
<th>Stop (Date/Time)</th>
<th>A-Weighted Sound Level (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Leq</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Daytime</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(7:00 a.m.-10:00 p.m.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>L10</td>
</tr>
<tr>
<td>Location 1</td>
<td>11/11/16, 12 a.m.</td>
<td>11/11/16, 12 p.m.</td>
<td>65.4</td>
</tr>
<tr>
<td>Location 2</td>
<td>11/11/16, 12 a.m.</td>
<td>11/11/16, 12 p.m.</td>
<td>70.2</td>
</tr>
<tr>
<td>Location 3</td>
<td>11/11/16, 12 a.m.</td>
<td>11/11/16, 12 p.m.</td>
<td>67.3</td>
</tr>
</tbody>
</table>

Refer to Exhibit 4.8-2 for ambient noise level measurement locations.
See Appendix E for detailed noise measurement data.
Source: Data collected by MWA 2016
4.8.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Construction Noise and Vibration
To assess potential short-term (construction-related) noise and vibration impacts, sensitive receptors and their relative exposure were identified. Project-generated construction source noise and vibration levels were determined based on methodologies, reference emission levels, and usage factors from FTA’s Guide on Transit Noise and Vibration Impact Assessment methodology (FTA 2006) and FHWA’s Roadway Construction Noise Model User’s Guide (FHWA 2006). Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics.

Operational Noise and Vibration
With respect to non-transportation noise sources (e.g., stationary) associated with project implementation, the assessment of long-term (operational-related) impacts was based on reconnaissance data, reference noise emission levels, and measured noise levels for activities and equipment associated with project operation (e.g., heating, ventilation and air conditioning [HVAC] units, delivery docks), and standard attenuation rates and modeling techniques.

To assess potential long-term (operation-related) noise impacts due to project-generated increases in traffic, noise levels were estimated in using calculations consistent with the Federal Highway Administration’s Traffic Noise Model Version 2.5 (FHWA 2004) and project-specific traffic data (Appendix B). The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Truck usage and vehicle speeds on area roadways were estimated from field observations and the project-specific traffic report. Note that the modeling conducted does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflection off building surfaces.

THRESHOLDS OF SIGNIFICANCE

Although State projects are exempt from local ordinances and standards, City noise standards are reasonable and appropriate thresholds for determination of significance. Therefore, a noise impact is considered significant if implementation of the 1215 O Street Office Building Project would result in any of the following:

- construction-generated noise levels exceeding City Noise Control Ordinance standards during the more noise-sensitive evening, nighttime, and early-morning hours (6 p.m. to 7 a.m., Monday through Saturday, and between 6 p.m. and 9 a.m. on Sunday);

- long-term, traffic-generated noise levels exceeding the applicable normally acceptable noise standards for land use compatibility (Table 4.8-3) as specified in the City of Sacramento General Plan Environmental Constraints Section, an increase in ambient-noise levels of more than the allowable noise increment at nearby existing noise-sensitive land uses (Table 4.8-4) as specified in the City of Sacramento General Plan Environmental Constraints Section, or an increase in ambient-noise levels exceeding interior noise standards (45 CNEL/Ldn) at nearby existing noise-sensitive land uses as specified in the City of Sacramento General Plan Environmental Constraints Section;

- long-term noise levels generated by stationary or area sources that exceed City Noise Control Ordinance standards, or result in a noticeable increase in ambient-noise levels at nearby existing noise-sensitive land uses;
Noise Ascent Environmental

California Department of General Services
4.8-16 1215 O Street Office Building Project Draft EIR

- construction-generated vibration levels exceeding Caltrans’s recommended standards with respect to the prevention of structural building damage (0.2 and 0.08 in/sec PPV for normal and historical buildings, respectively) or FTA’s maximum-acceptable-vibration standard with respect to human response (80 VdB for residential uses) at nearby existing vibration-sensitive land uses;

- on-site noise levels exceeding the applicable normally acceptable noise standards for land-use compatibility (Table 4.8-3) as specified in the City of Sacramento General Plan Environmental Constraints Section with respect to the proposed land uses;

- on-site vibration levels exceeding Caltrans’s recommended standards with respect to the prevention of architectural building damage (0.2 in/sec PPV for normal dwelling houses, 0.1 in/sec PPV for normal buildings, and 0.08 in/sec PPV for structures considered ruins or ancient monuments) or FTA’s maximum-acceptable-vibration standard with respect to human response (75 VdB) at nearby existing vibration-sensitive land uses;

- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or

- for a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The project is not located within an airport land use plan, or within two miles of a public airport or public use airport. Additionally, the project is not located within two miles of a private airstrip; Sacramento Executive Airport is the closest airport and is located approximately 3 miles south of the project site. Thus, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further.

ENVIRONMENTAL IMPACTS

Impact 4.8-1: Short-term construction-generated noise levels

Proposed construction areas are located in close proximity to existing noise-sensitive receptors. Most noise-generating construction activity would be performed during daytime hours, when construction noise is exempt from noise standards by the City of Sacramento Noise Control Ordinance. However, it is possible that construction activity may be required during the non-exempt evening and nighttime hours (6 p.m. to 7 a.m., Monday through Saturday, and between 6 p.m. and 9 a.m. on Sunday) for activities such as large continuous concrete pours. Thus, potential nighttime construction activities could expose nearby noise-sensitive receptors to noise levels that exceed City of Sacramento Noise Control Ordinance nighttime noise standards. This impact would be significant.

Short-term construction noise levels near the project site would fluctuate depending on the type, number, and duration of usage for the varying equipment. The effects of construction noise largely depend on the type of construction activities being performed; noise levels generated by those activities; distances to noise-sensitive receptors; the relative locations of noise attenuating features such as vegetation and existing structures; and existing ambient noise levels.

As discussed in Chapter 3, “Project Description,” construction of the project is estimated to begin in early 2018, with completion targeted for 2021. Construction activities at the project site would include demolition of the existing building, excavation and shoring, utilities installation, building construction, paving, and solar
Array installation. The construction labor force would fluctuate depending on the phase of work, with approximately 175 to 225 workers on-site during peak of construction periods.

Construction equipment may include, but would not be limited to backhoes, dozers, haul trucks, excavators, graders, scrapers, cranes, rollers, concrete trucks and pumps, pile drivers, drill rigs, welders, and generators. Noise levels for individual equipment can range from 55 to 95 dBA at 50 feet, as indicated in Table 4.8-9.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Typical Noise Level (dBA) @ 50 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dump Truck</td>
<td>76</td>
</tr>
<tr>
<td>Drill Rig Truck</td>
<td>79</td>
</tr>
<tr>
<td>Concrete Mixer</td>
<td>85</td>
</tr>
<tr>
<td>Concrete Saw</td>
<td>82</td>
</tr>
<tr>
<td>Crane</td>
<td>85</td>
</tr>
<tr>
<td>Dozer</td>
<td>85</td>
</tr>
<tr>
<td>Grader</td>
<td>85</td>
</tr>
<tr>
<td>Excavator</td>
<td>85</td>
</tr>
<tr>
<td>Front End Loader</td>
<td>80</td>
</tr>
<tr>
<td>Man Lift</td>
<td>75</td>
</tr>
<tr>
<td>Paver</td>
<td>89</td>
</tr>
<tr>
<td>Roller</td>
<td>85</td>
</tr>
<tr>
<td>Scaper</td>
<td>89</td>
</tr>
<tr>
<td>Pickup Trucks</td>
<td>55</td>
</tr>
<tr>
<td>Pile Driving</td>
<td>95</td>
</tr>
</tbody>
</table>

Notes: Assumes 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: FTA 2006

Noise-generating construction activities that occur during the more noise-sensitive evening and nighttime hours are of increased concern. Because exterior ambient noise levels typically decrease during the late evening and nighttime hours as traffic volumes and commercial activities decrease, and because typical sleep hours occur during these times, construction activities performed during these more noise-sensitive periods of the day can result in increased annoyance and potential sleep disruption for occupants of nearby residential uses.

Construction generally occurs in several discrete stages, each phase requiring a specific complement of equipment with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect they have on the noise environment of the project site and in the surrounding area for the duration of the construction period.

Specific timing of each construction phase and activity was not available at the time of this analysis, and therefore, the construction-noise evaluation conservatively assumed that three of the highest noise-generating pieces of equipment could operate simultaneously in close proximity to each other near the boundaries of the project site.

Based on the reference noise levels listed in Table 4.8-9 and accounting for typical usage factors of individual pieces of equipment, on-site construction-related activities could generate a combined hourly
average noise level of approximately 93 $L_{eq}$ and a maximum noise level as high as 97 $L_{max}$ at 50 feet from the project boundary. Detailed inputs and parameters for the estimated construction noise exposure levels are provided in Appendix E.

Noise-sensitive receptors that could be adversely affected by construction noise are shown in Table 4.8-10. See Exhibit 4.8-1 for locations of all nearby sensitive land uses. The distance to, and daytime noise exposure levels at each receptor location were estimated for the closest possible construction activities (at the project boundary) and are summarized in Table 4.8-10. These values represent a conservative assessment because they do not account for any shielding provided by existing buildings and, as stated above, the modeling assumes that three of the highest noise-generating pieces of equipment could operate simultaneously in close proximity to each other near the boundaries of the project site.

### Table 4.8-10 Levels of Noise Exposure at Noise-Sensitive Receptors during Typical Daytime Construction Activity

<table>
<thead>
<tr>
<th>Sensitive Receptor</th>
<th>Distance to Project Site/ Staging Area (feet)</th>
<th>Daytime Construction Noise Exposure Level at Sensitive Receptor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$L_{eq}$ (dBA)</td>
</tr>
<tr>
<td>The Thayer Apartments</td>
<td>50</td>
<td>93</td>
</tr>
<tr>
<td>Park Place Senior Residence</td>
<td>100</td>
<td>87</td>
</tr>
<tr>
<td>1228 O Street apartments</td>
<td>125</td>
<td>85</td>
</tr>
<tr>
<td>1506 13th Street apartments</td>
<td>150</td>
<td>83</td>
</tr>
<tr>
<td>Westminster Presbyterian Church</td>
<td>250</td>
<td>79</td>
</tr>
<tr>
<td>1215 P Street apartments</td>
<td>275</td>
<td>78</td>
</tr>
<tr>
<td>1211 P Street apartments</td>
<td>275</td>
<td>78</td>
</tr>
<tr>
<td>Forever Young Child Care Center</td>
<td>350</td>
<td>76</td>
</tr>
</tbody>
</table>

Notes:
1. See Exhibit 4.8-1 for locations of sensitive land uses relative to the project site.
2. Assumes 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: Data modeled by Ascent Environmental in 2017

As shown in Table 4.8-10, daytime construction-generated noise levels could exceed 93 $L_{eq}$ at the Thayer Apartment multifamily residences, and 87 $L_{eq}$ at the Park Place Senior Residence multifamily units.

Noise generated by construction activity between 7 a.m. and 6 p.m., Monday through Saturday, and between 9 a.m. and 6 p.m. on Sunday are exempt from the provisions of the City Noise Control Ordinance. As described in Chapter 3, “Project Description,” construction would primarily occur during the day, thus, would be exempt from City Noise Control Ordinance provisions.

Although not anticipated, it is possible that construction activities may need to occur between 6 p.m. and 7 a.m. Monday through Saturday, or 6 p.m. and 9 a.m. on Sunday. As discussed in Chapter 3, “Project Description, a distinction is made between nighttime construction indoors, within the building after walls and windows are in place, and outdoor construction activities that are not enclosed by the partially completed building. Indoor construction activities, such as installing wiring, drywall, and carpet, would be permitted during nighttime hours. However, the selected design-build team would only be permitted to conduct outdoor construction during the nighttime hours if there are no other reasonable options. For example, some foundation designs require that once the pouring of concrete begins, the pour must continue without pauses until complete. In some instances, such a concrete pour may take 20 or more hours, requiring work to occur during the nighttime hours. It is unknown at this time if the final building design will have any elements that
require outdoor nighttime construction. Therefore, to ensure a comprehensive evaluation of potential environmental effects, this EIR assumes the potential for limited outdoor nighttime construction activity.

As shown in Table 4.8-11, if a nighttime concrete pour were required (likely the most noise intensive nighttime construction activity that might occur), associated noise could expose nearby noise-sensitive receptors, including locations where people normally sleep, (e.g., The Thayer Apartments, Park Place Senior Residences, and 1228 O Street apartments) to interior noise levels that exceed applicable standards.

### Table 4.8-11 Levels of Noise Exposure at Noise-Sensitive Receptors during a Nighttime Concrete Pour

<table>
<thead>
<tr>
<th>Sensitive Receptor</th>
<th>Distance to Sensitive Receptor (feet)</th>
<th>Exterior Nighttime Construction Noise Level at Sensitive Receptor ($L_{eq}$)</th>
<th>Interior Nighttime Construction Noise Level at Sensitive Receptor ($L_{eq}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Thayer Apartments</td>
<td>50</td>
<td>86</td>
<td>62</td>
</tr>
<tr>
<td>Park Place Senior Residence</td>
<td>100</td>
<td>80</td>
<td>56</td>
</tr>
<tr>
<td>1228 O Street apartments</td>
<td>125</td>
<td>78</td>
<td>54</td>
</tr>
<tr>
<td>1506 13th Street apartments</td>
<td>150</td>
<td>76</td>
<td>52</td>
</tr>
<tr>
<td>1215 P Street apartments</td>
<td>275</td>
<td>71</td>
<td>47</td>
</tr>
<tr>
<td>1211 P Street apartments</td>
<td>275</td>
<td>71</td>
<td>47</td>
</tr>
</tbody>
</table>

Notes: Assumes 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: Data modeled by Ascent Environmental in 2017

Assuming the average exterior-to-interior noise level reduction of 24 dBA typically provided by residential buildings in a warm climate with the windows closed (EPA 1978: 11), the highest $L_{eq}$ in the interior of rooms for all nearby sensitive receptors where people normally sleep (listed in Table 4.8-11), would exceed the 45 dBA interior noise standard detailed in the City Noise Control Ordinance. Thus, this would be a **significant** impact.

**Mitigation Measure 4.8-1a: Implement construction-noise reduction measures.**

To minimize noise levels during construction activities, the design-build team shall comply with the following measures during all daytime and nighttime construction work:

- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers’ recommendations. Equipment engine shrouds shall be closed during equipment operation.

- Where available and feasible, construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dBA over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels.

- Install a temporary solid barrier (e.g., plywood) around the construction site and staging area. Also, as feasible, locate trailers and materials such that they would serve as noise barriers to protect off-site noise-sensitive receptors from noise generated by on-site construction activity.

- Designate a disturbance coordinator and post that person’s telephone number conspicuously around the construction site and provide to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.
Mitigation Measure 4.8-1b: Implement additional measures to reduce exposure to construction noise reduction during noise-sensitive time periods.

For all outdoor construction activity that is to take place outside of the City of Sacramento construction noise exception timeframes (i.e., 7:00 a.m. and 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday), and that is anticipated to generate interior noise levels at sensitive receptors that exceed the City Noise Control Ordinance interior noise standard of 45 L_{eq} for residential land uses, the design-build team shall comply with the following measures:

- Consistent with Section 8.68.080 Exceptions of the City Noise Control Ordinance, obtain an exception to Article II, Noise Standards for nighttime construction through the director of building inspections. An exception may be obtained for work to be performed outside the exempt hours in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

- Install temporary noise curtains as close as possible to the noise-generating activity such that the curtains obstruct the direct line of sight between the noise-generating construction activity and the nearby sensitive receptors. Temporary noise curtains shall consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot.

- Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).

- Operate heavy-duty construction equipment at the lowest operating power possible.

- Provide a minimum of one week of advanced notice to owners of all residential located within 350 feet of where nighttime construction activity would take place. This noticing shall inform the recipients of when and where nighttime construction would occur and the types of measures being implemented to lessen the impact at potentially affected receptors. This noticing shall also provide the contact information for the designated disturbance coordinator.

- Offer hotel accommodations to residents within 350 ft of the project site who would temporarily be exposed to nighttime interior noise levels that exceed the interior noise standard of 45 L_{eq}. Alternative overnight accommodations should be in a location that is not adversely affected by nighttime construction noise.

**Significance after Mitigation**

Implementation of mitigation measures 4.8-1a and 4.8-1b would provide substantial reductions in levels of construction noise exposure at noise-sensitive receptors by ensuring proper equipment use; locating noise-generating equipment away from sensitive land uses; requiring a temporary solid barrier around the project site and staging area; and requiring the use of enclosures, shields, and noise curtains (noise curtains typically can reduce noise by up to 10 dBA [EPA 1971]). Although, noise reduction would be achieved with implementation of these measures, reductions of up to 17 dBA would be required during more intensive nighttime construction (if necessary), to comply with the City of Sacramento’s nighttime interior standard of 45 L_{eq}. Reductions of this magnitude are not expected to be achieved under all circumstances with implementation of Mitigation Measures 4.8-1a and 4.8-1b. Because it cannot be assured at this time that nighttime construction will not be needed, and if needed that applicable noise standards can be met, this impact would remain significant and unavoidable.
Impact 4.8-2: Generation of excessive short-term vibration levels

If pile driving is performed during project construction, it could expose existing nearby sensitive receptors and structures to levels of ground vibration that could result in and/or structural damage and/or human disturbance. This impact would be significant.

As shown in Table 4.8-12, construction activities generate varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Blasting activities also generate relatively high levels of ground vibration and vibration noise. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and high levels of vibration can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions.

As shown in Table 4.8-12, pile driving and blasting are the typical construction activities that generate the greatest ground vibration. As described in Chapter 3, “Project Description,” the design-build team will not be precluded from considering pile driving as a construction method. No blasting would occur.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>PPV at 25 feet (in/sec)</th>
<th>Approximate Lv (VdB) at 25 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Pile Driver</td>
<td>1.518</td>
<td>112</td>
</tr>
<tr>
<td>Blasting</td>
<td>1.13</td>
<td>109</td>
</tr>
<tr>
<td>Sonic Pile Driver</td>
<td>0.734</td>
<td>104</td>
</tr>
<tr>
<td>Large Dozer</td>
<td>0.089</td>
<td>87</td>
</tr>
<tr>
<td>Caisson Drilling</td>
<td>0.089</td>
<td>87</td>
</tr>
<tr>
<td>Loaded Trucks</td>
<td>0.076</td>
<td>86</td>
</tr>
<tr>
<td>Rock Breaker</td>
<td>0.059</td>
<td>83</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>0.035</td>
<td>79</td>
</tr>
<tr>
<td>Small Dozer</td>
<td>0.003</td>
<td>58</td>
</tr>
</tbody>
</table>

PPV = peak particle velocity; Lv = the root mean square velocity expressed in vibration decibels (VdB), assuming a crest factor of 4
Source: FTA 2006

According to FTA, impact pile driver vibration levels are 1.518 in/sec PPV and 112 VdB at 25 feet (FTA 2006). Construction activities would be located in close proximity to existing off-site sensitive receptors (i.e., within 50 feet). Based on FTA’s recommended procedure for applying a propagation adjustment to these reference levels, vibration levels from impact pile driving was modeled at the sensitive receptors surrounding the project site. The location of any pile driving, if it were to be used, is not known at this time; therefore, to take a conservative approach to the analysis, it was assumed that pile driving could take place near the project boundary. Table 4.8-13 summarizes the levels of ground vibration that could occur at off-site receptors due to pile driving on the project site.
Table 4.8-13 Summary of Modeled Vibration Levels at Sensitive Receptors

<table>
<thead>
<tr>
<th>Sensitive Receptor</th>
<th>Distance (feet) to Sensitive Receptor</th>
<th>PPV (in/sec) at Sensitive Receptor&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Approximate L&lt;sub&gt;v&lt;/sub&gt; (VdB) at Sensitive Receptor&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Thayer Apartments</td>
<td>50</td>
<td>.537</td>
<td>103</td>
</tr>
<tr>
<td>Park Place Senior Residence</td>
<td>100</td>
<td>.190</td>
<td>94</td>
</tr>
<tr>
<td>1228 O Street apartments</td>
<td>125</td>
<td>.136</td>
<td>91</td>
</tr>
<tr>
<td>1506 13th Street apartments</td>
<td>150</td>
<td>.103</td>
<td>89</td>
</tr>
<tr>
<td>Westminster Presbyterian Church</td>
<td>250</td>
<td>.048</td>
<td>82</td>
</tr>
<tr>
<td>1215 and 1211 P Street apartments</td>
<td>275</td>
<td>.042</td>
<td>81</td>
</tr>
<tr>
<td>Forever Young Child Care Center</td>
<td>350</td>
<td>.029</td>
<td>78</td>
</tr>
</tbody>
</table>

Notes:

1 Caltrans’ recommended level of 0.2 in/sec PPV with respect to the structural damage used as the threshold.
2 FTA’s maximum acceptable level of 80 VdB with respect to human response used as the threshold.

Refer to Appendix E for detailed noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2017

None of the structures in the project vicinity would be considered ruins or ancient monuments subject to Caltrans’s 0.08 in/sec PPV vibration standard. The modeled vibration levels at the Westminster Presbyterian Church and the Forever Young Child Care Center, the two nearby non-residential sensitive receptors, would not exceed Caltrans’s recommended standard of 0.1 in/sec PPV with respect to the prevention of structural damage for normal buildings. For all but the Thayer Apartments, modelled vibration levels would not exceed Caltrans’s recommended standard of 0.2 in/sec PPV with respect to the prevention of structural damage for dwellings. However, as shown in Table 4.8-13, vibration levels could exceed Caltrans’ recommended level of 0.2 in/sec PPV with respect to the structural damage at The Thayer Apartments, adjacent to and northeast of the project. Additionally, vibration levels from the impact pile driving would exceed FTA’s maximum acceptable level of 80 VdB with respect to human response at all of the surrounding sensitive receptors within 300 feet of the project.

Thus, the use of impact pile driving equipment during project construction activities could result in the exposure of existing off-site sensitive receptors to excessive ground vibration and vibration noise levels. This impact would be significant.

Mitigation Measure 4.8-2a: Implement measures to reduce ground vibration.

To reduce vibration and noise impacts from construction activities, DGS shall require the design-build team to implement the following measures:

- To the extent feasible, earthmoving and ground-impacting operations shall be phased so as not to occur simultaneously in areas close to sensitive receptors. The total vibration level produced could be significantly less when each vibration source is operated at separate times.

- Where there is flexibility in the location of use of heavy-duty construction equipment, or impact equipment such as jackhammers, the equipment shall be operated as far away from vibration-sensitive sites as reasonably possible.
Mitigation Measure 4.8-2b: Develop and implement a vibration control plan.

DGS shall require the design-build team to implement the following measures when performing pile driving.

- Pile driving activities shall be limited to the daytime hours between 7:00 a.m. and 6:00 p.m. Monday through Saturday and between 9:00 a.m. and 6:00 p.m. on Sunday. No nighttime pile driving will be permitted.

- A vibration control plan shall be developed by the design-build team to be submitted to and approved by DGS prior to initiating any pile driving activities. Applicable elements of the plan will be implemented before, during, and after pile driving activity. The plan shall consider all potential vibration-inducing activities that would occur and require implementation of sufficient measures to ensure that nearby sensitive receptors are not exposed to vibration levels in excess of applicable thresholds. Items that shall be addressed in the plan include, but are not limited to, the following:
  - Identification that the maximum allowable vibration levels at nearby buildings consist of Caltrans’s recommended standards with respect to the prevention of architectural building damage; 0.2 in/sec PPV for normal dwelling houses, 0.1 in/sec PPV for normal buildings. For buildings that are occupied at the time of pile driving, FTA’s maximum-acceptable-vibration standard with respect to human response, 80 VdB, will also not be exceeded.
  - Pre-construction surveys shall be conducted to identify any pre-existing structural damage to nearby buildings that may be affected by project generated vibration.
  - Identification of minimum setback requirements for different types of ground vibration-producing activities (e.g., pile driving) for the purpose of preventing damage to nearby structures and preventing negative human response shall be established based on the proposed construction activities and locations and the maximum allowable vibration levels identified above. Factors to be considered include the specific nature of the vibration producing activity, local soil conditions, and the fragility/resiliency of the nearby structures. Initial setback requirements can be breached if a project-specific, site specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures.
  - All pile driving generated vibration levels shall be monitored and documented at the nearest sensitive land use to ensure that applicable thresholds are not exceeded. Recorded data will be submitted on a twice-weekly basis to DGS. If it is found at any time by the design-build team or DGS that thresholds are exceeded, pile driving will cease in that location and methods will be implemented to reduce vibration to below applicable thresholds, or an alternative pile installation method will be used at that location, such as cast-in-place or auger cast piles.

Significance after Mitigation

Implementation of Mitigation Measures 4.8-2a and 4.8-2b would ensure that pile driving would not occur during the more sensitive times of the day (i.e., late evening through early morning). Additionally, the mitigation measures would require the design-build team to minimize vibration exposure to nearby receptors by locating equipment far from receptors and phasing operations. Further, if pile driving would be required, a vibration control plan would be prepared and implemented to refine appropriate setback distances and identify other measures to reduce vibration if necessary, and identify and implement alternative methods to pile driving if required. These measures would ensure compliance with recommended levels to prevent structural damage and human annoyance. Thus, this impact would be reduced to a less-than-significant level.
Impact 4.8-3: Long-term (operational) traffic-generated noise levels

Project-generated traffic would not result in traffic noise increases that would expose existing receptors to noise levels or noise level increases that exceed the City of Sacramento noise standards. Therefore, this impact would be **less than significant.**

Project-generated vehicle trips would result in an increase in average daily traffic volumes and associated increases in traffic noise levels along affected roadway segments near the project site. To analyze the impact of project-generated operational transportation noise sources, traffic noise levels under existing and existing-plus-project conditions were modeled for affected roadway segments. For further details on traffic volumes and conditions, see Section 4.4, “Transportation and Circulation.” Refer to Appendix E for detailed noise modeling input parameters.

Table 4.8-14 summarizes the modeled traffic noise levels at the nearest applicable off-site receptors from the roadway centerlines under existing and existing plus project conditions, along with the overall net change in noise level as a result of project-generated traffic.

<table>
<thead>
<tr>
<th>Segment Description</th>
<th>Applicable Exterior CNEL/Lₘ Noise Standard along Roadway Segment (dBA)¹</th>
<th>Allowable Exterior CNEL Noise Standard Increment (dBA)</th>
<th>CNEL at 50 feet from Roadway Centerline</th>
<th>Change (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Street (10th Street to 12th Street)</td>
<td>70</td>
<td>3</td>
<td>60.2</td>
<td>-0.1</td>
</tr>
<tr>
<td>N Street (12th Street to 13th Street)</td>
<td>70</td>
<td>3</td>
<td>60.5</td>
<td>0.0</td>
</tr>
<tr>
<td>N Street (13th Street to 15th Street)</td>
<td>70</td>
<td>3</td>
<td>60.8</td>
<td>0.1</td>
</tr>
<tr>
<td>12th Street (N Street to Neighbors Alley)</td>
<td>70</td>
<td>6</td>
<td>53.0</td>
<td>0.4</td>
</tr>
<tr>
<td>12th Street (Neighbors Alley to O Street)</td>
<td>70</td>
<td>6</td>
<td>53.1</td>
<td>0.0</td>
</tr>
<tr>
<td>12th Street (O Street to P Street)</td>
<td>70</td>
<td>5</td>
<td>56.4</td>
<td>0.4</td>
</tr>
<tr>
<td>P Street (12th Street to 13th Street)</td>
<td>70</td>
<td>3</td>
<td>63.1</td>
<td>0.6</td>
</tr>
<tr>
<td>13th Street (N Street to Neighbors Alley)</td>
<td>70</td>
<td>6</td>
<td>52.8</td>
<td>0.4</td>
</tr>
<tr>
<td>13th Street (Neighbors Alley to O Street)</td>
<td>70</td>
<td>6</td>
<td>53.1</td>
<td>0.3</td>
</tr>
<tr>
<td>13th Street (O Street to P Street)</td>
<td>70</td>
<td>5</td>
<td>57.2</td>
<td>0.5</td>
</tr>
<tr>
<td>15th Street (N Street to W Street)</td>
<td>70</td>
<td>3</td>
<td>65.3</td>
<td>0.0</td>
</tr>
<tr>
<td>16th Street (N Street to W Street)</td>
<td>70</td>
<td>3</td>
<td>64.3</td>
<td>0.1</td>
</tr>
<tr>
<td>10th Street (South of Q Street)</td>
<td>70</td>
<td>3</td>
<td>60.4</td>
<td>0.1</td>
</tr>
<tr>
<td>9th Street (South of Q Street)</td>
<td>70</td>
<td>3</td>
<td>63.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Q Street (3rd Street to 9th Street)</td>
<td>70</td>
<td>3</td>
<td>63.2</td>
<td>-0.2</td>
</tr>
<tr>
<td>P Street (3rd Street to 9th Street)</td>
<td>70</td>
<td>3</td>
<td>66.0</td>
<td>0.1</td>
</tr>
<tr>
<td>0 Street (12th Street to 13th Street)</td>
<td>70</td>
<td>9</td>
<td>49.4</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibels;

¹ 70 CNEL – Exterior Noise Standard for office buildings, schools, libraries, churches, hospitals, neighborhood parks, and mixed-use projects per City of Sacramento General Plan.

Refer to Appendix B for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Noise levels modeled by Ascent Environmental in 2017
While some of the modeled roadway segments pass by residential buildings, this traffic noise analysis does not apply residential (single family or multi-family) exterior noise compatibility standards because no primary open space areas, as defined in Table 4.8-3, are located along the project-affected roadways.

As shown in Table 4.8-14, the addition of project-generated traffic to the surrounding roadway network would not result in any of the roadway study segments experiencing noise increases exceeding the allowable noise increment increase standard detailed in the City of Sacramento General Plan (see Table 4.8-4).

Interior noise levels would not exceed the City of Sacramento General Plan standard of 45 CNEL/Ldn for residential buildings, given that the typical residential construction provides at least 24 dBA exterior-to-interior attenuation (EPA 1978:11). Therefore, exterior noise levels would need to be at least 69 CNEL for the most stringent interior noise standards (residential standards) to be exceeded. As shown in Table 4.8-14, no existing residences along the modeled roadway segments would experience noise levels greater than 69 CNEL as a result of project-generated traffic.

Therefore, existing receptors would not be exposed to noise levels or noise level increases that exceed applicable City of Sacramento noise standards. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.8-4: Long-term operational (non-transportation) noise levels

The project would include a loading dock and delivery area. The exact location of this feature has yet to be determined; however, noise-sensitive receptors are located in close proximity to the project. Thus, it is possible that noise generated by trucks at the loading dock could expose off-site noise-sensitive receptors to noise levels that exceed applicable City of Sacramento noise standards. This impact would be significant.

This impact analysis assesses the potential exposure of existing sensitive receptors to noise generated by non-transportation aspects of the operation of the 1215 O Street Office Building Project. Mechanical equipment associated with building operations, such as HVAC equipment, elevator motors, and the emergency backup generator would be in enclosed areas, and in some cases, also on the building roof. Based on the location and enclosed nature of this equipment, it would not generate excessive noise that exceeds applicable standards. The compatibility of existing office buildings and high-rise buildings with nearby residential uses indicates the effectiveness of building codes and other regulations in minimizing and containing noise generated by building mechanical equipment.

However, delivery trucks at the loading dock of the proposed office building may not be in an enclosed space. Noise generated by loading dock activity is considered a non-transportation noise source because it is not linear in nature. Transportation generated noise is addressed under Impact 4.8-3. For purposes of this analysis, the interior nighttime noise standards for non-transportation noise sources affecting a noise sensitive land use (i.e., 55 Lmax) is considered.

The exact location of the building's loading dock has not been determined at the time of writing this DEIR; however, it is known that vehicular access to the truck loading dock would be from 12th Street and Neighbors Alley. The nearest sensitive receptor to the loading dock would be the Thayer Apartments or Park Place Senior Residence, depending on the loading docks specific location along Neighbors Alley. Noise sources associated with loading dock and delivery activities can include trucks idling, on-site truck circulation, trailer-mounted refrigeration units, pallets dropping, and the operation of forklifts. Based on reference noise levels and accounting for typical usage factors of individual pieces of equipment, such activities could result in noise levels of approximately 82 Leq and 86 Lmax at a distance of 50 feet.
Loading dock and delivery activities performed during the more noise-sensitive evening and nighttime hours can result in increased annoyance and potential sleep disruption for occupants of nearby residential uses. Assuming the average exterior-to-interior noise level reduction of 24 dBA typically provided by residential buildings (EPA 1978: 11), the highest $L_{\text{max}}$ that nearby sensitive receptors could experience without exceeding the 55 dBA interior noise standard detailed in the City Noise Control Ordinance is $79 L_{\text{max}} (79 - 24 = 55)$. Based on noise attenuation calculations conducted for the project and shown in Appendix E, sensitive receptors within 115 feet of loading dock and delivery activity could experience exterior noise levels greater than $79 L_{\text{max}}$. As shown in Table 4.8-10, the Thayer Apartments and Park Place Senior Residence are both located within 115 feet of the project and therefore, could experience noise levels exceeding the City of Sacramento Noise Control Ordinance interior noise standard of 55 $L_{\text{max}}$. This would be a significant impact.

**Mitigation Measure 4.8-4: Reduce exposure of existing sensitive receptors to noise generated by loading dock activity.**

The project applicant shall implement one of the following measures to reduce the effect of noise levels generated by on-site stationary noise sources:

- Loading docks shall be located and designed such that noise generated by activity at the loading dock would not exceed the City’s stationary noise source criteria established in this analysis (i.e., interior nighttime [10:00 p.m. to 7:00 a.m.] standards of 55 $L_{\text{max}}$) at any existing noise sensitive receptor. As part of the design-build process, a specialized noise study will be completed to evaluate the specific design and ensure compliance with City of Sacramento noise standards. Reduction of loading dock noise can be achieved by locating loading docks as far away as possible from noise sensitive land uses, constructing noise barriers between loading docks and noise-sensitive land uses, or using buildings and topographic features to provide acoustic shielding for noise-sensitive land uses. Final design, location, and orientation shall be dictated by findings in the noise study; or

- Operation of loading docks shall not be permitted between the hours of 10:00 p.m. and 7:00 a.m., seven days a week.

**Significance after Mitigation**

Implementation of Mitigation Measure 4.8-4 would ensure that the loading dock and delivery area be oriented, located, and designed in such a way that noise exposure at nearby sensitive receptors would comply with City of Sacramento interior noise standards for existing sensitive receptors, or that loading dock activity would not be permitted during nighttime hours (10:00 p.m. to 7:00 a.m.); thus, reducing this impact to a less-than-significant level.

**Impact 4.8-5: Compatibility of project with on-site noise levels**

The project office building would not be exposed to interior noise levels that exceed the City of Sacramento 45 $L_{\text{eq}}$ standard. This impact would be less than significant.

The City of Sacramento General Plan Policy EC 3.1.1, Exterior Noise Standards states that the City shall require noise mitigation to assure that the exterior noise compatibility standards for land uses are achieved. However, the project would not include any outdoor activity areas and, thus, interior noise standards are the focus of this impact analysis.

City of Sacramento General Plan Policy EC 3.1.3 includes an interior noise standard of 45 $L_{\text{eq}}$ during the peak hour for office buildings (with windows closed). This standard stipulates the level of interior noise from noise-generating activities of nearby land uses.

As shown in Table 4.8-14 under Impact 4.8-3, the roadway segments bordering the project property boundary (12th Street between Neighbors Alley and O Street, and O Street between 12th Street and 13th Street) neither roadway segment would experience any increase in traffic noise levels with the addition of
project-generated traffic. Also, shown in Table 4.8-14, the resultant traffic noise level along these roadway segments, with the project, would be 53.1 CNEL and 49.4 CNEL respectively, which is less than the ambient noise levels measured at the locations around the project property boundary as summarized in Table 4.8-8.

Because of the low traffic volumes along the roadways bordering the project site, the predominant source of noise at the project site is the SacRT light rail which travels along 12th Street and O Street. As detailed in Section 4.8.2 Existing Conditions and Appendix E, the highest peak hour $L_{eq}$ was recorded at noise measurement Location 2, the noise measurement location nearest to the SacRT light rail route. The peak hour $L_{eq}$ of 70.5 dBA was measured at Location 2.

Based on the modeled traffic noise levels, the ambient noise measurements collected at the project site, and given that new commercial buildings typically provide an exterior-to-interior noise reduction of 30 to 35 dBA (Caltrans 2002:7-37), interior noise levels of the proposed office building would range from 35.5 to 40.5 $L_{eq}$. Thus, the interior noise levels of the project building would not exceed the City’s 45 $L_{eq}$ standard for interior noise exposure. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.8-6: Compatibility of land uses with on-site vibration levels

SacRT light rail passing along 12th Street and O Street in the vicinity of the project may generate groundborne vibration levels that are perceptible on the project site. However, light rail operations would not expose the project to levels of ground vibration that exceed Caltrans’s standard of 0.1 in/sec PPV with respect to structural damage and FTA’s standard of 75 VdB with respect to human disturbance. This impact would be less than significant.

The 1215 O Street Office Building Project site is located adjacent to a SacRT light rail line that runs along 12th Street and O Street and thus, potentially exposes the project site to vibration at levels that could cause structural damage or human disturbance. According to FTA, vibration levels of light rail vehicles operating at 50 miles per hour (mph) are 0.013 in/sec PPV and 70 VdB at a distance of 75 feet from the track centerline (FTA 2006, 10-3). Light rail trains near the project site operate at a much lower speed to safely make the turn at 12th and O Streets in the downtown area, thus, generating lower levels of groundborne vibration. However, this analysis conservatively applies the reference vibration levels of light rail vehicles traveling at 50 mph.

Based on FTA’s recommended procedure for applying a propagation adjustment to these reference levels, vibration levels from the operation of light rail vehicles were modeled at the project site. The location of the proposed building on the project site would be approximately 115 feet from the centerline of the existing light rail tracks.

Based on the modeling results, ground vibration and vibration noise levels generated by operation of the light rail vehicles would be 0.007 in/sec PPV and 64 VdB, respectively, at the project site. Therefore, the modeled vibration levels at the project site would not exceed Caltrans’s recommended standard of 0.1 in/sec PPV to assure virtually no risk of architectural damage to normal buildings, or FTA’s maximum acceptable level of 75 VdB with respect to human response at institutional land uses with primarily daytime operations experiencing frequent vibration events. Thus, the project would not result in the exposure of proposed sensitive receptors (project building) to excessive ground vibration and vibration noise levels. This impact would be less than significant.

Mitigation Measures

No mitigation is required.
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4.9 GEOLOGY AND SOILS

This section describes current conditions relative to geology and soils at the 1215 O Street Office Building project site. It includes a description of soils and mineral resources, analysis of environmental impacts, and recommendations for mitigation measures for any significant or potentially significant impacts. The primary source of information used for this analysis is the Draft Geotechnical Engineering Report prepared by Terracon Consultants, Inc. (Terracon 2016) (provided in Appendix G of this DEIR).

4.9.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

National Earthquake Hazards Reduction Act
In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Alquist-Priolo Earthquake Fault Zoning Act
The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Public Resources Code [PRC] Section 2621-2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors, and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive, and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are “sufficiently active” and “well-defined.” A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act
The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act’s provisions are similar in concept to those of the Alquist-Priolo Act: The State is charged with 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. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development.

**California Building Code**

The California Building Code (CBC) (California Code of Regulations, Title 24) is based on the International Building Code. The CBC has been modified from the International Building Code for California conditions, with more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, while Chapter 18A regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction. Appendix J of the CBC regulates grading activities, including drainage and erosion control. The CBC contains a provision that provides for a preliminary soil report to be prepared to identify “...the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects.” (CBC Chapter 18 §1803.1.1.1).

**LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS**

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund, and would be implemented by the California Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this EIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the 1215 O Street Office Building Project. This evaluation is also intended to be used by local agencies for determining, as part of their permit process, the project’s consistency with local plans, policies, and regulations.

**City of Sacramento 2035 General Plan**

The Environmental Constraints Element of the City of Sacramento 2035 General Plan outlines the City of Sacramento’s (City’s) goals and policies regarding seismic and geologic hazards. The following are those goals and policies most applicable to the 1215 O Street Office Building Project:

**Goal EC 1.1 Hazards Risk Reduction.** Protect lives and property from seismic and geologic hazards and adverse soil conditions.

- **Policy EC 1.1.1 Review Standards.** The City shall regularly review and enforce all seismic and geologic safety standards and require the use of best management practices (BMPs) in site design and building construction methods.

- **Policy EC 1.1.2 Geotechnical Investigations.** The City shall require geotechnical investigations to determine the potential for ground rupture, ground-shaking, and liquefaction due to seismic events, as well as expansive soils and subsidence problems on sites where these hazards are potentially present.

**4.9.2 Existing Conditions**

**REGIONAL GEOLOGY**

The site of the 1215 O Street Office Building Project is in the Sacramento Valley within the northern portion of the Great Valley geomorphic province. A “geomorphic province” is comprised of an area of similar geologic origin and erosional/depositional history. The Great Valley geomorphic province is an alluvial plain about 50 miles wide and 400 miles long in the central part of California, and is a trough in which sediments have been deposited almost continuously for tens of millions of years. Its northern area is the Sacramento Valley, drained by the Sacramento River, and its southern area is the San Joaquin Valley, drained by the San Joaquin River.
The Sacramento Valley is bounded by the foothills of the Sierra Nevada to the east, the Coast Ranges to the west, and the Cascade Range and Klamath Mountains to the north. The geology of the Great Valley geomorphic province incorporates thick sequences of alluvial sediments derived primarily from erosion of the Sierra Nevada to the east, and to a lesser extent from erosion of the Cascade and Klamath mountain ranges to the north. Sediments from these mountain ranges were transported downstream and laid down as river channel and floodplain deposits and alluvial fans. The thickness of the alluvial deposits in the project area is approximately 8,000 feet (Hackel 1966: Figure 1). The uppermost part of the alluvial plain is comprised of Holocene age (approximately 11,000 years ago to present time) Basin Deposits and Pleistocene age (2.5 million to 11,000 years before present) Riverbank Formation sediments.

LOCAL GEOLOGY
The project site and immediate vicinity is underlain by Holocene age terraced riverine alluvium deposits, consisting of cobble, gravel, sand, silt, and clay (California Geological Survey [CGS] 1999a). These deposits were laid down by the present-day stream and river systems that flow through the Sacramento area. Based on the findings of the preliminary geotechnical report (Terracon 2016), a total of nine strata were encountered beneath the 1215 O Street Office Building project site during site investigation activities. These strata consisted of interbedded layers of sand, silts, and gravels with shallow groundwater. Medium dense to very dense sands and gravels were encountered at depths between 40 and 90 feet below ground surface (bgs). Very dense to hard sands and silts were encountered below 90 feet bgs.

TOPOGRAPHY AND DRAINAGE
The project site is in a flat, urban area devoid of slopes. The site has been graded as part of urban development and is almost completely covered by impervious surfaces including an existing office building, a surface parking lot, street, alley, and sidewalk. There are no drainages or waterways on the project site. All stormwater enters the City of Sacramento Combined Sewer System which collects and conveys both stormwater and wastewater.

GROUNDWATER
The Sacramento area is underlain by geologic formations that include an upper, unconfined groundwater/aquifer system (able to receive water that infiltrates from the surface) and a lower semiconfined groundwater/aquifer system (infiltration of water can be partially blocked by impermeable layers). Depth to groundwater in the downtown area varies seasonally, is relatively shallow (can be less than 10 feet to the water table), with no predominant direction of groundwater flow (Sacramento Central Groundwater Authority 2012). Data collected in support of the preliminary geotechnical report (Terracon 2016) showed groundwater being encountered at a depth of approximately 17 feet bgs at the 1215 O Street Office Building project site.

SOILS
Borings were used to collect samples at the project site to identify subsurface soil characteristics. The following discussion summarizes the results of the soil investigations and is based on two exploratory test borings completed to date, to a depth of approximately 101.5 feet bgs (Terracon 2016).

Based on data provided in the November 29, 2016 Environmental Data Resources, Inc. Radius Map Report (provided in Appendix F of the Phase 1 Environmental Site Assessment included as Appendix H of this EIR), the soil at and surrounding the 1215 O Street Office Building project site is classified as Urban Land of variable surface texture and as non-hydric. Soils of this variety are characterized by heavy alteration from their natural character by urban land uses. Soil composition may have been altered during construction of structures and paved surfaces. Grading, excavation, and placement of fill are common construction practices and contribute to soil mixing and altered composition of soil.
Natural soil complexes that comprised the original, unaltered soil horizon have been truncated, mixed, or otherwise altered. Where native soils still exist, soil types are expected to be similar to those of nearby areas, consisting of those identified in Table 4.9-1 (USDA SCS 1985). In their unaltered state, most of these soils have low to moderate shrink-swell potential, but rarely can have high shrink-swell characteristics. Taken together, these soils are susceptible to a variety of soil risk factors such as shallow hardpan, shallow bedrock, caving, flooding, and low strength. Construction on these soils generally requires design features that reduce or eliminate structural damage or failure risks.

### Table 4.9-1  Summary of Soil Characteristics

<table>
<thead>
<tr>
<th>Soil Group</th>
<th>Texture</th>
<th>Shrink-Swell Potential</th>
<th>Risk and Restrictive Soil Features for Building-Site Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americanos</td>
<td>Silt loam, sandy loam</td>
<td>Low</td>
<td>Slight to moderate: low strength</td>
</tr>
<tr>
<td>Andregg</td>
<td>Coarse sandy loam, weathered bedrock</td>
<td>Low</td>
<td>Slight to moderate: depth to bedrock</td>
</tr>
<tr>
<td>Argonaut</td>
<td>Loam, clay loam, gravelly clay loam, gravelly loam, weathered bedrock</td>
<td>Low to high</td>
<td>Moderate to severe: depth to rock, too clayey, shrink-swell, low strength</td>
</tr>
<tr>
<td>Auburn</td>
<td>Loam, unweathered bedrock</td>
<td>Low</td>
<td>Severe: depth to rock</td>
</tr>
<tr>
<td>Columbia</td>
<td>Sandy loam, stratified sand to silt loam, clay loam, silty clay loam, clay</td>
<td>Low to high</td>
<td>Moderate to severe: cutbanks cave, flooding, shrink-swell, drouthyc</td>
</tr>
<tr>
<td>Cosumnes</td>
<td>Silt loam, stratified silty clay loam to clay, stratified clay loam to clay</td>
<td>Low to high</td>
<td>Slight to severe: too clayey, wetness, flooding, shrink-swell, low strength</td>
</tr>
<tr>
<td>Egbert</td>
<td>Clay, silty clay loam, clay, stratified clay loam to clay loam</td>
<td>Moderate to high</td>
<td>Moderate to severe: too clayey, wetness, flooding, shrink-swell, low strength</td>
</tr>
<tr>
<td>Fiddyment</td>
<td>Fine sandy loam, loam, sandy clay loam, coarse sandy loam</td>
<td>Low to moderate</td>
<td>Moderate to severe: depth to rock, cemented pan, shrink-swell, slope, low strength, drouthyc</td>
</tr>
<tr>
<td>Galt</td>
<td>Clay, silty clay, cemented</td>
<td>High</td>
<td>Severe: cemented pan, cutbanks cave, shrink-swell, low strength, too clayey</td>
</tr>
<tr>
<td>Hedge</td>
<td>Loam, fine sandy loam, clay loam, sandy clay loam, cemented, sandy loam</td>
<td>Low to moderate</td>
<td>Moderate to severe: wetness, flooding, cemented pan</td>
</tr>
<tr>
<td>Kaseberg</td>
<td>Loam, indurated, weathered bedrock</td>
<td>Low</td>
<td>Moderate to severe: depth to rock, cemented pan, slope</td>
</tr>
<tr>
<td>Kimball</td>
<td>Silt loam, clay, clay loam, sandy clay loam, sandy loam</td>
<td>Low to high</td>
<td>Slight to severe: too clayey, shrink-swell, low strength</td>
</tr>
<tr>
<td>Lang</td>
<td>Fine sandy loam, stratified sand to loamy fine sand</td>
<td>Low</td>
<td>Moderate to severe: cutbanks cave flooding, drouthyc</td>
</tr>
<tr>
<td>Laugenour</td>
<td>Loam, fine sandy loam, sandy loam, stratified very fine sandy loam to loam</td>
<td>Low</td>
<td>Slight to severe: wetness, flooding</td>
</tr>
<tr>
<td>Liveoak</td>
<td>Sandy clay loam, sandy loam, stratified gravelly loamy coarse sand to sandy loam</td>
<td>Low</td>
<td>Slight to severe: cutbanks cave, flooding</td>
</tr>
<tr>
<td>Natomas</td>
<td>Loam, clay loam, stratified gravelly coarse sandy loam to sandy loam</td>
<td>Low to moderate</td>
<td>Slight to moderate: shrink-swell, low strength</td>
</tr>
<tr>
<td>Orangevale</td>
<td>Coarse sandy loam, sandy clay loam</td>
<td>Low to moderate</td>
<td>Slight to moderate: shrink-swell, slope, drouthyc</td>
</tr>
<tr>
<td>Orthents</td>
<td>Not identified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Bluff</td>
<td>Loam, clay loam, gravelly clay loam gravelly clay, very gravelly clay loam, very gravelly clay</td>
<td>Low to moderate</td>
<td>Slight to moderate: too clayey, shrink-swell, low strength</td>
</tr>
<tr>
<td>Rossmoor</td>
<td>Fine sandy loam, sandy loam</td>
<td>Low</td>
<td>Slight to severe: flooding</td>
</tr>
<tr>
<td>Sailboat</td>
<td>Silt loam, stratified sandy loam to silty clay loam, stratified sandy clay loam to silty clay loam, stratified loam to silt loam</td>
<td>Low to moderate</td>
<td>Slight to severe: wetness, flooding, low strength, shrink-swell</td>
</tr>
</tbody>
</table>
Table 4.9-1  Summary of Soil Characteristics

<table>
<thead>
<tr>
<th>Soil Group</th>
<th>Texture</th>
<th>Shrink-Swell Potential</th>
<th>Risk and Restrictive Soil Features for Building-Site Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Joaquin</td>
<td>Silt loam, clay loam, clay, indurated, stratified sandy loam to loam</td>
<td>Low to high</td>
<td>Moderate to severe: cemented pan, shrink-swell, low strength, drought</td>
</tr>
<tr>
<td>Tinnin</td>
<td>Loamy sand, loamy coarse sand, loamy sand, sand</td>
<td>Low</td>
<td>Slight to severe: cutbanks cave, slope, drought</td>
</tr>
<tr>
<td>Valpac</td>
<td>Loam, stratified sandy loam to silty clay loam</td>
<td>Low to moderate</td>
<td>Slight to severe: wetness, flooding, shrink-swell</td>
</tr>
<tr>
<td>Xerarents</td>
<td>Not identified</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: USDA SCS 1985

**SUBSIDENCE**

Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. Subsidence can be induced by both natural and human phenomena. Natural phenomena include shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, and gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction. The results of a geotechnical investigation (Terracon 2016) conducted beneath the project site identified potentially compressible soils at depths shallower than 30 feet. Although the project site and surrounding area is in an area of potential subsidence if there is sufficient groundwater withdrawal (City of Sacramento 2014), there is no reported evidence of subsidence in the immediate area of the project site.

**EXPANSIVE SOILS**

Expansive soils (also known as shrink-swell soils) are soils that contain expansive clay minerals that can absorb significant amounts of water. The presence of these clay minerals makes the soil prone to large changes in volume in response to changes in water content. When an expansive soil becomes wet, water is absorbed and it increases in volume, and as the soil dries it contracts and decreases in volume. This repeated change in volume over time can produce enough force and stress on buildings, underground utilities, and other structures to damage foundations, pipes, and walls.

The quantity and type of expansive clay minerals affects the potential for the soil to expand or contract. Where native soils still exist, soil types may be expected to be similar to those of the nearby areas. These soil types exhibit a range in shrink-swell potential from low to high (Table 4.9-1). However, potentially expansive soils were not identified in the geotechnical investigation conducted by Terracon (2016).

**MASS WASTING AND LANDSLIDES**

Mass wasting refers to the collective group of processes that characterize down slope movement of rock and unconsolidated sediment overlying bedrock. These processes include landslides, slumps, rockfalls, flows, and creeps. Many factors contribute to the potential for mass wasting, including geologic conditions as well as the drainage, slope, and vegetation of the site. A landslide susceptibility database developed by CGS (2011) indicates that the project site is located in an area where land sliding is not expected due to the site being located on a topographically flat area on the valley floor within the floodplain of the Sacramento River. With such minor topographic relief, the probability of a landslide is considered nonexistent.

**SEISMICITY**

Most earthquakes originate along fault lines. A fault is a fracture in the Earth’s crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly and/or by slow
creep (Bryant and Hart 2007). The state of California has a classification system that designates faults as either active, potentially active, or inactive, depending on how recently displacement has occurred along them. Faults that show evidence of movement within the last 11,000 years (the Holocene geologic period) are considered active, and faults that have moved between 11,000 and 1.6 million years ago (comprising the later Pleistocene geologic period) are considered potentially active.

A review of available published geologic and seismic hazards maps indicates that there are no known active faults identified in or adjacent to the City of Sacramento. In addition, there has been no documented movement on faults mapped in Sacramento County during the past 150 years. However, the region has experienced numerous instances of groundshaking originating from faults in other areas. The closest known potentially active fault mapped by the California Geological Survey is the Dunnigan Hills fault located about 20 miles northwest of Sacramento, with the closest branches of the seismically active San Andreas Fault System (Historic activity, i.e., within the last 200 years) being the Green Valley and Concord faults, 43 and 50 miles to the southwest, respectively. The main trace of the San Andreas Fault System is approximately 80 miles to the southwest. Active nearby faults identified within 100 miles of the project area are listed on Table 4.9-2.

**Table 4.9-2 Active Nearby Faults Within 100 Miles of the Project Area**

<table>
<thead>
<tr>
<th>Fault Name</th>
<th>Distance from Fault to Project Site (Miles)</th>
<th>Age of Movement</th>
<th>Characteristic Earthquake (moment magnitude)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunnigan Hills</td>
<td>20</td>
<td>Holocene (&lt;11,000 years)</td>
<td>6.61</td>
</tr>
<tr>
<td>Vaca</td>
<td>28</td>
<td>Quaternary</td>
<td>6.11</td>
</tr>
<tr>
<td>Foothills, N central section</td>
<td>30</td>
<td>Quaternary (&lt;130,000 years)</td>
<td>6.02,3</td>
</tr>
<tr>
<td>Foothills, S central section</td>
<td>36</td>
<td>Quaternary</td>
<td>6.02,3</td>
</tr>
<tr>
<td>Greenville</td>
<td>43</td>
<td>Holocene</td>
<td>6.6</td>
</tr>
<tr>
<td>Green Valley</td>
<td>43</td>
<td>Recent (&lt;150 years)</td>
<td>6.2</td>
</tr>
<tr>
<td>Cordelia</td>
<td>43</td>
<td>Holocene (&lt;11,000 years)</td>
<td>NA</td>
</tr>
<tr>
<td>Concord</td>
<td>50</td>
<td>Recent</td>
<td>6.2</td>
</tr>
<tr>
<td>Healdsburg / Rogers Creek</td>
<td>56</td>
<td>Quaternary / Holocene</td>
<td>7.1</td>
</tr>
<tr>
<td>Hayward</td>
<td>61</td>
<td>Recent</td>
<td>6.9 – 7.1</td>
</tr>
<tr>
<td>Calaveras</td>
<td>61</td>
<td>Holocene</td>
<td>7.5</td>
</tr>
<tr>
<td>San Andreas</td>
<td>80</td>
<td>Recent</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Notes: 1 Wesnousky, S.G., 1986  
2 General Plan, 2011  
3 Richter scale magnitudes  
Source: Jennings and Bryant 2010

Seismic hazards resulting from earthquakes include surface fault rupture, ground shaking, and liquefaction. Each of these potential hazards is discussed below.

**Surface Fault Rupture**

Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. The potential for surface rupture is based on the concepts of recency and recurrence. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see the Regulatory Setting discussion above) was created to prohibit the location of structures designed for human occupancy across, or within 50 feet of, an active fault, thereby reducing the loss of life and property from an earthquake. The project site is not located within an Alquist-Priolo active fault zone (Bryant and Hart 2007), and there is no evidence of active faulting within or near the project site.
Ground Shaking

The intensity of seismic shaking, or strong ground motion, during an earthquake is dependent on the distance and direction from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions of the surrounding area. Ground shaking could potentially result in the damage or collapse of buildings and other structures. The probable seismic ground shaking expected at the project site is anticipated to produce peak ground accelerations between 10 and 20 percent of the acceleration of gravity; 0.1g and 0.2g, respectively (California Department of Conservation 2002, Probabilistic Seismic Hazard Assessment Maps). Earthquake intensities generally associated with this amount of ground shaking are typically between VI and VII on the Modified Mercalli Intensity Scale (MMI) (Table 4.9-3). An expected characteristic earthquake on the entire San Andreas Fault System is a Moment Magnitude scale (Mw) of 7.9 and is probably the largest earthquake that would be felt in the project site. Given the distance between the San Andreas Fault and the project site, the felt intensity would be expected to be between MMI IV and V (light to moderate shaking). However, a felt intensity between MMI VII and VIII would be caused by a characteristic earthquake on the Dunnigan Hills fault of Mw 6.6 because it is much closer to the project area.

Overall, the project site is located in an area of low earthquake hazard and therefore experience low levels of ground shaking on an infrequent basis (CGS 2003). Based in data from the CGS (2008), the project site would be expected to have 2 percent chance in 50 years to experience a ground motion of 0.318 g.

<table>
<thead>
<tr>
<th>Table 4.9-3 The Modified Mercalli Scale of Earthquake Intensities</th>
</tr>
</thead>
<tbody>
<tr>
<td>If most of these effects are observed</td>
</tr>
<tr>
<td>Earthquake shaking not felt but people may observe marginal effects of large distance earthquakes without identifying these effects as earthquake-caused. Among them: trees, liquids, bodies of water sway slowly, or doors swing slowly.</td>
</tr>
<tr>
<td>Effect on people: Shaking felt by those at rest, especially if they are indoors, and by those on upper floors.</td>
</tr>
<tr>
<td>Effect on people: Felt by most people indoors. Some can estimate duration of shaking but many may not recognize shaking of building as caused by an earthquake; the shaking is like that caused by the passing of light trucks.</td>
</tr>
<tr>
<td>Other effects: Hanging objects swing. Structural effects: Windows or doors rattle. Wooden walls and frames creak.</td>
</tr>
<tr>
<td>Effect on people: Felt by everyone indoors and by most people outdoors. Many now estimate not only the duration of shaking but also its direction and have no doubt as to its cause. Sleepers wakened. Other effects: Hanging objects swing, Standing autos rock. Crockery clashes, dishes rattle or glasses clink. Structural effects: Doors close, open or swing, Windows rattle.</td>
</tr>
<tr>
<td>Effect on people: Felt by everyone indoors and by most people outdoors. Many now estimate not only the duration of shaking but also its direction and have no doubt as to its cause. Sleepers wakened. Other effects: Hanging objects swing, Shutters or pictures move, Pendulum clocks stop, start, or change rate. Standing autos rock. Crockery clashes, dishes rattle or glasses clink. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Structural effects: Weak plaster and Masonry D+ crack. Windows break. Doors close, open, or swing.</td>
</tr>
<tr>
<td>Effect on people: Felt by everyone. Many are frightened and run outdoors. People walk unsteadily. Other effects: Small church or school bells ring. Pictures thrown off walls, knickknacks and books off shelves. Dishes or glasses broken. Furniture moved or overturned. Trees, bushes shaken visibly, or heard to rustle. Structural effects: Masonry D+ heavily damaged; some cracks in Masonry C+. Weak chimneys break at roof line. Plaster, loose bricks, stones, tiles, cornices, unbraced parapets, and architectural ornaments fall. Concrete irrigation ditches damaged.</td>
</tr>
<tr>
<td>Effect on people: Difficult to stand. Shaking noticed by auto drivers. Other effects: Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Furniture broken. Hanging objects quiver. Structural effects: Masonry D+ heavily damaged; Masonry C+ damaged, partially collapses in some cases; some damage to Masonry B+; none to Masonry A+. Stucco and some masonry walls fall. Chimneys, factory stacks, monuments, towers, elevated tanks twist or fall. Frame houses move on foundation if not bolted down; loose panel walls thrown out. Decayed piling broken off.</td>
</tr>
<tr>
<td>Effect on people: General fright. People thrown to ground. Other effects: Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes. Steering of autos affected. Branches broken from trees.</td>
</tr>
<tr>
<td>Table 4.9-3</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td><strong>If most of these effects are observed</strong></td>
</tr>
<tr>
<td>Structural effects: Masonry D* destroyed; Masonry C* heavily damaged, sometimes with complete collapse; Masonry B* is seriously damaged. General damage to foundations. Frame structures, if not bolted, shifted off foundations. Frames cracked. Reservoirs seriously damaged. Underground pipes broken.</td>
</tr>
<tr>
<td>Effect on people: General panic. Other effects: Conspicuous cracks in ground. In areas of soft ground, sand is ejected through holes and piles up into a small crate, and, in muddy areas, water fountains are formed. Structural effects: Mast masonry and frame structures destroyed along with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, and embankments. Railroads bent slightly.</td>
</tr>
<tr>
<td>Effect on people: General panic. Other effects: Same as for Intensity X. Structural effects: Damage nearly total, the ultimate catastrophe. Other effects: Large rock masses displaced. Lines of sight and level distorted. Objects thrown into air.</td>
</tr>
</tbody>
</table>

* Masonry A: Good workmanship and mortar, reinforced, designed to resist lateral forces.  
* Masonry B: Good workmanship and mortar, reinforced.  
* Masonry C: Good workmanship and mortar, unreinforced.  
* Masonry D: Poor workmanship and mortar and weak materials, like adobe.

**Liquefaction and Lateral Spreading**

Liquefaction is a phenomenon in which loose, saturated, granular soil deposits lose a significant portion of their shear strength because of excess pore water pressure buildup. An earthquake, typically causes the increase in pore water pressure and subsequent liquefaction. These soils are behaving like a liquid during seismic shaking and re-solidify when shaking stops. The potential for liquefaction is highest in areas with high groundwater and loose, fine, sandy soils at depths of less than 50 feet. Based on mapping conducted pursuant to the Alquist-Priolo Act, the project site and surrounding area are not identified as located within an area of potential liquefaction (Bryant and Hart 2007). However, a geotechnical investigation conducted (Terracon 2016) beneath the project site did identify groundwater at approximately 17 feet bgs and potentially liquefiable and compressible soils at depths shallower than 30 feet. Another geological and seismological study in 1972 in the downtown area indicated the potential for liquefaction (Sacramento County 2011). This study also concluded that potential liquefaction problems may exist throughout the downtown area where loose sands and silts are present below the ground water table. However, there have been no reported instances of liquefaction occurring in downtown Sacramento during major earthquake events, including the Loma Prieta earthquake in 1989, the Vacaville-Winters earthquake in 1982, or the San Francisco earthquake in 1906 (DGS 2005).

Liquefaction may also lead to lateral spreading. Lateral spreading (also known as expansion) is the horizontal movement or spreading of soil toward an “open face,” such as a streambank, the open side of fill embankments, or the sides of levees. It often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high. The Sacramento River is located approximately one mile to the west of the project site and could offer a potential opportunity for lateral spreading. However, because the project site and vicinity are on flat terrain and relatively distant from the Sacramento river, lateral spreading caused by liquefaction is not expected to be a concern.
MINERAL RESOURCES

The California Department of Conservation Division of Mines and Geology has developed guidelines for the classification and designation of mineral lands, known as Mineral Resource Zones (MRZs), and retains publications of the Surface Mining and Reclamation Act (SMARA) Mineral Land Classification Project dealing with mineral resources in California. The project site is located within a mapped MRZ and is designated MRZ-1, areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (CGS 1999b).

4.9.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The examination of geology, soils, and mineral resources is based on information obtained from reviews of:

- the project description;
- available literature, including documents published by the City, the County of Sacramento, State and federal agencies, and published information dealing with geotechnical conditions in the Sacramento area;
- applicable elements from the County of Sacramento General Plan and the City of Sacramento General Plan; and
- Draft Geotechnical Engineering Report prepared for the 1215 O St. Office Building Project (Appendix G).

THRESHOLDS OF SIGNIFICANCE

A geology and soils impact is considered significant if implementation of the 1215 O Street Office Building Project would do any of the following:

- expose people or structures to potential substantial adverse impacts, including risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- locate project facilities on a geologic unit that is unstable, or that would become unstable as a result of the 1215 O Street Office Building Project, and potentially result in on-site or off-site lateral spreading, subsidence, liquefaction, or collapse;
- locate project facilities on expansive soil, creating substantial risks to property;
- result in substantial soil erosion or the loss of topsoil; or
- result in the loss of a known statewide, regional, or locally-important mineral resource.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The topography of the project site in downtown Sacramento is flat. Therefore, there is little to no potential for lateral spreading and landslides. Therefore, impacts associated with lateral spreading and landslides are not discussed further in this DEIR.

The project site is not located on soils susceptible to subsidence. No soft clay-type materials that would undergo long-term settlement were encountered in borings beneath the project site. Borehole data indicate medium stiff to hard silts and clays. On-site subsidence is not expected to occur and subsidence is not
discussed further in this DEIR. The project site is an urban site developed with an office building, impervious surfaces, and landscaping. Because of the developed conditions of the sites and their generally flat topography, the proposed project would not generate the potential for substantial soil erosion or loss of topsoil. Grading, trenching, and excavation during construction can temporarily expose soil to erosive forces such as wind and stormwater. Such effects are addressed in Section 4.10, “Hydrology and Water Quality,” and are not addressed in this section.

The project site is located within a mapped MRZ and is designated MRZ-1, areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (CGS 1999b). There is no evidence that there are important mineral resources underlying the project site and potential effects on mineral resources are not discussed further in this DEIR.

ENVIRONMENTAL IMPACTS

Impact 4.9-1: Seismic hazards

The project site is not located on any known faults or traces of active faults. Surface fault rupture, therefore, is extremely unlikely. Construction of the proposed facilities would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by ground shaking from earthquakes and to minimize secondary seismic hazards (i.e., ground lurching, liquefaction). Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of this project alternative would not result in exposure of people or structures to substantial adverse effects related to seismic hazards, nor would the project have the potential to exacerbate these hazards. This impact would be less than significant.

Although the Sacramento area is located between three seismically active fault regions, the project site would not be located on any known faults or traces of active faults. Surface fault rupture, therefore, is extremely unlikely.

In the event of a major earthquake, people and structures would be exposed to moderate to severe ground shaking. Potential secondary effects of ground shaking at the project site include seismic shaking and liquefaction.

The potential for seismic shaking and associated formation of cracks in the ground is considered greater at contacts between materials with substantially different properties, such as deep, soft soil and bedrock. These conditions were not found at the project site, and the probability of ground lurching and formation of cracks in the ground during a seismic event is considered low.

Construction of the project would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by ground shaking from earthquakes. Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of the project would not result in exposure of people or structures to substantial adverse effects related to seismic hazards. The impact would be less than significant.

Mitigation Measures

No mitigation is required.
Impact 4.9-2: Liquefaction

The project site is located in an area of potential liquefaction based on the findings of the geotechnical investigation performed by Terracon and from previous investigations in the area. Construction of the proposed facilities would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by liquefaction. Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of this project alternative would not result in exposure of people or structures to substantial adverse effects related to liquefaction. This impact would be less than significant.

The soils beneath the project site are susceptible to liquefaction, and potential liquefaction problems may exist throughout the downtown area where loose sands and silts are present below the ground water table. However, there have been no reported instances of liquefaction occurring in downtown Sacramento during past major earthquake events.

Lateral spreading occurs when soils liquefy and the overlying soils move horizontally or down a slope. Because the topography at the project site is relatively flat, the potential for lateral spreading is considered generally low.

Construction of the proposed facilities would conform to the current CBC, which contains specifications to minimize adverse effects on structures caused by liquefaction. Through conformance with the CBC and implementation of site-specific engineering measures developed in compliance with these codes, development of this project alternative would not result in exposure of people or structures to substantial adverse effects related to liquefaction. The impact would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.9-3: Expansive soils

The project site is located in an area where native soils may still exist, and these soil types exhibit a range in shrink-swell potential from low to high. However, potentially expansive soils were not identified in a geotechnical investigation beneath the project site. Through conformance with the CBC and implementation of applicable measures (if needed) to address shrink-swell soils, development of the project would not result in exposure of people or structures to substantial adverse effects from these soil types. This impact would be less than significant.

The soils beneath the project site are not susceptible to expansion. It is not expected that shrink-swell soils would adversely affect underground facilities associated with the project. However, construction of project facilities would conform to the current CBC, which contains specifications to address shrink-swell soils where they might occur.

Through conformance with the CBC and implementation of applicable measures (if needed) to address shrink-swell soils, development of the project would not result in exposure of people or structures to substantial adverse effects from these soil types. This impact would be less than significant.

Mitigation Measures
No mitigation is required.
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4.10 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, describes the existing hydrologic conditions at the project site, and evaluates potential hydrology and receiving water-quality impacts of the proposed 1215 O Street Office Building Project. Potential effects on the capacity of City of Sacramento water-supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 4.5, “Utilities and Infrastructure.”

4.10.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Clean Water Act
The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards
Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (State Water Board) and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

CWA Section 303(d) Impaired Waters List
Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as Basin Plans, of the State RWQCBs. See “State Plans, Policies, Regulations, and Laws,” below.

National Pollutant Discharge Elimination System
The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

“Nonpoint source” pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or
discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of “State Plans, Policies, Regulations, and Laws” section below).

National Flood Insurance Act
The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

FEMA prepares Flood Insurance Rate Maps (FIRMs) that delineate the regulatory floodplain to assist local governments with the land use planning and floodplain management decisions needed to meet the requirements of NFIP. Floodplains are divided into flood hazard areas, which are areas designated per their potential for flooding, as delineated on FIRMs. Special Flood Hazard Areas are the areas identified as having a one percent chance of flooding in each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain, if the development is expected to increase flood elevation by 1 foot or more.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Porter-Cologne Act
California’s primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Board and each of the nine RWQCBs power to protect water quality, and is the primary vehicle for implementation of California’s responsibilities under the Clean Water Act. The applicable RWQCB for the proposed project is the Central Valley RWQCB. The State Water Board and the Central Valley RWQCB have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a “Basin Plan”) for its region. The Basin Plan for the Central Valley Region includes a comprehensive list of waterbodies within the region and detailed language about the components of applicable Water Quality Objectives (WQOs). The Basin Plan recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities throughout the Sacramento and San Joaquin River Basins. Through the Basin Plan, the Central Valley RWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plan includes both narrative, and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, groundwater recharge, fresh water replenishment, hydroelectric power generation, and preservation and enhancement of wildlife, fish, and other aquatic resources.

The Central Valley RWQCB also administers the adoption of waste discharge requirements (WDRs), manages groundwater quality, and adopts projects within its boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit).
NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity
The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems
The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria and metals. The runoff can then drain directly into a local stream, lake or bay. Often, the runoff drains into storm drains which eventually drain untreated into a local waterbody. MS4 permits were issued in two phases: Phase I, for medium and large municipalities, and Phase II for small ones. Most Phase I permits are issued to a group of co-permittees encompassing an entire metropolitan area. These permits are reissued as the permits expire. The Phase I MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable, which is the performance standard specified in Section 402(p) of the CWA. The management programs specify what BMPs will be used to address certain program areas.

The 1215 O Street Office Building Project site lies within downtown Sacramento, which is covered under a Phase I permit. The City of Sacramento, along with the Cities of Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova were reissued a NPDES area-wide MS4 permit to discharge stormwater runoff from storm drains within their jurisdictions (CVRWQCB Order No. R5-2015-0023, NPDES Permit No. CAS082597).

California Water Code
The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of DWR is “to manage the water resources of California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments.” DWR is responsible for promoting California’s general welfare by ensuring beneficial water use and development statewide.

Groundwater Management
Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030, and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1). Pursuant to the SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a “groundwater sustainability agency” for that basin (Water Code Section 10723). The Sacramento Central Groundwater Authority has notified DWR that it has elected to become a GSA pursuant to Water Code Section 10723.8, and intends to undertake...
sustainable groundwater management in area roughly coincident with the Sacramento Valley Groundwater Basin, South American Subbasin.

**Central Valley Flood Protection Act**
The Central Valley Flood Protection Act of 2008 establishes the 200-year flood event as the minimum level of protection for urban and urbanizing areas. As part of the state’s FloodSAFE program, those urban and urbanizing areas protected by flood control project levees must receive protection from the 200-year flood event level by 2025. The DWR and Central Valley Flood Protection Board (CVFPB) collaborated with local governments and planning agencies to prepare the 2012 Central Valley Flood Protection Plan (CVFPP) (DWR 2012), which the CVFPB adopted on June 29, 2012. The objective of the 2012 CVFPP is to create a system-wide approach to flood management and protection improvements for the Central Valley and San Joaquin Valley. The Central Valley Flood Protection Act calls for updates to the CVFPP every 5-years. At the time of preparation of this Draft EIR, the 2017 Update to the Central Valley Flood Protection Plan was in preparation, but had not been adopted.

**State Plan of Flood Control**
Section 9110(f) of the California Water Code defines the SPFC as follows, “‘State Plan of Flood Control’ means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361.”

The SPFC encompasses a wide network of facilities, which range from major structures such as levees, drainage pumping plants, drop structures, dams and reservoirs, and major channel improvements, to minor components such as stream gauges, pipes, and bridges.

**LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS**
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund, and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

**City of Sacramento 2035 General Plan**
The following goals and policies from the Sacramento 2035 General Plan Utilities Element relate to stormwater and wastewater management.

**Goal U 4.1 Adequate Stormwater Drainage**. Provide adequate stormwater drainage facilities and services that are environmentally sensitive, accommodate growth, and protect residents and property.

- **Policy U 4.1.1 Adequate Drainage Facilities**. The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

- **Policy U 4.1.4 Watershed Drainage Plans**. The City shall require developers to prepare watershed drainage plans for proposed developments that define needed drainage improvements per City standards, estimate construction costs for these improvements, and comply with the City’s National Pollutant Discharge Elimination System (NPDES) permit.
Policy U 4.1.5 Green Stormwater Infrastructure. The City shall encourage “green infrastructure” design and Low Impact Development (LID) techniques for stormwater facilities (i.e., using vegetation and soil to manage stormwater) to achieve multiple benefits (e.g., preserving and creating open space, improving runoff water quality).

Policy U 4.1.6 New Development. The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures, including “green infrastructure” and Low Impact Development (LID) techniques, to prevent on- or off-site flooding.

Goal ER 1.1 Water Quality. Protect local watersheds, water bodies, and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers, and their shorelines.

Policy ER 1.1.3 Stormwater Quality. The City shall control sources of pollutants and improve and maintain urban runoff water quality through storm water protection measures consistent with the City’s NPDES Permit.

Policy ER 1.1.4 New Development. The City shall require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the City’s NPDES Permit.

Policy ER 1.1.5 Limit Stormwater Peak Flows. The City shall require all new development to contribute no net increase in stormwater runoff peak flows over existing conditions associated with a 100-year storm event.

Policy ER 1.1.6 Post-Development Runoff. The City shall impose requirements to control the volume, frequency, duration, and peak flow rates and velocities of runoff from development projects to prevent or reduce downstream erosion and protect stream habitat.

Policy ER 1.1.7 Construction Site Impacts. The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City’s erosion and sediment control ordinance and stormwater management and discharge control ordinance.

Goal EC 2.1 Flood Protection. Protect life and property from flooding.

Policy EC 2.1.8 Floodplain Requirements. The City shall regulate development within floodplains in accordance with State and Federal requirements and maintain the City’s eligibility under the National Flood Insurance Program.

Policy EC 2.1.11 New Development. The City shall require evaluation of potential flood hazards prior to approval of development projects.

Stormwater Quality Design and Procedures Manual
As detailed above, the County of Sacramento (County) and the Cities of Sacramento, Folsom, and Galt applied for and received one of the first areawide NPDES MS4 permits in 1990. In response, the Sacramento Stormwater Quality Partnership developed core stormwater management program elements and activities to address problems related to water quality of local urban runoff. The program is discussed in detail in the City of Sacramento’s Stormwater Quality Improvement Plan. The program is an established effort that effectively reduces pollutants to the maximum extent practicable by continuing to implement successful control measures and to develop and utilize new, innovative BMPs (County of Sacramento et al. 2007).
While the BMPs described in the program are to be followed throughout the city, stormwater flow from the project site discharges to the City’s combined sewer system (CSS) and is therefore regulated through the NPDES permit (NPDES No. CA 0077682), described in Section 4.5 “Utilities and Infrastructure.”

**Grading, Erosion, and Sediment Control Design Manual**
The City’s policies and design standards for grading, erosion and sediment control measures are driven collectively by the regulations within the Regional MS4 Permit, as well as Ordinance 93-068 and the City of Sacramento Design and Procedures Manual. The City’s policies and design standards are consistent with those in the General Permit, but applicants are still required to comply with the General Permit if it is applicable to their project. These policies and design standards are outlined in the Administrative and Technical Procedures for Grading and Erosion and Sediment Control, which provides guidance and minimum standards for use in grading design, temporary erosion and sediment control measures to be used during construction (City of Sacramento 2013).

**Sacramento Central Groundwater Authority**
The Sacramento Central Groundwater Authority developed the Central Sacramento County Groundwater Management Plan (CSCGMP) to assist water providers in maintaining a safe, sustainable, and high quality groundwater resource within the extent of the groundwater basin. There are five Best Management Objectives outlined in the CSCGMP that are used to achieve that central goal. They are to:

1. maintain a long-term average groundwater extraction rate of 273,000 acre-feet/year,
2. establish specific minimum groundwater elevations within all areas of the basin consistent with the Water Forum “Solution,”
3. protect against any potential inelastic land surface subsidence,
4. protect against any adverse impacts to surface water flows, and
5. develop specific water quality objectives for several constituents of concern.

**Sacramento Area Flood Control Agency**
The Sacramento Area Flood Control Agency (SAFCA) was formed in 1989 to address the Sacramento area's vulnerability to catastrophic flooding. Its mission is to minimize flood risk potential while preserving the environment and enhancing floodway and floodplains. This vulnerability was exposed during the record flood of 1986 when Folsom Dam exceeded its normal flood control storage capacity and several area levees nearly collapsed under the strain of the storm. In response, the City of Sacramento, the County of Sacramento, the County of Sutter, the American River Flood Control District and Reclamation District No. 1000 created SAFCA through a Joint Exercise of Powers Agreement to provide the Sacramento region with increased flood protection along the American and Sacramento Rivers.

**City of Sacramento Comprehensive Flood Management Plan**
Because of the City’s high flood risk and vulnerability, the City developed a Comprehensive Flood Management Plan (CFMP) to guide the City’s flood risk reduction and mitigation efforts. The CFMP was initiated by the City’s Department of Utilities and serves as the City’s strategic plan to reduce flood risk over the planning period (2016-2021).
4.10.2 Existing Conditions

HYDROLOGY AND DRAINAGE

Regional Hydrology
The primary watershed within Sacramento County is the Sacramento River Basin, which encompasses 26,500 square miles and is bound by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Sacramento-San Joaquin Delta lands (Delta) to the south. The Sacramento River Basin is the largest river basin in California, capturing roughly one-third of the total surface runoff in the state, and draining an average of approximately 21.9 million acre-feet per year (U.S. Geological Survey [USGS] 2000). Rain and snow support late autumn, winter, and spring flows, and melting of the winter snowpack is the primary source of flows during the summer and early fall months. Within the Sacramento River Basin there are several subbasins or smaller watersheds that drain to the tributaries of the Sacramento River (Exhibit 4-10-1).

The Sacramento River originates in the mountains and plateaus of far northern California and flows south through the Sacramento Valley. As the river approaches downtown Sacramento, it is joined by the American River from the east, and then flows under Tower Bridge and I-80 in downtown Sacramento. Upstream from downtown Sacramento, the Sacramento Weir is situated to relieve floodwaters from the Sacramento River, sending them south via the Yolo Bypass, to enter the Delta near Rio Vista. The region of the Sacramento River below the I Street Bridge is considered part of the Delta (California Water Code Section 1220). Forty miles south of the Sacramento area, the Sacramento River joins the San Joaquin River, and waters from both rivers drain into San Francisco Bay.

Local Hydrology
The project site is in the City of Sacramento on low-lying lands approximately 1-mile east of the Sacramento River and approximately 1.5 miles south of the American River. The site is downstream (south) of the confluence of the Sacramento and American Rivers. The project site is in an urbanized area and has not direct connection to streams, creeks, or other hydrologic features.

Stormwater Drainage
At a broad scale, storm drainage is comprised of overland sheet flow generated diffusely throughout a watershed by precipitation and channeled, ultimately, to natural drainageways. In local urban neighborhoods and communities in Sacramento County, drainage is primarily conveyed by engineered drainage systems consisting of pipes, gutters, swales, ditches, and graded land. These engineered systems are designed to control the quantity and quality of storm drainage produced in urban areas, and manage it in a controlled manner such that it produces less harm to natural waterbodies.

Stormwater at the project site is collected by the CSS and conveyed to one of two facilities for primary treatment prior to discharge to the Sacramento River. CSS flows and discharges are currently regulated by the provisions of WDR Order No. R5-2015-0045 (NPDES No. CA0079111). Direct stormwater discharges to the Sacramento River are not permitted unless the total combined 380 mgd capacity of the CSS is exceeded during an extreme high flow event. Section 4.5, “Utilities and Infrastructure” contains further details relating to the operation and capacity of the CSS.

Flood Conditions
Sacramento County has an extensive system of dams, levees, weirs, pumping plants, and flood control bypass channels along the Sacramento and American Rivers to provide flood control. These facilities can control floodwaters by regulating the amount of water passing through reaches of the river. The amount of water flowing through the river system can be controlled locally by Folsom Dam on the American River and the reserve overflow area of the Yolo Bypass on the Sacramento River.
Downtown Sacramento is within the natural floodplain of the Sacramento River, with a one percent risk of flooding in any given year (100-year floodplain) (FEMA 2017). However, the flood risk is reduced in downtown Sacramento, including the project site (Exhibit 4.10-2), by the system of levees maintained under the SPFC.

**Groundwater Hydrology**

The project site is located within the South American Groundwater Subbasin of the Sacramento Valley Groundwater Basin, as defined in the DWR Bulletin 118 (DWR 2004). The South American Subbasin is bounded by the Sierra Nevada on the east, the Sacramento River on the west, the American River to the north, and the Cosumnes and Mokelumne rivers on the south.

Sacramento is underlain by geologic formations that include an upper, unconfined aquifer system (able to receive water that infiltrates from the surface) and a lower semiconfined aquifer system (infiltration of water can be partially blocked by impermeable layers). Depth to groundwater in the downtown area varies seasonally, is relatively shallow (less than 10 feet to the water table), with no predominant direction of groundwater flow (SCGA 2012).

**WATER QUALITY**

**Surface Water Quality**

The most extensive water-quality monitoring programs and data sets of the Sacramento River near Sacramento include the Coordinated Monitoring Program (CMP) conducted by the City and County, the Sacramento River Watershed Program (SRWP), and the USGS National Water Quality Assessment Program for the Sacramento River Basin.

Designated beneficial uses for the Sacramento River near the project site, include:

- municipal and agricultural supply,
- contact and noncontact recreation,
- coldwater fish habitat and spawning,
- warmwater fish habitat and spawning,
- wildlife habitat, and
- navigation.

The Sacramento River, from Knights Landing to the Delta, is included on the CWA Section 303(d) list of impaired waters for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, mercury, polychlorinated biphenyls (PCBs), and unknown toxicity (toxicity to various biological indicators exhibited through standardized toxicity tests), based on the assessment provided in the 2012 Integrated Report of data collected under the SRWP and the San Francisco Bay Delta and Tributaries Project (Central Valley RWQCB 2012). Chlordane, DDT, and dieldrin are insecticides used in agriculture; PCBs are found in a wide variety of industrial applications; and mercury is a byproduct of gold mining.

Measurements taken at the USGS Freeport monitoring station on the Sacramento River by CMP and USGS indicate that for many generic water quality parameters, the Sacramento River generally has good water quality that is low in common pollutants that are used as indicators of overall river health. The data indicate that the river is low in total dissolved solids (TDS), has neutral pH, moderate alkalinity, and adequate dissolved-oxygen (DO) levels for aquatic organisms. The water from the river is also generally low in nutrients (nitrogen and phosphorus) that can cause nuisance algae and aquatic vascular plant growth. Total organic carbon (TOC) concentrations often exceed Safe Drinking Water Act thresholds that can potentially trigger additional treatment requirements at municipal treatment plants. The river concentrations of E. coli and fecal coliform concentrations are typically low in dry-weather conditions and elevated in the winter runoff period, resulting in general conformance to long-term mean Basin Plan objectives. Trace metal content is generally low in the river, except for mercury, which is a legacy pollutant from historic mining operations.
Exhibit 4.10-2

Flood Zone

Legend

- Project Location
- Bank of the Sacramento River
- Flood Hazard Zone
  - 1% Annual Chance Flood Hazard
  - Area with Reduced Risk Due to Levee
  - Area of Minimal Flood Hazard
  (<0.2% annual chance flood hazard)

Source: FEMA 2016

Aerial: NAIP 2016

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While pesticides have been detected and resulted in Section 303(d) listing of the Sacramento River for such constituents, there are no applicable regulatory criteria established for pesticides that have been exceeded. (Central Valley RWQCB 2012). Total maximum daily load (TMDL) criteria for the Sacramento River watershed have been established through the Section 303(d) evaluation and listing process.

**Groundwater Quality**

Groundwater quality can be affected by many things, but the chief controls on the characteristics of groundwater quality are the source and chemical composition of recharge water, properties of the host sediment, and history of discharge or leakage of pollutants. Groundwater quality impairments in the central Sacramento area are primarily related to urban source contamination.

The Sacramento region contains known areas of substantial groundwater pollution, including groundwater plumes beneath the former McClellan Air Force Base, the former Mather Air Force Base, and the Aerojet property south of US 50 in Rancho Cordova. A portion of the South Plume, a significant industrial groundwater plume emanating from the Railyards and contaminated with metals, solvents, and petroleum-based compounds, is located just northwest of the project site (City of Sacramento 2014). However, no evidence of groundwater contamination at the project site was found during preparation of the Phase I Environmental Site Assessment (ESA) for the project (Appendix H).

**4.10.3 Environmental Impacts and Mitigation Measures**

**ANALYSIS METHODOLOGY**

Evaluation of potential hydrologic and water quality impacts is based on a review of existing documents and studies that address water resources in the vicinity of the project. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, state, and local laws, ordinances, and regulations.

**THRESHOLDS OF SIGNIFICANCE**

An impact on hydrology or water quality is considered significant if implementation of the 1215 O Street Office Building Project 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;
- 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-site or off-site;
- 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-site or off-site;
- create or contribute runoff water that would exceed the capacity of existing or planned stormwater-drainage systems or provide substantial additional sources of polluted runoff;
- 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 the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The project’s contribution of stormwater and wastewater to the City’s CSS and the project’s impact to the capacity and infrastructure of the CSS are addressed in Section 4.5, “Utilities and Infrastructure.” The water use for the project, and therefore the potential to contribute to groundwater depletion, is also addressed in Section 4.5.

Replacement of the existing CDFA Annex with a new office building and repaving and installing a solar array over the CalVet surface parking lot would have little to no change to impervious surfaces at the project site. There are no natural drainage features on the project site, and stormwater drainage is captured and directed to the City’s CSS. The project would not alter the existing drainage system; stormwater would continue to drain to the CSS. The quantity of stormwater infiltration to groundwater at the site is negligible due to the large amount of developed site coverage and the high degree of compaction of uncovered areas. Therefore, proposed development on the site would not alter groundwater recharge. The project would result in a similar amount of coverage and compaction and the project proposes to collect and utilize rainwater for greywater in the new office building. Therefore, there would be no increase in stormwater runoff; rather, runoff volume may decrease. The project would have no impact related to drainage alteration, stormwater volume, or groundwater recharge and these issues are not evaluated further.

Replacing the existing building and repaving the existing parking lot would not alter stormwater drainage characteristics and would have no long-term impact to receiving water quality from erosion and siltation, because the site would remain developed and paved. Stormwater runoff would continue to be collected by the City’s CSS and treated prior to discharge to the Sacramento River (see Section 4.5, “Utilities and Infrastructure”). As a result, operation of the office building would not adversely affect water quality and this topic is not evaluated further.

Although downtown Sacramento is within the natural floodplain of the Sacramento River, with a one percent risk of flooding in any given year (100-year floodplain), the FEMA FIRM indicates that the flood risk is reduced in downtown Sacramento, including the project site, due to levees and the overall flood protection system (Exhibit 4.10-2). The project would not place structures, including housing, in a flood hazard area. Furthermore, the project would replace existing development and would not place structures in such a manner that would impede or redirect flood flows. Therefore, the project would have no impact related to flood hazards and this issue is not evaluated further.

The City is not within an area subject to seiche, tsunami, or mudflows; therefore, these issues are not evaluated further.
ENVIRONMENTAL IMPACTS

Impact 4.10-1: Construction-related water quality impacts

Project construction would require ground-disturbing activities, which could lead to erosion and sedimentation, and possible exposure of the groundwater table. Stormwater or groundwater contact with construction materials could lead to degradation of water quality. Compliance with existing regulations relating to stormwater controls, including adherence to SWPPP BMPs and implementation of relevant design standards in the Stormwater Quality Design Manual for the Sacramento Region would result in a less-than-significant water quality impact.

Under the proposed project, the existing CDFA Annex building would be demolished and the project site would be subject to ground disturbing activities for building foundations, utility connections, and other site improvements such as repaving the parking lot and installing solar panels. Excavation of soils could intersect with shallow groundwater and require dewatering.

Materials such as aggregate-base rock for roadway and parking area subgrade, sand bedding and backfill for utility lines, and crushed rock for building foundations would be brought to the project site. Imported or excavated material could become exposed to stormwater and potentially result in contamination of surface water, or could directly connect with and contaminate groundwater. Other construction materials, including fuels, lubricants, oil, grease, and paint contain toxic and hazardous substances. These materials could also become exposed to stormwater runoff or to groundwater if there are construction activities where the groundwater table is breached. Multiple small incidents of contamination, or larger single releases (e.g., fuel spill) could result in adverse effects on surface and groundwater quality.

Prior to construction, DGS would obtain coverage under, and comply with, the NPDES General Permit. In compliance with the General Permit, a SWPPP would be prepared detailing measures to control soil erosion and waste discharges from project construction areas. All contractors conducting construction-related work would be required to implement the SWPPP to control soil erosion and waste discharges. The general contractor(s) and subcontractor(s) conducting the work would be responsible for implementing all BMPs detailed in the SWPPP.

The SWPPP would identify the grading and erosion-control BMPs and specifications necessary to avoid and minimize water-quality impacts to the extent practicable. Standard erosion control measures (including management and structural controls) would be required to be implemented for all construction activities that expose soil. Fill and grading materials brought in from offsite would be clean, chemically inert, and handled with appropriate containment to prevent contamination of stormwater. Grading operations would be required to eliminate direct routes for conveying potentially contaminated runoff to the CSS. Erosion control barriers such as silt fences and mulching material would be installed. The SWPPP would contain specific measures for stabilizing soils before the onset of the winter rainfall season. Implementation of these standard erosion-control measures would reduce the potential for soil erosion and sedimentation of stormwater runoff during construction.

If dewatering is required, the SWPPP would include a dewatering plan, which would establish measures to treat groundwater pumped from the construction site prior to release, and to prevent/minimize sediment and contaminant releases into groundwater during excavation, as well as methods to clean up releases if they occur. Measures to prevent/minimize releases of sediment and contaminants into groundwater during excavation and methods of cleaning up releases may include using temporary berms or dikes to isolate construction activities; using vacuum trucks to capture contaminant releases; and maintaining absorbent pads and other containment and cleanup materials on-site to allow an immediate response to contaminant releases if they occur.
In addition to the protections provided by coverage under the General Permit, the City’s Land Grading and Erosion Control Ordinance requires project applicants to prepare erosion, sediment, and pollution-control plans for both during and after construction of a project, along with preliminary and final grading plans. The ordinance applies to projects where 350 cubic yards or more of soil is excavated and/or disposed and requires BMPs that must be approved of by the City’s Department of Utilities. In addition, the City’s Stormwater Management and Discharge Control Ordinance requires projects to minimize or eliminate sediment and pollutants in construction site stormwater discharges. While the State is not subject to local regulations, DGS would, in the exercise of its discretion, prepare an erosion, sediment, and pollution-control plan, or its equivalent, for construction and post-construction activities and would comply with all applicable regulations and industry-standard practices for protection of surface water and groundwater quality.

Because DGS would comply with the above-described laws and regulations designed to be protective of water quality, the release of soil or other contaminant materials into waterbodies during construction would be avoided and/or minimized. Impacts to surface and groundwater quality resulting from project construction would be less than significant.

**Mitigation Measures**

No mitigation is required.
4.11 HAZARDOUS MATERIALS AND PUBLIC HEALTH

This section describes the potential impacts of the 1215 O Street Office Building Project related to hazardous materials and public health. The evaluation provided in this section is based, in part, on review of the Phase I environmental site assessment (ESA) completed for the project site by the Sandberg Group (Appendix H).

4.11.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Management of Hazardous Materials
Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.


- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal (“cradle to grave”).

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.

- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Transport of Hazardous Materials
The U.S. Department of Transportation regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transportation regulations are enforced by the Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.
Worker Safety
The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Management of Hazardous Materials
In California, both federal and state community right-to-know laws are coordinated through the Governor’s Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the State, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking underground storage tanks (USTs). The Central Valley RWQCB has jurisdiction over the 1215 O Street Office Building Project site.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan
The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor’s Office of Emergency Services, which coordinates the responses of other agencies in the project area.
Management of Construction Activities
Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 4.10, “Hydrology and Water Quality.”

The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

Worker Safety
The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts onsite evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are utilized during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives in construction.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund, and would be implemented by the California Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

County of Sacramento
The County of Sacramento enforces State regulations governing hazardous substance generators; hazardous substance storage; and the inspection, enforcement, and removals of USTs in both the City of Sacramento and Sacramento County. The county Hazardous Materials Division (HMD) regulates the storage, use, and disposal of hazardous materials in Sacramento County by issuing permits, monitoring regulatory compliance, and investigating complaints. HMD oversees remediation of certain contaminated sites resulting from leaking USTs, reviews technical aspects of cleanup of hazardous-substance sites, and provides assistance to public and private operations seeking to minimize the generation of hazardous substances.

City of Sacramento 2035 General Plan
The following goal and policies from the Sacramento 2035 General Plan Health and Safety Element of the City of Sacramento General Plan pertain to hazardous materials and are relevant to the 1215 O Street Office Building Project:
Goal PHS 3.1 Reduce Exposure to Hazardous Materials and Waste. Protect and maintain the safety of residents, businesses, and visitors by reducing, and where possible, eliminating exposure to hazardous materials and waste.

- **PHS 3.1.1 Investigate Sites for Contamination.** The City shall ensure buildings and sites are investigated for the presence of hazardous materials and/or waste contamination before development for which City discretionary approval is required. The City shall ensure appropriate measures are taken to protect the health and safety of all possible users and adjacent properties.

- **PHS 3.1.2 Hazardous Material Contamination Management Plan.** The City shall require that property owners of known contaminated sites work with Sacramento County, the State, and/or Federal agencies to develop and implement a plan to investigate and manage sites that contain or have the potential to contain hazardous materials contamination that may present an adverse human health or environmental risk.

- **PHS 3.1.4 Transportation Routes.** The City shall restrict transport of hazardous materials within Sacramento to designated routes.

**City of Sacramento Department of Utilities**

The City of Sacramento regulates the discharge of groundwater to the City’s sewer and separated drainage systems. The City’s Department of Utilities Engineering Services Resolution No. 92-439 requires approval of a Memorandum of Understanding (MOU) for long-term (greater than 30 days), and an approval letter for short term (less than 30 days), groundwater dewatering discharges to the City’s sewer and/or separated drainage system. The MOU must cover proposed dewatering details such as flow rate, system design, and contaminant monitoring plan. Discharges to the sewer must meet the Sacramento Regional County Sanitation District- (SRCSD) and RWQCB-approved levels. Dischargers to the sewer must obtain a SRCSD discharge permit. Discharges to the separated drainage system will require approval from RWQCB.

**City of Sacramento Hazardous Materials Program**

The City’s Hazardous Materials Program (HazMat) provides capability for response to hazardous material emergencies. HazMat contains a minimum of 108 firefighters trained to the Hazardous Materials Response level and also includes three Hazardous Materials Response Teams and one Decontamination Team. Under a contractual agreement, HazMat provides 24-hour first response to hazardous materials incidents within the City of Sacramento.

**City of Sacramento Emergency Operations Plan**

The City of Sacramento Emergency Operations Plan (EOP), published in April 2005, provides safeguards to minimize loss of life and property damage during natural disasters and emergencies of national defense. The EOP establishes an Emergency Management Organization and assigns functions and tasks in accordance with California’s Standardized Emergency Management System. The EOP provides guidance as to disaster response from the initial onset through the cost recovery process. It includes policies, responsibilities, and procedures necessary to protect human health and safety, public and private property, and the environment from the effects of natural and anthropogenic disasters and emergencies. The EOP outlines the specific emergency-related responsibilities of City agencies. For example, the City of Sacramento Police Department is responsible for implementing emergency evacuations, including traffic control plans, while the City of Sacramento Fire Department is the first responder for hazardous materials incidents (City of Sacramento 2005).

**City of Sacramento Evacuation Plan**

The City of Sacramento Evacuation Plan (2008) provides evacuation-specific strategy and information to support and guide the City’s Emergency Managers, Emergency Operations Center staff, and other governmental and non-governmental agencies that would be involved with an evacuation event in the City. Therefore, the Evacuation Plan serves as an amendment to the EOP. Flooding is considered the primary threat that would invoke an evacuation in Sacramento. Therefore, much of the Evacuation Plan is dedicated
to procedures to be followed in the event of a flood emergency. However, the associated strategy and plan details apply to other hazards, as well. The City of Sacramento Fire Department maintains updated records of the emergency response and evacuation routes for the City (City of Sacramento 2008).

Sacramento Metropolitan Air Quality Management District
The proposed project would be subject to Sacramento Metropolitan Air Quality Management District Rule 902 for asbestos abatement; 8 CCR Sections 1529 and 1532.1 (construction safety orders pertaining to asbestos and lead, respectively); and CFR Part 61, Subpart M (pertaining to asbestos). These regulations govern the specific methods to be used for removal of asbestos and lead-based paint, and specify workplace safety measures that must be used to protect the health of construction workers during the removal process.

4.11.2 Existing Conditions

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined in the CFR as “a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its 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 into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that:

... because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

The construction date of the CDFA Annex (1955) necessitated the testing for asbestos containing material (ACM), lead based paint (LBP), and Polychlorinated Biphenyls (PCB), as these were commonly used until the late 1970s. Sampling was performed on various building materials, including plaster walls and ceilings, acoustical ceiling tile, carpet and resilient sheet and/or tile flooring, pipe and fitting insulation, and roofing materials (Terracon 2016). Analysis of these materials identified at least 45 materials that contained ACM, including insulation, adhesives, and sealants; refer to the Phase I Environmental Site Assessment in Appendix H for additional information.

One of three building sealant samples from the CDFA Annex was identified as containing PCB. Although it was reported at less than the 50 parts per million (ppm) regulatory threshold established by the Toxic Substances Control Act for disposal and cleanup requirements, the PCB waste material would require special handling and disposal.

Sampling was performed on 12 painted surfaces and nine bulk materials (ceramic tile, resilient flooring, and caulks) for potential lead content in the CDFA Annex. In addition, four painted surfaces and one bulk material were sampled for potential lead content in the Food and Agriculture building to the north. Nine of the painted surfaces in the CDFA Annex and three painted surfaces in the Food and Agriculture building were found to have lead content above the laboratory detection limit. Seven bulk materials were reported with lead content including ceramic wall tile, resilient flooring, and various sealants. The ceramic wall tile (restrooms), resilient sheet flooring, and window sealants were reported with lead content exceeding 1,000 ppm, the threshold for
designated as a hazardous lead waste in California. Three of the paint samples were found to contain lead in concentrations exceeding 5,000 ppm, the threshold for designation of lead-based paint.

Universal wastes are defined as those that are classified as hazardous, but are contained in materials that are very common, such as mercury (hazardous waste) in fluorescent light bulbs (common material). Mercury-containing fluorescent lamps and high intensity discharge bulbs were present throughout the interior and exterior of the CDFA Annex. Mercury-containing thermostats and switches were observed within the building. Exits signs observed were lit by fluorescent lamps with backup batteries. Representative lighting ballasts inspected in the building were labeled as containing “No PCBs.” Equipment with refrigerants in the building included drinking fountains, room-sized air conditioner units, and a small room-sized walk-in refrigerator.

The existing Cal Vet surface parking lot is paved with asphalt concrete. The surface is moderately weathered but appears in good condition. Miscellaneous oil spots are present but not atypical for such use.

4.11.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The following reports and data sources document potential hazardous conditions at the project site and were reviewed for this analysis:

- materials prepared by the Master Architect team for the 1215 O Street Office Building Project;
- available literature, including documents published by federal, State, County, and City agencies;
- review of applicable elements from the City of Sacramento General Plan; and
- Phase I Environmental Site Assessment for the 1215 O Street Office Building Project, prepared by Sanberg (2017); refer to Appendix H.

Project construction and operation were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur.

THRESHOLDS OF SIGNIFICANCE

An impact related to hazardous materials and public health is considered significant if implementation of the 1215 O Street Office Building Project 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 release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site that is included on a list of hazardous-materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;

- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; and

- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

The closest school to the 1215 O Street Project site is Sacramento City Unified School District’s William Land Elementary School, approximately 0.5-mile southwest of the project site. This is farther than the one-quarter mile from an existing or proposed school identified in the threshold of significance above. There are several day care/child care centers within one-quarter mile of the 1215 O Street Project site. Many of these are located within State owned office buildings and facilities. California Government Code Section 4560-4563 calls for, under certain circumstances, the provision of space for child care facilities in State office buildings. Although some materials qualifying as hazardous may be used in an office building setting (e.g., cleaners, lubricants for mechanical equipment), these materials, used in this context, are not considered incompatible with nearby day care/child care facilities. The issue of the project emitting hazardous emissions or resulting in the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school is not evaluated further in this DEIR.

The project site, including the CDFA Annex site and the CalVet surface parking lot, is not on a list of hazardous-materials sites compiled pursuant to Government Code Section 65962.5. Therefore, this issue is not evaluated further in this DEIR.

The project site is not located within an airport land use plan or within two miles of a public airport or public use airport, or within the vicinity of a private airstrip, and would not result in an aviation related safety hazard for people residing or working in the project area. Therefore, this issue is not evaluated further.

The project site is in downtown Sacramento, an urban area that includes office buildings; apartments, high-rise condominiums, and other residences; parks; restaurants, and shops. The project site is not adjacent to or intermixed with wildlands. Therefore, the project would not expose people or structures to significant risk due to wildland fires and this issue is not evaluated further in this DEIR.

For evaluation of potential dewatering activities during construction, see Section 4.10, “Hydrology and Water Quality,” Impact 4.10-1.

ENVIRONMENTAL IMPACTS

Impact 4.11-1: Storage, use, or transport of hazardous materials

Construction and operation of the 1215 O Street Office Building Project would involve the storage, use, and transport of hazardous materials at the project site. However, use of hazardous materials would be in compliance with local, State, and federal regulations. Therefore, adverse impacts related to the creation of significant hazards to the public through routine transport, storage, use, disposal, and risk of upset would not occur. This impact is considered less than significant.

Project construction and operation would involve the storage, use, and transport of hazardous materials (e.g.: fuels, lubricants, paint). Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and Caltrans, whereas use of these materials is regulated by DTSC, as outlined in CCR Title 22. The State is required to use, store, and transport hazardous materials in compliance with local, State, and...
federal regulations during construction. Any use of hazardous materials after construction would be required to comply with appropriate regulatory-agency standards designed to avoid releases of hazardous materials. Because construction and operation of the project would comply with existing hazardous-materials regulations, impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would not occur. Therefore, this impact is considered less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.11-2: Exposure of construction workers and others to hazardous materials

According to the Phase I ESA prepared for the project site, there are no records in various hazardous materials databases of past soil or groundwater contamination at the site. Grading, excavation, and other soil disturbance at the project site would not represent a significant risk as no records of past contamination were identified. Demolition of the vacant CDFA Annex building could result in the exposure of construction workers to hazardous materials, including asbestos, lead-based paint, and PCB known to be present at the building. Contractors and the State would be required to comply with federal, State, and local regulations intended to protect workers and the public from exposure to these types of hazardous materials and related to the remediation and disposal of contaminated materials. Compliance with these regulations would prevent the proposed project from resulting in a significant risk to construction workers or the public. This impact is considered less than significant.

According to the Phase I ESA prepared for the project site, there are no records in various hazardous materials databases of past soil or groundwater contamination at the site. Past records did identify the presence of PCB in the vacant CDFA Annex building. However, subsequent sampling of representative materials inside the CDFA Annex building identified ACM, LBP and PCB in various construction materials. In addition, the building contains various other potentially hazardous materials (e.g.: storage batteries), and universal wastes (e.g.: fluorescent, mercury-containing thermostats and switches, etc.) that would require proper handling and disposal.

Development of the project site would involve site grading, excavation for utilities, dewatering of open trenches, backfilling, and construction of the new building and associated facilities. However, because no evidence of soil and groundwater contamination were found in database searches or during a site visit conducted during preparation of the Phase I ESA, it is very unlikely that existing hazardous materials would be encountered during these activities. However, demolition of the existing CDFA Annex building could result in the exposure of construction workers and the public to ACM, LBP and other lead-containing materials, and PCBs found in the building.

However, contractors and the State would be required to comply with federal, State, and local regulations related to the remediation and disposal of contaminated materials and intended to protect workers and the public from exposure to these types of hazardous materials. The State must coordinate with various agencies regarding appropriate methods to address the contamination found in the CDFA Annex building during demolition activities, including DTSC, EPA, Cal/OSHA, and the Central Valley RWQCB. Remediation and/or methods for containment/removal of asbestos-, lead-, and PCB containing materials would follow all regulatory standards. All asbestos-, lead-, PCB-containing materials removed from the project site would be disposed of in a manner consistent with applicable regulations at an appropriate off-site disposal facility. In addition, the County HMD shall be notified in the unlikely event that evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation and dewatering activities. Also, as addressed in Impact 4.10-1 of this DEIR, the SWPPP would include a dewatering plan, which would establish measures to treat any groundwater pumped from the construction site prior to release.

Remediation and disposal of existing hazardous materials in the CDFA Annex building would be implemented in accordance federal, State, and local laws and regulations intended to protect workers and the public from
exposure to these types of hazardous materials. Compliance with these laws and regulations would be achieved, in part, through direct coordination with applicable regulatory agencies. Compliance with existing regulations would prevent the implementation of the proposed project from resulting in a significant risk to construction workers or the public from exposure to hazardous materials. This impact is considered less than significant.

**Mitigation Measures**
No mitigation is required.

**Impact 4.11-3: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan**

During construction, the project could result in temporary lane or street closures, which could affect emergency access and evacuation routes. DGS shall prepare a construction traffic control plan, consistent with Section 12.20.20 of the Sacramento City Code, which would minimize construction impacts related to potential interference with emergency response or evacuation. In addition, the project site is located within a downtown street grid, and there are various alternative routes available to access the project site and nearby locations. This impact would be less than significant.

The project would replace the existing CDFA Annex with a new office building and the project would maintain the existing public rights-of-way and easements. Therefore, project operation would not alter emergency response or evacuation.

During construction, it may be necessary to restrict or redirect pedestrian, bicycle, or vehicular movements around the site to accommodate demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours, which would be temporary. Because O Street is blocked off to through traffic at the project site, and because of the light rail line turning south from O Street to 12th Street, potential lane restrictions or closures would only affect streets regularly used by vehicles at 12th Street between N and O streets. Vehicular, pedestrian, and bicycle access to apartments, offices, and other uses on N Street, 13th Street, and 12th Street would be maintained even if 12th Street between N and O is temporarily blocked off. In addition, the project site is located within a downtown street grid, and there are various alternative routes available to access the project site and nearby locations if 12th Street were temporarily closed between N and O Streets.

DGS would prepare a construction traffic control plan, consistent with Section 12.20.20 of the Sacramento City Code, that illustrates the location of the proposed work area; identifies the location of areas where the public right-of-way would be closed or obstructed and the placement of traffic control devices necessary to perform the work; shows the proposed phases of traffic control; and identifies the time periods when the traffic control would be in effect and the time periods when work would prohibit access to private property from a public right-of-way. The plan may be modified by the City at any time to eliminate or avoid traffic conditions that are hazardous to the safety of the public. The traffic control plan would also provide information on access for emergency vehicles to prevent interference with emergency response.

Preparation of the required traffic control plan and compliance with the plan would minimize construction impacts related to interference with emergency response or evacuation. This impact would be less than significant.

**Mitigation Measures**
No mitigation is required.
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4.12 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

Cultural resources are buildings, structures, objects, sites, landscapes, or districts that are important for historical, scientific, or religious reasons and are of concern to cultures, communities, groups, or individuals. Cultural resources may include buildings and architectural remains, archaeological sites, or other artifacts that provide evidence of past human activity. There are specific definitions for historical resources, archaeological resources, and tribal cultural resources provided in CEQA, and these are provided in below in Section 4.12.1, “Regulatory Background.”

This section describes the regulatory setting and existing conditions related to cultural resources at the 1215 O Street Office Building Project site. Historic and prehistoric background information is presented below so that cultural resources associated with this project area may be understood within their appropriate context. Impacts associated with the project are identified. Note that for the purposes of this analysis, buildings will be named according to their current, rather than their original/historic name.

4.12.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) (Title 54 of the United States Code, Section 306108 [USC 54 306108]) does not apply specifically to the proposed project because it is not funded in whole or in part by a Federal agency. However, it is discussed in this section because it establishes criteria for determining eligibility for listing in the National Register of Historic Places (NRHP).

Federal protection of resources is legislated by (a) the NHPA (54 USC 300101 et seq), (b) the Archaeological Resource Protection Act of 1979, and (c) the Advisory Council on Historical Preservation. These laws and organizations maintain processes for determination of the effects on historical properties eligible for listing in the NRHP.

Section 106 of the NHPA and accompanying regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the main federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed in, or may be eligible for listing in the NRHP. The NRHP is the nation’s master inventory of known historic resources. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural districts that are considered significant at the national, state, or local level.

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

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);

2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and

3. It possesses at least one of the following characteristics:

   A Association with events that have made a significant contribution to the broad patterns of history (events).
B Association with the lives of persons significant in the past (persons).

C Distinctive characteristics of a type, period, or method of construction, or represents the work of
a master, or possesses high artistic values, or represents a significant, distinguishable entity
whose components may lack individual distinction (architecture).

D Has yielded, or may be likely to yield, information important to prehistory or history (information
potential).

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

The National Register Bulletin also provides guidance in the evaluation of archaeological site significance. If
a heritage property cannot be placed within a particular theme or time period, and thereby lacks “focus,” it is
considered not eligible for the NRHP. In further expanding upon the generalized National Register criteria,
evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, flumes, etc.)
are considered in terms of four related criteria that account for specific elements that define engineering
and construction methods of linear features: (1) size and length; (2) presence of distinctive engineering
features and associated properties; (3) structural integrity; and (4) setting. The highest probability for
National Register eligibility exists within the intact, longer segments, where multiple criteria coincide.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on both “historical resources” and
“unique archaeological resources.” Pursuant to Public Resources Code Section 21084.1 (PRC 21094.1), a
“project that may cause a substantial adverse change in the significance of an historical resource is a
project that may have a significant effect on the environment.” Section 21083.2 requires agencies to
determine whether proposed projects would have effects on unique archaeological resources.

Historical Resources

“Historical resource” is a term with a defined statutory meaning (PRC 21084.1); determining significant
impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections
15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the
following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing
in the California Register of Historical Resources (PRC 5024.1).

2) A resource included in a local register of historical resources, as defined in PRC 5020.1(k) or identified
as significant in a historical resource survey meeting the requirements of PRC 5024.1(g), will be
presumed to be historically or culturally significant. Public agencies must treat any such resource as
significant unless the preponderance of evidence demonstrates that it is not historically or culturally
significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to
be historically significant or significant in the architectural, engineering, scientific, economic, agricultural,
educational, social, political, military, or cultural annals of California may be considered to be a historical
resource, provided the lead agency’s determination is supported by substantial evidence in light of the
whole record. Generally, a resource will be considered by the lead agency to be historically significant if
the resource meets the criteria for listing in the California Register of Historical Resources (PRC 5024.1),
including the following:
Ascent Environmental Cultural and Tribal Cultural Resources

a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

b) Is associated with the lives of persons important in our past;

c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d) Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, or not included in a local register of historical resources (pursuant to PRC 5020.1(k)), or not identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC 5020.1(j) or 5024.1.

Unique Archaeological Resources

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

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will impact tribal cultural resources. PRC 21074 states the following:

a) “Tribal cultural resources” are either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

   A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

   B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).
California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are automatically listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant within the context of California’s history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP.

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

The CRHR uses four evaluation criteria:

1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity. The CRHR uses the same seven aspects of integrity as the NRHP.

Public Resources Code, Section 5024 and 5024.5

The California State Legislature enacted PRC § 5024 and 5024.5 as part of a larger effort to establish a state program to preserve historical resources. These sections of the code require state agencies to take a number of actions to ensure preservation of state-owned historical resources under their jurisdictions. These actions include evaluating resources for NRHP eligibility and California Historical Landmark eligibility; maintaining an inventory of eligible and listed resources; and managing these historical resources so that they will retain their historic characteristics. PRC 5024 requires State agencies to evaluate whether a state-owned building is eligible for inclusion in the Master List of State-Owned Historical Resources. PRC 5024.5 requires the State agency to consult with the State Historic Preservation Officer (SHPO) before a State-owned building on the master list is to be altered, transferred, relocated or demolished.

California Native American Historical, Cultural, and Sacred Sites Act

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

Health and Safety Code, Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.
Assembly Bill 52
Assembly Bill (AB) 52, signed in 2014, establishes a new class of resources under CEQA: “tribal cultural resources.” Tribal cultural resources are defined above in the discussion of CEQA. AB 53 requires that lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation once the lead agency determines that the application for the project is complete, prior to the issuance of a NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision would create a new category for “tribal cultural resources.”

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund, and would be implemented by the California Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

City of Sacramento 2035 General Plan
The following goal and policies from the City of Sacramento 2035 General Plan Historic and Cultural Resources Element are relevant to the analysis of effects on cultural resources.

Goal HCR 2.1: Identification and Preservation of Historic and Cultural Resources. Identify and preserve the city’s historic and cultural resources to enrich our sense of place and our understanding of the city’s prehistory and history.

Policy HCR 2.1.1: Identification. The City shall identify historic and cultural resources including individual properties, districts, and sites (e.g., archaeological sites) to ensure adequate protection of these resources.

Policy HCR 2.1.2: Applicable Laws and Regulations. The City shall ensure compliance with City, State, and Federal historic preservation laws, regulations, and codes to protect and assist in the preservation of historic and archaeological resources, including the use of the California Historical Building Code as applicable. Unless listed in the Sacramento, California, or National registers, the City shall require discretionary projects involving resources 50 years and older to evaluate their eligibility for inclusion on the California or Sacramento registers for compliance with the California Environmental Quality Act.

Policy HCR 2.1.3: Consultation. The City shall consult with appropriate organizations and individuals (e.g., California Historical Resources Information System (CHRIS) Information Centers, the Native American Heritage Commission (NAHC), the CA Office of Planning and Research (OPR) “Tribal Consultation Guidelines,” etc.,) and shall establish a public outreach policy to minimize potential impacts to historic and cultural resources.

Policy HCR 2.1.5: National, California, and Sacramento Registers. The City shall support efforts to pursue eligibility and listing for qualified resources including historic districts and individual resources under the appropriate National, California, or Sacramento registers.

Policy HCR 2.1.7: Historic Resource Property Maintenance. The City shall encourage maintenance and upkeep of historic resources to avoid the need for major rehabilitation and to reduce the risks of demolition, loss through fire or neglect, or impacts from natural disasters.
Policy HCR 2.1.11: Compatibility with Historic Context. The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources.

Policy HCR 2.1.12: Contextual Features. The City shall promote the preservation, rehabilitation, restoration, and/or reconstruction, as appropriate, of contextual features (e.g., structures, landscapes, street lamps, signs) related to historic resources.

Policy HCR 2.1.15: Demolition. The City shall consider demolition of historic resources as a last resort, to be permitted only if the rehabilitation of the resource is not feasible, demolition is necessary to protect the health, safety, and welfare of its residents, or the public benefits outweigh the loss of the historic resource.

Policy HCR 2.1.16: Archeological & Cultural Resources. The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

Policy HCR 2.1.17: Preservation Project Review. The City shall review and evaluate proposed development projects to minimize impacts on identified historic and cultural resources, including projects on Landmark parcels and parcels within Historic Districts, based on applicable adopted criteria and standards.

The following goal and policy from the City of Sacramento 2035 Land Use Element are relevant to the analysis of effects on cultural resources.

Goal LU 1.1: Growth and Change. Support sustainable growth and change through orderly and well-planned development that provides for the needs of existing and future residents and businesses, ensures the effective and equitable provision of public services, and makes efficient use of land and infrastructure.

Policy LU 2.4.2: Responsiveness to Context. The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento’s climate, and consideration of cultural and historic context of Sacramento’s neighborhoods and centers.

4.12.2 Existing Conditions

PROJECT SITE

A portion of the 1215 O Street Office Building Project site (see Exhibit 4.12-1) consists of the existing vacant 115,000 sq. ft. California Department of Food and Agriculture Annex Building (CDFA Annex), located on the southwestern portion of the block bounded by O and N Streets and 12th and 13th Streets. This portion of the project site is approximately 1.3 acres (57,600 sq. ft.), and the existing CDFA Annex building footprint is approximately 30,000 sq. ft. (DGS 2017). The CDFA Annex building is connected to the primary Food and Agriculture Building to the north by a sky bridge that crosses the alley between the two buildings. The sky bridge connects the two buildings at the 2nd, 3rd, and 4th floors. The alley between the CDFA Annex and the primary Food and Agriculture Building is part of the project site. The project also includes removal of the sky bridge, repair of the Food and Agricultural Building where the sky bridge is removed, and limited access, egress, mobility, and safety improvements inside the Food and Agriculture Building (e.g., interior door and corridor renovation). The project site also includes the State-owned CalVet employee surface parking lot located directly across O Street from the CDFA Annex, and the segment of O Street between the CDFA Annex and the parking lot. The surface parking lot is approximately 0.8 acre (34,800 sq. ft.) in size.
STUDY AREA

Archaeological Resources Study Area
The primary study area for the archaeological resources evaluation consists of the 1215 O Street Office Building Project site described above. However, an archival and literature search encompassing a 1-mile radius around the project site was performed on December 19, 2016 at the North Central Information Center (NCIC) of the California Historical Resources Information System, housed at California State University, Sacramento. The record search included a review of site location base maps and other records on file at the NCIC, listings in the NRHP (National Park Service 1998), California Inventory of Historic Resources (California Department of Parks and Recreation 1976), California Historical Landmarks (California Department of Parks and Recreation 1996), and California Points of Historical Interest (1992 and updates) (California Department of Parks and Recreation 1992). Archival research was conducted using Sanborn Fire Insurance Maps available at the Sacramento Public Library. Additional field reconnaissance of the project site was conducted January 24, 2017.

Digging test pits at the project site was not feasible because the site is developed with buildings, parking lots, and facilities. However, archival, aerial, and satellite imagery indicate that no significant earth moving occurred between the demolition of the original buildings and structures and the installation of the present-day facilities. This suggests that there was limited potential for disturbance of potential subsurface features.

Historic Architecture Study Area
The study area for the historic architecture evaluation (Exhibit 4.12-1) includes 13 built-environment resources, consisting of 12 buildings (Table 4.12-1) and one potential historic district. The study area was drawn to account for potential direct and indirect impacts resulting from the proposed project. The study area encompasses the project site to account for direct impacts and includes a buffer area surrounding the project site to accommodate potential indirect impacts (such as visual and vibration).

The buffer area includes:

- all of the buildings sited on the same city block as the CDFA Annex at 1215 O Street;
- the two buildings on the west side of 12th Street between N and O Streets: 1120 N Street and 1121 O Street (California Department of Transportation); and
- two of the buildings along Opera Alley that have a direct line of site to/from the proposed photo-voltaic solar panels that would be installed over the parking lot across from 1215 O Street.

<table>
<thead>
<tr>
<th>Address</th>
<th>Building Name</th>
<th>Year Built</th>
</tr>
</thead>
<tbody>
<tr>
<td>1215 O Street</td>
<td>CDFA Annex (project site)</td>
<td>1955</td>
</tr>
<tr>
<td>1227 O Street</td>
<td>Veterans Affairs Building</td>
<td>1956</td>
</tr>
<tr>
<td>1120 N Street</td>
<td>Transportation Building (formerly Public Works Building)</td>
<td>1937</td>
</tr>
<tr>
<td>1220 N Street</td>
<td>Food and Agriculture Building (formerly Motor Vehicle Building)</td>
<td>1936</td>
</tr>
<tr>
<td>1121 O Street</td>
<td>Transportation Annex (formerly Public Works Annex)</td>
<td>1952, 1959</td>
</tr>
<tr>
<td>1228 N Street</td>
<td>Thayer Apartments</td>
<td>1914</td>
</tr>
<tr>
<td>1228 O Street</td>
<td>Gibson Apartments</td>
<td>1947</td>
</tr>
<tr>
<td>1506 13th Street</td>
<td>McCafferty Manor</td>
<td>1946</td>
</tr>
<tr>
<td>1512 13th Street</td>
<td>Southwark Building</td>
<td>1926</td>
</tr>
</tbody>
</table>
Table 4.12-1  Buildings Located in the Study Area

<table>
<thead>
<tr>
<th>Address</th>
<th>Building Name</th>
<th>Year Built</th>
</tr>
</thead>
<tbody>
<tr>
<td>1230 N Street</td>
<td>Park Place Senior Residences</td>
<td>1957</td>
</tr>
<tr>
<td>1517 12th Street</td>
<td>NA</td>
<td>1955</td>
</tr>
<tr>
<td>1215 P Street</td>
<td>Gibbs Apartments</td>
<td>1949</td>
</tr>
</tbody>
</table>

Note: regarding nomenclature: For the purposes of this analysis, buildings will be named according to their current, rather than their original/historic name. Whenever possible, former names will be noted.

REGIONAL PREHISTORY

The project site is in the southern end of California’s Sacramento Valley, in downtown Sacramento. The City of Sacramento was developed near the confluence of the American River and the Sacramento River. The low-lying region was prone to winter flooding. Historic maps and other materials identify the general project study area as being near the edge of a marsh, thus indicating slightly higher ground. High ground near marshes or other freshwater environments was ideal for resource extraction by Native Americans. For this reason, coupled with the generally benign weather in the region, the general project area has a high likelihood of subsurface prehistoric resources (Hamilton et al 2005).

Archaeological Setting

The earliest presence of humans in California dates to the Paleo-Indian Period (10,000–6000 before the current era [BCE]) of the Late Pleistocene. People lived in small and highly mobile bands, hunting and gathering along ancient pluvial lakeshores and coastlines. Such behavior has been evidenced by fluted projectile points and chipped stone crescent forms (Fredrickson 1973; Moratto 1984). Few archaeological sites have been found in the Sacramento Valley that date to the Paleo-Indian or the subsequent Lower Archaic (6000–3000 BCE) time periods. This may be due to high sedimentation rates at the confluence of the Sacramento and American rivers, leaving the earliest sites deeply buried and inaccessible. Archaeologists have recovered a great deal of data from sites occupied by the Middle Archaic Period (3000–1000 BCE).

In the Sacramento region, the Windmiller Pattern dates to the Middle Archaic Period. The Windmiller Pattern is recognized by an increased emphasis on acorns, a continuation of hunting and fishing activities, as well as more intensive procurement practices. Ground and polished charmstones, twined basketry, baked-clay artifacts, and worked shell and bone are hallmarks of Windmiller culture. Widely ranging trade patterns brought goods in from the Coast Ranges and trans-Sierran sources, as well as closer trading partners. Distinctive burial practices (ventrally extended, oriented westward) identified with the Windmiller Pattern also appeared in the Sierra Nevada foothills, indicating possible seasonal migration into the Sierra Nevada (Stevens et al 2009).

Sociopolitical complexity continues through the Upper Archaic Period (1000 BCE–500 into the current era [CE]). Formalized and regular sustained trade between groups are demonstrated for the first time. Assemblages dating to this period in the lower Sacramento Valley are consistent with the Berkeley Pattern. Distinguished by distinctive stone and shell artifacts and a reliance on acorns as a food source. Flex burials accompanied with red ocher predominated. Minimally shaped mortar and pestle technology was much more prevalent than the mano/metate, and nonstemmed projectile points became more common. Berkeley traits may have developed in the San Francisco Bay area and were spread through the migration of Plains Miwok Indians (Bennyhoff and Fredrickson 1969).

Significant technological and social developments characterized the Emergent Period (CE 500–1800). The introduction of the bow and arrow ultimately replaced the dart and atlatl. Distinctions in an individual’s social status could be linked to acquired wealth. Later in this period (CE 1500–1800), highly regularized and
Exhibit 4.12-1

Cultural Resources Study Area

Legend
- Proposed Project Site
- Project Study Area
- California State Government Building Complex District
- Parcels

Source: ESRI StreetMap North America (2010)
sophisticated exchange relations utilized the clamshell disk bead as a monetary unit. Various aspects of material goods production and exchange as well as inter and intra-group rituals were regulated by specialists. Territorial boundaries between ethno-linguistic groups encountered at the time of European contact became well established (Hamilton et al. 2005).

The Emergent Period in the lower Sacramento Valley is represented by the Augustine Pattern (Bennyhoff and Fredrickson 1969), a widespread central California pattern assigned to the Late Horizon. Cultural evolution may have been stimulated by the southern migration of Wintuan people from north of the Sacramento Valley. Food procurement strategies, as well as trade activities intensify along with fishing, hunting, and gathering. Complex exchange systems, and a wider variety in mortuary practices including cremation for some high-status individuals are hallmarks of this pattern.

Initial work in the Sacramento region, from the 1950s and earlier, generally indicates that the northern portion of the Sacramento Valley was culturally more closely affiliated with the Shasta/Oroville area. The associations between the cultures of the southern Sacramento Valley, northern San Joaquin Valley and the Sacramento-San Joaquin Delta became apparent during the 1950s and 1960s.

While the problem of alluvial deposition covering older sites has been discussed in relation to Sacramento Valley archaeology (Moratto 1984), numerous sites in the Sacramento region have been identified and excavated, guiding archaeologists toward a more refined interpretation of local cultural patterns. Most recently, excavations in downtown Sacramento in 2004 and 2005 (the City Hall Site at Ninth and I streets, another on H Street) recovered artifacts more than 15 feet below street level at the Ninth Street site, but have also demonstrated that prehistoric sites (including human remains) can be found just a few feet below the current street grade (Farris and Tremaine 2008).

**Ethnographic Setting**

The area east of the Sacramento River between modern Sacramento and Marysville was inhabited by the eastern Valley Nisenan. In the Sacramento Valley, the tribelet, consisting of a primary and a few satellite villages, served as the basic political unit (Moratto 1984). Permanent settlements were often populated by over one hundred people, living in earthen, tule, grass, or bark structures, concentrated on raised ground near water. Valley Nisenan territory was divided into three tribelet areas, each populated with several large villages (Kroeber 1925). Momol and Sama are two such villages, recorded historically in the vicinity of the project site.

Valley Nisenan people gathered a wide variety of food resources year round, but hunting and gathering activities were at their most intense in late summer and early fall. Food staples included acorns, buckeyes, pine nuts, hazelnuts, various roots, seeds, mushrooms, greens, berries, and herbs. Preferred game included mule deer, elk, antelope, black bear, beaver, squirrels, rabbits, and other small animals and insects. Salmon, whitefish, sturgeon, and suckers, as well as freshwater shellfish, were also caught for food (Kroeber 1925). Descendants of these indigenous people are contemporarily organized as the Federally-recognized Wilton Rancheria, United Auburn Indian Community of the Auburn Rancheria, and the Shingle Springs Rancheria.

**REGIONAL HISTORY**

**European and American Settlement**

California was visited by every major European naval power, but was claimed by the Spanish Empire ca. 1602. The first California mission was established in 1769, in San Diego. Over the next 50 years, the Spanish government with the aid of various Roman Catholic orders established 21 missions throughout “Alta California.” Lieutenant Gabriel Moraga and 13 soldiers traveled to the Sacramento Valley from Mission San Jose in 1808, but reported that the area would not be suitable for a mission site. However, a member of the expedition, enamored with the trees and the rivers, compared the region’s beauty to the Catholic Eucharist, or sagrado sacramento.
Mexico’s independence from Spain in 1822 resulted in the secularization of the missions, in part to limit influence of Roman Catholics loyal to Spain. Foreign fur trappers, primarily Canadian and American, gained a regional foothold. In 1826, Jedediah Smith camped near the present site of California State University, Sacramento, on assignment for the Hudson Bay Company. His success spurred an influx of trappers. They depleted the area until the early 1840s, when hunting and trapping were no longer profitable. The rapid influx of European and American trappers caused epidemics of malaria and smallpox that killed thousands of the Patwin and Nisenan people along the Sacramento River. Depopulation of the indigenous people from the project area through disease, relocation, and murder continued during Mexican secularization of Alta California (Lindsay 2012).

The vast northern territory of Alta California lacked the military capacity to protect Mexico’s lucrative interests in the trans-Pacific economy. The Mexican government continued the practice started by Imperial Spain of awarding large land grants to foreign citizens, nominally loyal to Mexico, as a bulwark against competitors in the frontier. John Sutter, born a citizen of Switzerland, was awarded such a land grant by President Juan Bautista Alvarado of Mexico in 1834. His party disembarked at the site of present-day Sutter’s Landing Park on 28th Street August 12, 1839. Sutter had constructed an adobe fort, a settlement he called New Helvetia, by 1841 (now Sutter’s Fort State Park on L and 27th Streets). He immediately disavowed his loyalty to the Mexicans at the initiation of the Mexican-American War in 1846 and raised the Stars and Stripes over New Helvetia.

California was ceded as a territory to the United States following the end of the Mexican-American War in 1848. During that time, the steadily growing population of New Helvetia expanded into the surrounding countryside. The lumber mill built by one of Sutter’s employees, James Marshall, was originally planned to support Sutter’s conceptual city, Sutterville. The Coloma mill yielded gold, instead. Unable to keep news of the gold secret, word reached San Francisco and the rest of the world.

The fort of New Helvetia was steadily abandoned. Sutter’s men and associates were lured away by prospecting. Creditors, assuming Sutter had claim to the gold at Coloma (he did not), forced the Swiss émigré to transfer his holdings to his son, John. John, seeking to pay off his father’s debts, designated four-square miles of the original Mexican land grant as the site for the new town, Sacramento. He sold lots within the new town between $200 and $500 (Hamilton et al. 2005).

The same lots sold for 10 times their original price, and stores, saloons, and gambling houses sprang up to empty the newly filled pockets of the miners arriving at the embarcadero on Front Street. As the commercial center of Sacramento began to favor the riverfront, more and more canvas and semi-permanent structures opportunistically arose. When California was admitted to the Union in 1850 the populace of Sacramento, nearly 12,000 people, had already experienced a disastrous flood. Subsequent floods and fires would shape civil policy and urban planning for the next several decades.

**Designing a Modern Capitol**

While industries supporting the Gold Rush and the growing population of Sacramento boomed, the city itself suffered multiple catastrophes. A fire in 1852, and the floods in 1853, 1854, 1861-1862, and 1878 motivated wealthy members of the city to construct levees, bulwarks, and raised streets to protect people, homes, and businesses (Downey 2010). Between 1862 and 1878 the area bound by the east bank of the Sacramento River, 12th, H and L Streets was systematically raised using convict labor, press gangs, and private contractors. Bulwarks were constructed with locally-fired bricks and the first stories of many downtown buildings became subterranean.

In 1860, four blocks bounded by 10th and 12th Streets and L and N Streets were donated by the City as a site for a new State Capitol. By 1869, enough of the structure had been built to allow legislative sessions to convene within its walls, but construction was not completed until 1874. Following construction, the area surrounding the Capitol became a popular residential neighborhood with fashionable houses (Hamilton et al. 2005). The project site is located in one such neighborhood (Sanborn 1895).
Historic photographs and Sanborn Fire Insurance maps from the 1890s of the 1200 block of N and O Streets depict opulent Italianate and vernacular multi-story family homes built along boulevards of palm trees. Despite the presence of many recognizably modern city features like paved asphalt streets and cement sidewalks, urban sanitation was a blight on the beautiful Capitol neighborhood. Privies in ca. 1880 Sacramento were little more than holes dug in the backyard. Even upper-class homes might be served by little more than a private cess-pool. Residential privies served the needs of approximately 5,500 homes in 1902 (Hamilton et al. 2005).

In 1900, Sacramento had a population of 30,000, covering an area of about 4 square miles. The city streets averaged 80 feet wide and had electric lights. Water mains were established on an east-west orientation. The 1915 Sanborn Map indicates the O and N street residences had water serviced by a 6-inch pipe, which was fed from 13th Street to the east and 12th Street to the west. By 1910 the population had doubled to 45,000. By 1914, Sacramentans were enthusiastic motorists, with use nearly doubling to 6,500 vehicles in two years. New developments attracted middle-class and upper-class families away from the city core. The homes in the older parts of town were soon divided into rentals, demolished for new construction, or simply left to deteriorate. In the 1960s, the State began acquiring land in downtown Sacramento for future expansion and development. The current project is part of the realization of that plan.

The architectural character of the development of State facilities over the decades is summarized in the following context statement, which is an excerpt from the Final Draft State Government Historic Context Statement as printed in the City of Sacramento’s 2035 General Plan Technical Background Report prepared by Ruth Todd and Meg de Courcy, Page & Turnbull, Pages 594-631 and 977-1106 (2014).

State government buildings in Sacramento reflect [the] trend to use Neoclassical and Beaux Arts architectural styles for public buildings. Most notably, the California State Capitol Building (completed in 1874) is demonstrative of the Neoclassical Style. Other classically-inspired institutional buildings that are part of the Capitol Area complex include the Library and Courts Building located at 914 Capitol Mall and the Jesse Unruh Building (originally known as Office Building No. 1) located at 915 Capitol Mall, both of which were designed by the architectural firm Weeks & Day, were completed in 1928. Other institutional properties associated with the California State Government may include office and departmental buildings constructed in the Art Deco/Moderne style, such as the California Department of Transportation Building located at 1120 N Street and the California Department of Food and Agriculture Building at 1220 N Street, buildings designed by George B. MacDougal along the south side of Capitol Park in the 1930s. Institutional properties associated with the state government also include buildings constructed along Capitol Mall as part of the 1960 Capitol Plan. Other significant office buildings developed along Capitol Mall after its 1960s creation include the Harry Devine-designed, International Style, Federal Courthouse and larger structures built for office and financial firm headquarters.

PROJECT SITE HISTORY

As stated in the previous section, the 1200 block of O Street once contained private residences of similar design to the Italianate homes of the Capitol Park neighborhood. 20th century development of the project area began in 1910 when the house at 1228 N Street was torn down and replaced by the Thayer Apartment building. Soon after, the adjacent residence 1220 N Street had become a rooming house.

Sanborn Fire Insurance maps from 1915 show many of the homes in this upper-class neighborhood with garages for Sacramento’s first autos. However, several other homes on the same block had also been converted to apartments. The residential neighborhood shifted to office buildings for the government bureaucracy during the inter-bellum period.

The homes on the western side of N street were demolished for the construction of the California Department of Motor Vehicles building in 1936 (Sanborn 1952). The State of California Department of Food and Agriculture took over this building and expanded to the opposite side of the block in 1953, demolishing...
the private residence at 1215 O Street. The CDFA Annex was completed in 1955. The currently vacant CDFA Annex at 1215 O Street, connected via sky-bridge to the Department of Food and Agriculture building (1220 N Street), has stood to the present day. The Park Place Senior Living Facility, originally the El Mirador Hotel, was constructed following a fire in 1957.

A considerable portion of the block has been excavated for modern office construction; consequently, much of the archaeological record has likely been removed. This location coincides with the back lots of many of the residences that once occupied the neighborhood. Back lots are often the location where intact historical features are discovered in the form of artifact-filled privies or trash pits. Some back lots may not have been disturbed during prior construction. However, given the intensive construction of the present-day facilities, the potential to locate undisturbed archaeological resources appears to be low within the project area.

Currently, the project area is surrounded by surface streets, Sacramento Metro Rail lines, a vacant parking lot, and the art deco apartments at 1228 O Street. The site was examined during the field investigation portion of the current project. Recent Underground Service Alert markings highlighted the extensive underground utilities present below the surface.

RESULTS OF INFORMATION REVIEW AND CONSULTATION

The identification of CEQA cultural resources within the project study area included a review of existing sources of information regarding previously identified cultural resources and consultation with interested parties. The outcome of this review and consultation is described below.

Archaeological Resources

North Central Information Center Results

Cultural-Resources Studies in or Near the Project Site
Numerous previous cultural-resources studies have been undertaken within one-half mile of the project site. These studies include Pritchard’s investigation of the Eagle Theater site in 1972, the cultural-resources overview by Brienes et al. of the Central Business District in 1981, Lindström’s evaluation of the Wells Fargo Tower building in 1989, Osanna and Peak’s 1994 evaluation of the Sacramento Seawall, Munns and Turner’s 2000 survey for part of the Level 3 fiber-optic project, PAR Environmental Services’ inventory for the Worldcom fiber-optic line in 2001, Billat’s cell tower study in 2002, as well as studies by Praetzellis and Praetzellis in 1981, 1982, 1987, 1993, and 1997.

Within the more immediate project study area, in 1997 Peak & Associates examined brick sewers, including a section running below Seventh Street between P and S Streets (Peak & Associates 1997); they were found to be too disturbed to be eligible for listing in the NRHP. In 2000, PAR Environmental Services carried out a salvage-archaeology project on Capitol Mall and N between Ninth and 10th Streets, where a brick cistern and a refuse deposit were found (PAR Environmental Services 2000). The refuse deposit consisted primarily of domestic items from the 1870s; no artifacts were recovered from the cistern. In 2002–2003, Nettles et al. monitored and recovered artifacts for the California Public Employees’ Retirement System (CalPERS) headquarters project involving excavations from Third to Seventh Streets, between R and Q Streets. Their excavations identified numerous historic features (Nettles and Hamilton 2003), many of which were considered to meet the CEQA criteria for significant historic resources.

Two additional studies have taken place on the 1200 block of O Street. Urbana performed an NHRP evaluation of the Park Place Senior Residences at 1230 N Street, in 2005. Loma Billat performed a field study of the same location in 2007 for Earth Touch Inc. Brian Hatof performed an architectural history evaluation on behalf of URS Corp. in 2010, also at 1230 N Street.
Known Cultural Resources in or Near the Project Site
No previously recorded cultural resources sites are located on the 1215 O Street Office Building Project site. CA-SAC-36 is located near the intersection of 10th and P Streets; this is a prehistoric site but otherwise no information is recorded. CA-SAC-38 is bounded by I and J Streets and Ninth and 10th Streets; the site consists of a prehistoric habitation site below approximately 5 feet of fill deposited in 1872. There may be associated human remains, but that is unclear. CA-SAC-394H is in the southeast quarter of the block bounded by J and K Streets and Sixth and Seventh Streets; the site consists of structural remains and several discrete refuse deposits from approximately 1850–1890. CA-SAC-552H spans L, Capitol, 15th, and 16th Streets. Field mitigation at this site in 2000 identified 107 features of which 24 were determined significant under CEQA guidelines. These features included cisterns, privies, posts, utilities, and other structures.

The two prehistoric sites, CA-SAC-36 and CA-SAC-38, were identified in 1934, but neither has ever been explored; therefore, site extent, contents, age, or complexity are all unknown. There are likely many more prehistoric sites in the downtown Sacramento area that have not yet been uncovered. Construction in 2008 near the historic Folsom Power Station in downtown Sacramento (between G, 6th, H, and 7th Streets) revealed multiple Native American burials and possible cremations (Farris and Tremaine 2008). The historic site, CA-SAC-394H, includes dozens of historic features. Similarly crowded historic blocks are located throughout Sacramento.

Consultation Efforts
During project planning, a Native American contact program was initiated pursuant to California Assembly Bill 52. An electronic communication dated December 5, 2016 requested from the NAHC a search of the Sacred Lands Database managed by the NAHC. Eight Tribal contacts identified by the NAHC were sent letters dated December 12, 2016 regarding construction at the project site. The United Auburn Indian Community of the Auburn Rancheria (United Auburn) responded by letter dated January 4, 2017 indicating that the project area is within the tribal territory of their ancestors and requesting consultation pursuant to AB 52. The consultation was concluded on April 17th 2017.

Wilton Rancheria (Wilton) also responded by letter dated December 20, 2016 indicating that the project area is within the tribal territory of their ancestors. Wilton further requested results of any archival, archaeological, and geotechnical reporting on the project location. Therefore, CHRIS results were transmitted electronically January 5, 2017.

The Shingle Springs Band of Miwok Indians (Shingle Springs Miwok), via e-mail sent on March 27, 2017, provided preliminary information regarding two Native American village sites known in the general project area. The Shingle Springs Miwok were contacted via telephone and relevant information is incorporated into this DEIR.

While other federally-recognized Tribes may claim the project area as part of their ancestral territory, no other Tribes have requested consultation or additional information as a result of the NAHC request.

Historical Resources

Previous Historic Resources Evaluations

Data Sources
The following sources of information were reviewed to identify previously evaluated historical resources in the study area.

- National Register of Historic Places,
- California Register of Historical Resources,
- California Inventory of Historic Resources,
- California Historical Landmarks (State of California 1996) et seq.,
- California State Historic Resources Inventory (HRI),
1997 Capital Area Plan Final EIR,
Context Statement from the City of Sacramento,
Sacramento Register of Historic & Cultural Resources, and
Archival collections at the Center for Sacramento History.

Relevant Data from the 1997 Capital Area Plan Final EIR
According to the 1997 Capital Area Plan Final EIR, the City of Sacramento conducted a Non-Residential Survey in 1981 that identified eleven buildings and one park (twelve total contributing elements) as part of the California State Government Building Complex District (see district outlined in yellow in Exhibit 12-1). The southern portion of this district overlaps with the project study area. The City of Sacramento survey concluded the district is eligible for listing in the NRHP. The district combines resources currently listed in the NRHP with additional resources that have been identified more recently as individually eligible for listing in the NRHP. The California State Capitol, including the Park between 10th and 16th and L and N Streets, is listed in the NRHP, as is the Capitol Extension District on Capitol Mall, made up of the Library and Courts Building and the Jesse Unruh State Office Building. Although the State Printing Office (State Archives) at 1020 O Street, and the Franchise Tax Building (State Office Building) at 1021 O Street, have been demolished since the original 1981 survey, the following group of nine buildings and one park (ten total contributing elements) remain extant:

- California State Capitol;
- Capitol Park;
- Capitol Park Service Area (the Insectary);
- California State Library and Courts Building, 914 M Street;
- Jesse Unruh State Office Building (formerly State Office Building Number One), 915 M Street;
- Food and Agriculture Building (formerly Motor Vehicle Building), 1220 N Street;
- Transportation Building (formerly Public Works Office Building), 1120 N Street;
- Legislative Office Building (formerly Business and Professions Building), 1020 N Street;
- Transportation Annex (formerly Public Works Annex), 1121 0 Street; and
- CDFA Annex, 1215 0 Street.

Historic Resources Inventory Results
The HRI includes four resources located in the project study area (including the project site property at 1215 O Street) that have been assigned a California Historical Resources code of “3D,” signifying their status as contributing to a NRHP eligible district through a 1981 City of Sacramento survey.

Two of those four resources, 1120 N Street and 1220 N Street, also have a status code of “1CS” indicating they are listed in the CRHR as individual properties by the State Historical Resources Commission.

The HRI also lists the California State Government Building Complex as a historic district with a status code of 3D. However, the 3D designation, as described above, applies to a resource that contributes to a district. In this case, the 3D designation would indicate that the California State Government Building Complex District would be contributing to its own NRHP eligibility. It is believed that this 3D designation is in error and the appropriate status code is 3S, indicating a resource that appears eligible for the NRHP as an individual property through survey evaluation.

Thayer Apartments, located at 1228 N Street, has two listings in the HRI: one dating to 1999 with status code 7R (denoting “Identified in Reconnaissance Level Survey: not evaluated”) and one from 2002 with status code 7N (signifying “Needs to be reevaluated”).

Sacramento Register of Historic and Cultural Resources
Most recently updated in August 2015, the Sacramento Register of Historic & Cultural Resources lists all resources that have been designated by the City of Sacramento. Because each of these resources has been so designated by Sacramento’s City Council via city ordinance, these resources are considered historical resources for the purposes of CEQA.
The Thayer Apartments (1228 N Street) is located within the project study area and was designated by the City of Sacramento and included in the Sacramento Register of Historic & Cultural Resources.

Summary Results of Previous Historic Resources Evaluations
As identified above, among the buildings in the project study area, two are listed in the CRHR, two have been previously evaluated as eligible for listing in the NRHP, and one has been designated by Sacramento City Council and is included in the Sacramento Register of Historic & Cultural Resources. These five buildings are CEQA historical resources.

In addition, the California State Government Building Complex district, previously identified as eligible for the NRHP, is a CEQA historical resource.

Finally, although it has not been formally evaluated previously, the Veterans Affairs Building located at 1227 O Street was identified in the 1997 EIR Capitol Area Plan EIR as a potential contributor to the California State Government Building Complex district. The building was not formally evaluated during this analysis, but is presumed for the purposes of this EIR to be eligible for listing in the NRHP as a contributor to the previously identified California State Government Building Complex District. It is, therefore, presumed to be a CEQA historical resource.

These seven resources, consisting of six buildings and one historic district are historical resources for the purposes of CEQA.

Current Historic Resources Evaluations
There are six buildings 50 years of age or older in the project study area that have not previously been evaluated to determine their status as historical resources under CEQA. These six buildings, therefore, were evaluated for CRHR eligibility as part of this EIR analysis. An ICF architectural historian exceeding the Secretary of the Interior’s Professional Qualification Standards in the areas of history and architectural history conducted evaluations of these six buildings. Methodology included field observation conducted on January 10, 2017 (including photo-documentation and notation of alterations) and research including review of primary and secondary sources such as tax assessor records, building permits, Sanborn Fire Insurance maps, scholarly books and articles, and additional sources as relevant.

Based upon the methods outlined for the identification and evaluation of historical resources, none of the six built architectural resources depicted in Table 4.12-2 meet the necessary criteria for listing in the NRHP or CRHR, either individually or as a contributing element to an existing or potential historic district. Each of the six built architectural resources in the study area were evaluated in accordance with Section 15064.5 (a)(2)(3) of the CEQA Guidelines and using the criteria outlined in PRC 5024.1, and do not appear to be historical resources for the purposes of CEQA. The analysis of impacts in Section 4.12.3 of this document, therefore, will be confined to previously identified and presumed CRHR-eligible resources.

<p>| Table 4.12-2 Buildings in the Project determined not to be CEQA Historical Resources |</p>
<table>
<thead>
<tr>
<th>Address</th>
<th>Building Name</th>
<th>Year Built</th>
</tr>
</thead>
<tbody>
<tr>
<td>1228 O Street</td>
<td>Gibson Apartments</td>
<td>1947</td>
</tr>
<tr>
<td>1506 13th Street</td>
<td>McCafferty Manor</td>
<td>1946</td>
</tr>
<tr>
<td>1512 13th Street</td>
<td>Southwark Building</td>
<td>1926</td>
</tr>
<tr>
<td>1230 N Street</td>
<td>Park Place Senior Residences</td>
<td>1957</td>
</tr>
<tr>
<td>1517 12th Street</td>
<td>NA</td>
<td>1955</td>
</tr>
<tr>
<td>1215 P Street</td>
<td>Gibbs Apartments</td>
<td>1949</td>
</tr>
</tbody>
</table>
Historical Resources within Study Area
The following tables 4.12-3 and 4.12-4 summarize the seven CEQA historical resources located in the study area. A more detailed discussion of each of the resources follows the tables.

<table>
<thead>
<tr>
<th>Resource Name</th>
<th>Address</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State Government Building Complex District</td>
<td>Various</td>
<td>3D - Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation (should be 3S, but HRI lists 3D)</td>
</tr>
<tr>
<td>CDFA Annex (building on project site)</td>
<td>1215 O Street 3D</td>
<td>Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation.</td>
</tr>
<tr>
<td>Transportation Building</td>
<td>1120 N Street</td>
<td>3D - Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation. 1CS – Listed in the CRHR as an individual property by the State Historic Resources Commission</td>
</tr>
<tr>
<td>Food and Agriculture Building</td>
<td>1220 N Street</td>
<td>3D - Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation. 1CS – Listed in the CRHR as an individual property by the State Historic Resources Commission</td>
</tr>
<tr>
<td>Transportation Annex</td>
<td>1121 O Street*</td>
<td>3D - Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation.</td>
</tr>
<tr>
<td>Thayer Apartments</td>
<td>1228 N Street</td>
<td>City of Sacramento Ordinance No. 3911</td>
</tr>
</tbody>
</table>

Notes: Z* The address of this building is incorrectly listed in the HRI as 1120 O Street.
Sources: 1981 City of Sacramento Survey, HRI, Sacramento Register of Historic & Cultural Resources.

<table>
<thead>
<tr>
<th>Resource Name</th>
<th>Address</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterans Affairs Building</td>
<td>1227 O Street</td>
<td>Presume 3D - Appears eligible for NRHP as a contributor to a NRHP eligible district through survey evaluation</td>
</tr>
</tbody>
</table>

Source: ICF 2017

The following summarizes the CEQA historical resources, describing their historic significance and important character-defining features.

California State Government Building Complex District
The 1997 Capitol Area Plan EIR analyzed a potential historic district of government buildings centered around the State Capitol. Based on a 1981 City of Sacramento survey effort, the potential historic district was identified as the proposed California State Government Building Complex District. The 1997 EIR treated the district as NRHP eligible and considered it a historical resource for the purposes of CEQA.

The California State Government Building Complex District consists of buildings previously listed or identified as eligible for the NRHP at the time. Including only State of California buildings and spaces, it is generally bounded by L Street on the north, 15th Street on the east, O Street on the south, and 9th Street on the west.
The California State Government Building Complex District as identified in 1981 and analyzed in the 1997 EIR consisted of the following 13 elements (12 buildings and one park) and included:

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a.</td>
<td>California State Capitol</td>
</tr>
<tr>
<td>b.</td>
<td>Capitol Park</td>
</tr>
<tr>
<td>c.</td>
<td>State Insectary (Capitol Park Service Area)</td>
</tr>
<tr>
<td>d.</td>
<td>California State Library and Courts Building – 914 M Street</td>
</tr>
<tr>
<td>e.</td>
<td>State Office No. One (Jesse Unruh State Office Building) – 915 M Street</td>
</tr>
<tr>
<td>f.</td>
<td>Business and Professions Building (Legislative Office Building) – 1020 N Street</td>
</tr>
<tr>
<td>g.</td>
<td>Public Works Office Building (Cal Trans Building) – 1120 N Street</td>
</tr>
<tr>
<td>h.</td>
<td>Motor Vehicles Building (Department of Food and Agriculture Building) – 1220 N Street</td>
</tr>
<tr>
<td>i.</td>
<td>State Printing Office (State Archives) – 1020 O Street demolished</td>
</tr>
<tr>
<td>j.</td>
<td>Business and Professions Building Annex (Legislative Office Building Annex) – 1021 O Street demolished</td>
</tr>
<tr>
<td>k.</td>
<td>Public Works Annex Building (Cal Trans Annex) – 1120 O Street</td>
</tr>
<tr>
<td>l.</td>
<td>Franchise Tax Building (State Office Building) – 1021 O Street demolished</td>
</tr>
<tr>
<td>m.</td>
<td>CDFA Annex – 1215 O Street</td>
</tr>
</tbody>
</table>

The California State Government Building Complex District, as proposed in the 1997 EIR, is a historical resource for CEQA in accordance with Section 15064.5(a)(3) of the CEQA Guidelines. For the purposes of this EIR, extant proposed contributing elements to the district are considered to be historical resources under CEQA.

California Department of Transportation Building (formerly Public Works Building) - 1120 N Street

1120 N Street, constructed in 1937 as the Public Works Building, is composed of reinforced concrete forming rectilinear volumes rising as high as five stories. Currently known as the Caltrans Building, 1120 N Street is a strong example of PWA Moderne architectural design applied to a large public administrative building. (PWA Moderne was named for the Public Works Administration, which funded many projects during the period of the Great Depression. Buildings designed in this style were almost always developed to serve government needs. Although the PWA itself was a federal agency, its eponymous architectural style is commonly seen on both federal buildings that were built under the PWA and on buildings developed by state or local governments during the years 1933-1944. Typically, these buildings reference Beaux Arts classicism, which is common of government buildings, but with a relatively austere presentation. Often horizontal in massing, these designs emphasize horizontality but usually feature strong centrally placed vertical accents. In this way, they also recall Streamline Moderne, a popular architectural style of the same period.) Sheltered by a horizontally accented canopy with curved corners, the centered main entrance is outlined by sculptural panels below a narrow, nearly full-height window framed by pilasters. The vertically oriented central portion of the primary façade is stepped and punctuated by glass-block windows. Balancing this verticality are horizontal scallop-molding courses and long rows of original steel windows outlined by beveled frames between fluted piers on the second to fifth floors. 1120 N Street is listed on the CRHR as an individual property, and was identified in the 1981 City of Sacramento Survey as eligible for listing in the NRHP as a contributor to the NRHP-eligible California State Government Building Complex District. The building is a historical resource for the purposes of CEQA.

Transportation Annex (formerly Public Works Annex) - 1121 O Street

1121 O Street is a large, multistory, rectilinear administration building designed in the Late Moderne style. Constructed of reinforced concrete, the building is asymmetrically massed with varying roof heights and undulating elevation setbacks and projections. Slightly offset at O Street, the main entrance is framed by canted walls with marble veneer below a cantilevered canopy. The building’s smoothly surfaced exterior walls are punctuated by long bands of bezel-outlined aluminum windows. Above a recessed secondary entry at the west elevation, a vertically oriented bezel outlining small square window openings interrupts the dominant horizontal emphasis created by the building’s long window bands.
The Transportation Annex was originally designed and constructed as the Public Works Annex. It is connected to the original Public Works (now Transportation) Building by a bridge across the alley. The Transportation Annex was completed in 1952 and cost $3,470,000 (Poage 1956a). Given the accelerated pace of California’s population boom and the expansion of state government to serve it, the Public Works Department soon outgrew the 1952 annex. By 1959, a 70,000 sq. ft. addition to the annex was constructed to the west of the annex, on the site of a surface parking area (Rodda 1958; McClatchy 1959). The Annex expresses an institutional variation of the International style that emphasizes horizontality. At five stories, the Annex matches the height of the Transportation Building to which it is connected. The Annex features a rectangular plan, reinforced concrete construction and a flat roof. The roof is punctuated by several structures that house mechanicals and are minimally visible from the street. The façade of the original Annex building is symmetrically composed and consists of five bays. The central bay, easternmost and westernmost bays project slightly from the other bays, giving the building a visual rhythm. The central bay contains the main entrance which is sheltered by a horizontal canopy. Three concrete steps approach its two pairs of metal doors which are flanked by green marble panels. An extensive ramp for disabled access is arranged to the east of the main entrance. The dominant visual feature of the façade are its alternating bands of windows and concrete which extend the entire length of the façade spanning its five bays. The windows consist of pairs of 3-light rolled steel casement sashes with transoms set atop them, flanked by a pair of fixed sashes. The addition to the annex is sited immediately to its west. The buildings abut one another. The addition shares the same height as the Transportation Building and Annex. In design and style, it reflects a simplified version on the Annex with bands of windows alternating with bands of concrete. It was previously identified in the 1981 City of Sacramento Survey as eligible for listing in the NRHP as a contributor to the California State Government Complex District, an NRHP-eligible historic district, and appears to remain eligible for the NRHP as a contributor to the NRHP-eligible California State Government Building Complex District. The building is a historical resource for the purposes of CEQA.

Food and Agriculture Building (formerly Motor Vehicle Building) - 1220 N Street

The Food and Agriculture building was originally designed and constructed in 1936 at a cost of $700,000 to house the Department of Motor Vehicles (Poage 1956b). It was developed by the State of California in conjunction with the Public Works (now Caltrans) Building that is sited on the opposite side of 12th Street; the two buildings share similar design characteristics. Both building face Capitol Park across N Street. Like its near twin, the Transportation (formerly Public Works) Building, this building is constructed of reinforced concrete to form a strong rectilinear volume rising to a height of four stories. It features a rectangular plan and flat roof. The symmetrical composition of its primary façade consists of three sections. The central section features the building’s main entrance, which consists of four single panel metal doors sheltered by large metal canopy. Vertically arranged above the entrance is a mass that rises to above the roof line and contains a large rectangular window consisting of multiple rolled steel sashes. The east and west sections are identical consisting of horizontal bands of rolled windows alternating with concrete bands. The building at 1220 N Street is best described as embodying the PWA Moderne style. The Food and Agriculture Building is individually listed in the CRHR. It was previously identified as for listing in the NRHP as a contributor to the NRHP-eligible California State Government Complex District and is a historical resource for the purposes of CEQA.

CDFA Annex - 1215 O Street

The four-story reinforced concrete building was constructed in 1955 and reflects the International style in its form, simplicity of design and fenestration patterns. The rectangular building is composed simply of horizontal bands of windows. The ground floor window proportions vary from those of the upper three floors, which are identical. The ground floor building surface is scored. Glazed tile panels surface the angled entrance, which contains glass and metal doors beneath transoms. A rectangular canopy clad in stainless steel projects above the entryway. 1215 O Street appears eligible for the NRHP as a contributor to the NRHP-eligible California State Government Building Complex District. The building is a historical resource for the purposes of CEQA.
Veterans Affairs Building - 1227 O Street
Rising six stories, the Modern-style 1227 O Street building has a square plan and a flat roof surrounded by a low parapet. The main, off-center entrance is recessed at the south elevation. The building’s smooth walls are punctuated by horizontal bands of aluminum-framed windows at the second to sixth floors, and rectangular aluminum-framed windows at the first floor. The windows’ predominantly horizontal emphasis is balanced by vertically oriented rectangular shapes formed by simple vertical and cornice molding. Various rectangular and square volumes rise from the roof. Occupied in 1957, the Veteran’s Affairs Building was built at a cost of $2,500,000 (Poage 1956c). It features a rectangular plan and 6 stories. As a common version of a post-World War II institutional design with steel frame construction and stucco cladding, the building expresses the Miesian Modern style. Constructed on 480 concrete piles driven into bedrock, Veteran’s Affairs contains 145,000 sq. ft (Sacramento Bee 1957). Although its massing is distinctly vertical, the building’s visual presentation shares a design similarity with the other contributors to the California State Government Complex District: bands of windows alternating with expanses of plain cladding. Each elevation is nearly identical, with the exception of the O Street elevation that includes the building’s main entrance. The windows appear to be single pane metal sashes, which are quite different than the windows in earlier state buildings in the area. Overall, the design of the Veteran’s Affairs Building represents a stylistic departure from previous state buildings (Sacramento Bee 1955).

1227 O Street was identified in the 1997 Capitol Area Plan EIR as a potential contributor to the California State Government Building Complex district. It is presumed for the purposes of this EIR to be eligible for listing in the NRHP as a contributor to the previously identified California State Government Building Complex District, and is therefore a historical resource for the purposes of CEQA.

Thayer Apartments, 1228 N Street
The three-story concrete building with raised basement at 1228 N Street is designed in a Mediterranean Revival style with Italian Renaissance and French Revival elements. The imitation stonework stucco façade features a two-part vertical composition with a cornice separating the first two floors from the recessed third floor. A molded belt course below the first-floor windows and above the second-floor windows also create a visual separation of the first two floors. Angled three-story bays flank a central section with three bays, an arched loggia at the third story with French doors and a balcony, and a decorative recessed entry centered at the first floor. The central entry features a molded arched and stepped entablature centered with a decorative light and a molded classical pilaster and surround. The wood-frame windows at the angled bays are 12-over-2 lights at the center and 4-over-1 lights at the sides, and the third floor with decorative classical pilasters topped by a cartouche and dentiled cornice. The central bay windows are recessed and feature four paired lights with square transoms. The stepped roof parapet is punctuated in the central bay with rectangular openings and with a simple molded surround at the angled bays. The east and west elevations of the building contain shallow three-story angled bay windows. Listed in the Sacramento Register of Historic and Cultural Resources, the Thayer Apartments building is a historical resource under CEQA.

These seven resources located in the project area are depicted in Exhibit 4.12-2 as follows:

- California State Government Building Complex
- Individually listed in the CRHR, contributors to the California State Government Building Complex
- Listed in the Sacramento Register of Cultural and Historic Resources
4.12.3  Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

For purposes of discussion throughout the following impacts and mitigation measures, the term “historic resources” describes extant buildings and structures as well as subsurface historic-era features (such as wells, privies, or foundations). Prehistoric resources refer to Native American sites, features, or burials.

While there is a low likelihood that intact cultural deposits are present within the project area, background research indicates that substantial prehistoric and historic deposits containing significant data have been discovered in similar settings in downtown Sacramento. Past projects have had success locating buried cultural resources using historic maps, photographs, archival data, and consultation.

Restricted surface visibility in urban areas provides only basic information on the impact of construction on subsurface archaeological deposits. Consequently, the results of a review of historical documents and previous research provide the primary basis for assessing project impacts on archaeological resources. Factors taken into account include the general history of the area, the time frame of residential development, potential for the presence of artifact-filled features, and later period development that would have disturbed archaeological features. All these factors were assessed to rate the potential for the presence of archaeological resources as high, moderate, or low:

- High potential for impacts on cultural resources was considered likely when the proposed component or alternative was in an area where no known subsurface disturbances had previously occurred and archival research indicated the presence of residential components before water and/or sewer hookup and municipal garbage pickup.

- Moderate potential for impacts on cultural resources was considered likely when the proposed component or alternative was in an area where no known belowground disturbances had previously occurred and archival research indicated a potential for artifact-filled features.

- Low potential for impacts on cultural resources was considered likely when the proposed alternative occurred in an area of known ground disturbance. While the potential to encounter archaeological deposits was considered low under these circumstances, the possibility that isolated deposits may remain intact cannot be dismissed.

THRESHOLDS OF SIGNIFICANCE

An impact on cultural resources is considered significant if implementation of the 1215 O Street Office Building Project would do any of the following:

- cause a substantial adverse change in the significance of a unique archaeological resource or a historical resource as defined in PRC 21083.2 and Section 15064.5 of the State CEQA Guidelines, respectively;

- directly or indirectly destroy a unique paleontological resource or site or unique geological feature;

- disturb any human remains, including those interred outside of dedicated cemeteries; or

- cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC 21074.

Section 15064.5 of the State CEQA Guidelines defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.
ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

As described in Section 4.9.2, “Existing Conditions,” the project site lies within the urban environment of downtown Sacramento where underlying soils consist of Holocene alluvium deposits less than 11,000 years old. Objects must typically be older than the Holocene epoch to be considered a fossil; therefore, it is highly unlikely that soils underlying the project site contain unique paleontological resources. There are no unique geological features on the project site. Therefore, these topics will not be addressed further in this EIR.

ENVIRONMENTAL IMPACTS

Impact 4.12-1: Potential for Impacts on Significant Historic Archaeological Resources

Construction at 1215 O Street would result in the expansion of the existing facilities on the 1200 block of O Street. Although the excavations required to build the Department of Motor Vehicles Building in the 1930s, and the expansion of the Department of Food and Agriculture Building in the 1950’s likely removed any significant historic archaeological features, there are a few areas that may yet be undisturbed, thus potentially retaining significant historic archaeological resources. Because earthmoving activities could potentially affect significant historic archaeological resources within these undisturbed areas, this impact is considered potentially significant.

Present-day 1215 O Street has supported residential and commercial activity since the 1850s, likely represented by archaeological remains. Such remains may represent some of the earliest residential development within Sacramento. Artifact-filled features from at least the 1850s through the 1880s could contain information about the lives of early important Sacramento citizens. Important data about other lesser-known residents, including professionals, skilled workers, servants, and immigrants could also be present. However, reconnaissance of the project area found that underground-system components and distribution pipes have been installed in much of this block. Installation of these systems required substantial earthmoving activities that would have likely removed any archaeological features that may have been present. There is a greater possibility that portions of the block, particularly the eastern half of the block adjacent to the Thayer Apartments, may remain undisturbed and contain significant intact historic archaeological deposits. If these areas have not been disturbed by previous construction activities, remaining artifacts and features could be disturbed or destroyed during project construction.

Construction at 1215 O Street would result in the expansion of the existing facilities on the 1200 block of O Street. Although the excavations required to build the Department of Motor Vehicles Building in the 1930s, and the expansion of the Department of Food and Agriculture Building in the 1950’s likely removed any significant historic archaeological features, there are a few areas that may yet be undisturbed, thus potentially retaining significant historic archaeological resources. In addition, the excavation of a basement for the 1215 O Street Office Building may result in excavations going deeper than past construction disturbance and encountering previously undisturbed native soils. Overall, the project site is considered to have a low to moderate potential for the existence of intact archaeological deposits. However, because there is some potential for earthmoving activities associated with project construction to potentially affect significant historic resources in previously undisturbed areas, this impact is considered potentially significant.

Mitigation Measure 4.12-1: Monitoring and Response Measures for Potential Unknown Historic Archaeological Resources.

Where ground disturbing activities occur in native soils, or there is no evidence of extensive past ground disturbances, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists will monitor ground-disturbing activities. If evidence of any historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can access the significance of the find. If after evaluation, a resource is considered
significant, all preservation options shall be considered as required by CEQA, including possible data recovery, mapping, capping, or avoidance of the resource. If artifacts are recovered from significant historic archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results, and distributes this information to the public.

Significance after Mitigation
Implementation of this mitigation measure would reduce Impact 4.12-1 to a less-than-significant level by requiring construction monitoring and, in the case of a discovery, preservation options (including data recovery, mapping, capping, or avoidance) and proper curation if significant artifacts are recovered.

Impact 4.12-2: Potential for Impacts on Significant Prehistoric Archeological Resources and Tribal Cultural Resources

There are no known significant prehistoric archeological resources or tribal cultural resources on the project site. However, earthmoving activities associated with project construction could disturb or destroy previously undiscovered significant subsurface prehistoric archaeological resources and/or tribal cultural resources. This impact is considered potentially significant.

Evidence of prehistoric occupation of the Sacramento region dates back several thousand years. Cultural deposits of most early or long-term occupation sites in the region are marked by cultural layers alternating with flood-deposited silts. Sites, such as one discovered on I Street, have cultural layers that are now 15 to 20 feet below the current street level (Hamilton et al. 2005). As described above for Impact 4.12-1, while the project site is developed and past construction activities may have damaged or removed subsurface cultural resources, there is the potential for subsurface resources, including significant prehistoric archeological resources and resources that would qualify as a tribal cultural resource, to be present where there has been less ground disturbance or where native soils are still intact. Components of the project which require substantial earthmoving could disturb or destroy undisturbed and significant prehistoric deposits. In addition, the excavation of a basement for the 1215 O Street Office Building may result in excavations going deeper than past construction disturbance and encountering previously undisturbed native soils. There are no known significant prehistoric archeological resources or tribal cultural resources on the project site. Overall, the project site is considered to have a low to moderate potential for the existence of intact archaeological deposits. Because there is some potential for earthmoving activities associated with project construction to potentially affect significant prehistoric archeological resources, or resources that would qualify as tribal cultural resources, in areas with little or no previous disturbance, this impact is considered potentially significant.

Mitigation Measure 4.12-2: Monitoring and Response Measures for Potential Unknown Prehistoric Archaeological Resources and Tribal Cultural Resources.

This mitigation measure expands on the actions included in Mitigation Measure 4.12-1 to also address encountering unknown prehistoric cultural resources and tribal cultural resources. Where ground disturbing activities occur in native soils, or there is no evidence of extensive past ground disturbances, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists will monitor ground-disturbing activities. Native American representative(s) will be invited to observe any excavations. If evidence of any prehistoric subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., lithic scatters, midden soils), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist and Native American representative can assess the significance of the find. If after evaluation, a resource is considered significant, or is considered a tribal cultural resource, all preservation options shall be considered as required by CEQA, including possible data recovery, mapping, capping, or avoidance of the resource. If artifacts are recovered from significant prehistoric archaeological resources or tribal cultural resources, they shall be transferred to an appropriate tribal representative, or housed at a qualified curation facility. The results of the identification,
evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results, and distributes this information to the public.

**Significance after Mitigation**
Implementation of this mitigation measure would reduce Impact 4.12-2 to a less-than-significant level by requiring construction monitoring and, in the case of a discovery, preservation options (including data recovery, mapping, capping, or avoidance) and proper care of significant artifacts if they are recovered.

**Impact 4.12-3: Potential discovery of human remains**

There are no known past cemeteries or burials on the project site. However, earthmoving activities associated with project construction could disturb or destroy previously undiscovered human remains. This impact is considered potentially significant.

As identified above in the discussions of Impact 4.12-2 and 4.12-2, overall, the project site is considered to have a low to moderate potential for the existence of intact archaeological deposits. This assessment would also apply to the potential presence of human remains, whether associated with historic, or pre-historic occupation. There are no known past cemeteries or burials on the project site. However, because there is some potential for earthmoving activities associated with project construction to potentially encounter buried human remains in areas with little or no previous disturbance, this impact is considered potentially significant.

**Mitigation Measure 4.12-3: Response protocol in case human remains are uncovered.**

Consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act, if suspected human remains are found during project construction, all work shall be halted in the immediate area, and the county coroner shall be notified to determine the nature of the remains. The coroner shall examine all discoveries of suspected human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The NAHC shall then assign an MLD to serve as the main point of Native American contact and consultation. Following the coroner’s findings, the MLD, in consultation with the State, shall determine the ultimate treatment and disposition of the remains.

**Significance after Mitigation**
Implementation of this mitigation measure would reduce Impact 4.12-3 to a less-than-significant level by requiring work to stop if suspected human remains are found, communication with the county coroner, and the proper identification and treatment of the remains consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act.

**Impact 4.12-4: Potential for impacts on historic architectural resources**

Demolition of the CDFA Annex Building would cause a substantial adverse change in the significance of historic architectural resources. This would result in a significant impact on the environment as described in State CEQA Guideline 15064.5(b)(1).

Five historical resources in the project study area boundaries would not be subject to risk of adverse physical change as a result of project-related physical demolition, destruction, relocation, or alteration of the resources per CEQA Guidelines 15064.5(b)(1). Although the proposed office building at 1215 O Street would have a height less than 150 feet, which would be in accordance with the Sacramento Capitol View Protection Area height limit as cited by California State legislation, the project would change the immediate surroundings of each of these historical resources. However, as described below, the impact for these five buildings would not be significant:
Transportation Building (formerly Public Works Building) - 1120 N Street. The Transportation Building is located approximately 100 feet from the project site and the immediate surroundings near the building are characterized by a collection of similar government office buildings, apartments, and the Capitol Park. The building is largely shielded by visual impacts caused by the introduction of the proposed office building due to a buffer from the Transportation Annex (1121 O Street) and mature trees along 12th Street. The Transportation Building was given a status code “3D” as a contributor to the NRHP eligible California State Government Building Complex district and a “1CS” as listed on the CRHR as an individual property. According to the Sacramento Register of Cultural and Historic Resources, the physical characteristics that convey its significance are the building’s simple Moderne architectural design, whose features and details are located on the primary elevation along N Street and facing away from the proposed project site. The construction of the proposed 1215 O Street Office Building Project would be to the rear of the Transportation Building, and though still a change to the surroundings, would not obstruct views of these architectural features and details. Therefore, the introduction of a new office building would not result in a substantial adverse change to the immediate surroundings of the Transportation Building or to the physical characteristics of the building that convey its significance.

Food and Agriculture Building (formerly Motor Vehicle Building) - 1220 N Street. The Food and Agriculture Building is located directly north of the project site and is currently connected to the CDFA Annex by sky bridge at the third story. The third-story sky bridge was constructed as part of the CDFA Annex development and is not an original feature of the older Food and Agriculture Building. The immediate surroundings of the Transportation Building are characterized by government office buildings directly to the south, east, and west with Capitol Park directly across N Street to the north. The Food and Agriculture Building was given a status code “3D” as a contributor to the NRHP eligible California State Government Building Complex district and a “1CS” as listed on the CRHR as an individual property. According to the Sacramento Register of Cultural and Historic Resources, the physical characteristics that convey its significance are the building’s simple Moderne architectural design. The features and details that express this design are located on the primary elevation along N Street, which is the face on the opposite side of the building from the project site located to the rear of the Food and Agriculture Building. Therefore, the project would not obstruct views of the architectural features and details that convey the significance of the Food and Agriculture Building. The project includes removal of the non-original, three-story sky bridge and restoration of the affected area of the rear wall of the Food and Agriculture Building in a manner consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties and in consultation with the SHPO. In addition, the planned access, egress, mobility, and safety improvements in the Food and Agriculture building to ensure adequate access systems for all floors with removal of the sky bridge (e.g., interior door and corridor renovation) will also be completed in a manner consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties and in consultation with the SHPO.

Therefore, the introduction of the proposed new office building would not result in a substantial adverse change to the immediate surroundings of the Food and Agriculture building or to the physical characteristics of the building that convey its significance.

Transportation Annex (formerly Public Works Annex) - 1121 O Street. The Transportation Annex is located directly across 12th Street and approximately 90 feet to the west of the project site. The Transportation Annex is surrounded by government office buildings (located directly to the north and east) and parking lots (directly to the south and west). In addition to providing a 90-foot separation between the building and the project site, 12th Street is also lined on both sides with mature trees, providing a buffer that would help obscure visibility of the proposed building. The Transportation Annex was given a status code of “3D” as a contributor to the NRHP eligible California State Government Building Complex district and the building is considered significant for its status as a state government building within a collection of government buildings from the early part of the 20th Century. The construction of a proposed 150-foot tall office building at the project site would not substantially affect the Transportation Annex’s connection to the district as a whole because the new state office building would be consistent with the government theme of the district, even though it would not be a contributing element. Because the
project would leave street-level views of the Transportation Annex mostly unobstructed, the physical characteristics that convey the building’s significance would remain highly visible to the public. Moreover, the remaining contributing buildings in the area would reduce the overall impact of the proposed building. Therefore, the introduction of a new office building would not result in a substantial adverse change to the immediate surroundings of the Transportation Annex or to the physical characteristics of the building that convey its significance.

**Thayer Apartments - 1228 N Street.** The Thayer Apartments are located approximately 30 feet from the project site. This building’s immediate surroundings include government office buildings on all sides except its primary elevation which faces Capitol Park to the north along N Street. The Food and Agriculture Building (1220 N Street) and the Veterans Affairs Building (1227 O Street) are located between the Thayer Apartments and the project site and mostly obstruct views between the apartments and the project site. The apartment building is listed in the Sacramento Register of Cultural and Historic Resources and is considered a historical resource for the purposes of CEQA Guideline 15064.5(a)(2). Physical characteristics that convey significance are the building’s distinctive architectural style and features, which are most evident along the primary elevation on N Street, facing away from the project site. Therefore, the introduction of a new government office building would not result in a substantial adverse change to the immediate surroundings of the Thayer Apartments or to the physical characteristics of the building that convey its significance.

**Veterans Affairs Building - 1227 O Street.** The Veterans Affairs Building is located directly east of the project site and shares the same parcel as the CDFA Annex Building (1215 O Street), which is proposed for demolition. Buildings immediately surrounding the Veterans Affairs Building include apartment buildings to the north and south, a government building to the west, and a parking lot to the east. The Veterans Affairs Building appears eligible for the NRHP/CRHR as a contributor to an NRHP-eligible district, specifically, the California State Government Building Complex district. Although the Veterans Affairs Building is directly adjacent to the project site, the proposed office building would have a height equal to or below the Sacramento Capitol View Protection Area height limit of 150 feet, and would be operated for government use, consistent with the surrounding area. Because the project would not obstruct street-level views of the Veterans Affairs Building, including views of the primary façade facing O Street, the physical characteristics that convey the building’s significance would remain highly visible to the public. Though it does introduce a change to the overall setting, the introduction of a new government office building would not result in a substantial adverse change to the immediate surroundings of the Veterans Affairs Building or to the physical characteristics of the building that convey its significance.

Although the proposed project would not result in a substantial adverse effect to the five structures listed above, the demolition of the CDFA Annex Building would cause a substantial adverse change in the significance of this building and its contribution to the California State Government Building Complex. Therefore, the project would cause a significant impact on the environment as described in State CEQA Guideline 15064.5(b)(1), as discussed below.

**CDFA Annex Building – 1215 O Street.** The CDFA Annex Building is proposed to be demolished and replaced by an 11-story office building. The building was identified as eligible for the NRHP as a contributor to the California State Government Building Complex historic district in the 1997 Capitol Area Plan Final EIR and is therefore considered a historical resource under CEQA Guidelines 15064.5(a)(3). The demolition of this historical resource would result in a substantial adverse change per CEQA Guideline 15064.5(b)(2)(C) which states that a resource is materially impaired when project work demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

**California State Government Building Complex.** The demolition of the CDFA Annex Building (1215 O Street) would result in the loss of the building, a contributing resource to the NRHP-eligible California State Government Building Complex district and the introduction of a new state office building within the
district boundary. The California State Government Building Complex historic district was identified as eligible for inclusion in the NRHP in the 1997 Capitol Area Plan Final EIR and is therefore considered a historical resource under CEQA Guidelines 15064.5(a)(3). Contributing features, such as the CDFA Annex Building, convey the significance of a historic district. The demolition of this contributing feature of the historic district would result in a substantial adverse change per CEQA Guideline 15064.5(b)(2)(C) which states that a resource is materially impaired when project work demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

**Mitigation Measure 4.12-4: Preparation of a salvage report and documenting the historical resource.**

A precedent for mitigation of the loss of a contributing feature to the California State Government Building Complex historic district was set in 1998-1999 for the demolition of the Legislative Annex Building, formerly located at 1021 O Street, and very similar to the CDFA Annex Building. The mitigation included a salvage report identifying architectural features of the building that could be salvaged and reused in the immediate area. The SHPO, City of Sacramento, and local preservation groups would be consulted in development of the salvage report and plan.

In addition, the project applicant will arrange for the preparation of historical resource documentation of the CDFA Annex Building (1215 O Street). This documentation will be prepared by a qualified architectural historian and modeled on the National Park Service’s Historic American Buildings Survey (HABS) program and prepared along the lines of a HABS Level III treatment. This will include large-format black-and-white photographs that provide exterior views of the significant portion of the building, a short physical description of the significant portion of the building, and a photo index that describes each of the photographic views and compositions. These will be provided along with a short report that contains a brief physical description of the building, a brief narrative that explains its historical significance, and a location map. The photographic views will be prepared as 8- by 10-inch, machine-printed black-and-white archival prints; the accompanying photo index and other written data will be printed on archival paper. The completed HABS-like documentation packages will be archived for public access at the California History Room of the California State Library, the Center for Sacramento History, and the Sacramento Room at the Sacramento Central Public Library.

**Significance after Mitigation**

Mitigation Measure 4.12-4 would minimize the impact caused by the demolition of the CDFA Annex Building on the subject building and on the California State Government Building Complex historic district, but would not reduce it to a level less than significant. The CDFA Annex building would still be removed and an adverse change to the California State Government Building Complex historic district would still occur. This impact would be **significant and unavoidable.**
4.13 BIOLOGICAL RESOURCES

This section addresses common and sensitive biological resources that could be affected by implementation of the 1215 O Street Office Building Project. This evaluation is based on data collected during a reconnaissance-level survey of the project site conducted on January 25, 2017; a survey of the interior and exterior of existing CDFA Annex building on February 24, 2017; review of aerial photographs of the project area; review of the City of Sacramento 2035 General Plan Update and Master EIR; and a search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (2017).

4.13.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Federal Endangered Species Act
Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) 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. Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Migratory Bird Treaty Act
The Migratory Bird Treaty Act (MBTA), first enacted in 1918, 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 will 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. Under the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities.” A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Endangered Species Act
Pursuant to the California Endangered Species Act (CESA), a permit from CDFW is required for projects that could result in the “take” of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species, but does not include “harm” or “harass,” as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.
California Fish and Game Code Sections 3503 and 3503.5—Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Fully Protected Species under the California Fish and Game Code

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

City of Sacramento 2035 General Plan

The following policies of the *City of Sacramento 2035 General Plan* (City of Sacramento 2015) are relevant to the analysis of biological resources effects of the project:

- **Policy ER 2.1.1** Resource Preservation. The City shall encourage new development to preserve on-site natural elements that contribute to the community’s native plant and wildlife species value and to its aesthetic character.

- **Policy ER 3.1.2** Manage and Enhance the City’s Tree Canopy. The City shall continue to plant new trees, ensure new developments have sufficient right-of-way width for tree plantings, manage and care for all publicly owned trees, and work to retain healthy trees. The City shall monitor, evaluate and report, by community plan area and city wide, on the entire tree canopy in order to maintain and enhance trees throughout the City and to identify opportunities for new plantings.

- **Policy ER 3.1.3** Trees of Significance. The City shall require the retention of City trees and Heritage Trees by promoting stewardship of such trees and ensuring that the design of development projects provides for the retention of these trees wherever possible. Where tree removal cannot be avoided, the City shall require tree replacement or appropriate remediation.

- **Policy ER 3.1.4** Visibility of Commercial Corridors. The City shall balance the tree canopy of the urban forest with the need for visibility along commercial corridors, including the selection of tree species with elevated canopies.

- **Policy ER 3.1.6** Urban Heat Island Effects. The City shall continue to promote planting shade trees with substantial canopies, and require, where feasible, site design that uses trees to shade rooftops, parking facilities, streets, and other facilities to minimize heat island effects.
Policy ER 3.1.7 Shade Tree Planting Program. The City shall continue to provide shade trees along street frontages within the city.

City of Sacramento Tree Preservation Ordinance
The City of Sacramento has adopted an ordinance to protect trees as a significant resource to the community (City Code Title 12, Chapter 12.56, Ordinance 2016-0026 Section 4). It is the City’s policy to retain all trees when possible regardless of their size. When circumstances will not allow for retention, permits are required to remove trees that are within City jurisdiction. Trees in the median between the curb and sidewalk are within City jurisdiction; trees on State-owned property are not within City jurisdiction and are not subject to the City’s Tree Preservation Ordinance. Removal of, or construction around, trees that are protected by the tree ordinance are subject to permission and inspection by City arborists. The City’s Tree Services Division reviews project plans and works with the City Public Works Department during the construction process to minimize impacts on street trees in Sacramento.

4.13.2 Existing Conditions

VEGETATION
The project site is occupied by the vacant CDFA Annex building and the CalVet surface parking lot. The project site and vicinity are characterized by urban development with landscaping in the form of trees, shrubs, and ground cover, primarily maintained for aesthetic purposes. Trees range from relatively small ornamentals to large mature trees of various species. Vegetation within the project site is limited to small ornamental shrubs along the south side of the existing building, shrubs along the west and north sides of the surface parking lot, and larger City street trees between the sidewalk and roadway along 12th Street and O Street. Tree species observed during the site visit include London plane (Platanus x hispanica) and elm (Ulmus sp.) occurring as street trees, and camellia shrubs (Camellia sp.) along the south side of the building. Two large palm trees are in the northwest corner of the surface parking lot. Vegetation on the project site does not include any native plant communities or natural habitats, and provides very marginal habitat value.

COMMON WILDLIFE SPECIES
The project site supports a low diversity of wildlife because it is developed with a building and a surface parking lot, is located in a heavily urbanized area with no native vegetation communities, and is subjected to frequent human activity. Most of the wildlife species expected to occur in the project vicinity are adapted to urban environments, and several are nonnative species. Common bird species expected to occur in the project vicinity include house finch (Carpodacus mexicanus), Brewer's blackbird (Euphagus cyanocephalus), house sparrow (Passer domesticus), American robin (Turdus migratorius), rock pigeon (Columba livia), and American crow (Corvus brachyrhynchos). Common mammals that are expected to occur in the project vicinity include opossum (Didelphis virginiana) and non-native eastern fox squirrel (Sciurus niger).

SENSITIVE BIOLOGICAL RESOURCES

Special-Status Species
Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California or the federal government as endangered, threatened, or rare;
- a candidate for state or federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic category or group) 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 CDFW as Species of Special Concern;

- species listed as Fully Protected under the California Fish and Game Code;

- species afforded protection under local planning documents; and

- taxa considered by the 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, 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).

The term “California species of special concern” is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW's fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Appendix I provides a list of special-status species potentially occurring in the project vicinity. The list was developed through a review of biological studies previously conducted in the area and observations made during the January and February 2017 site surveys. CDFW’s CNDDB (CNDDB 2017), a statewide inventory of the locations and conditions of the State’s rarest plant and animal taxa and vegetation types, was also reviewed for specific information on documented observations of special-status species previously recorded in the project vicinity. A 1-mile search radius around the project site was used to identify potential special-status species because it encompasses a sufficient distance to accommodate for local habitat diversity. The CNDDB is based on actual recorded occurrences and does not constitute an exhaustive inventory of every resource.

The species list in Appendix I includes special-status wildlife species with both scientific and common names, legal status, description of habitat preference, and the potential for the species to occur on the project site. No special-status plant species are included because there is no suitable habitat for special-status plant species on-site, no sensitive communities are present on-site, and no special-status plant species were identified in the CNDDB record search. Most of the special-status species identified in Appendix I do not occur on the project site or have a low potential for occurrence because the habitat elements they require either were never present or are no longer found on the highly-urbanized site in downtown Sacramento. Special-status wildlife species that could occur on or adjacent to the project site are evaluated in this DEIR and are discussed in further detail below.

**Raptors**

Two special-status raptors are considered to have low potential to occur at the project site: Swainson’s hawk (*Buteo swainsoni*) and white-tailed kite (*Elanus leucurus*). All raptors are protected under Section 3503.5 of the California Fish and Game Code, which prohibits take or destruction of raptors, including their nests and eggs. Raptors are not expected to nest on the project site because of the highly-urbanized environment. Although some raptor species are known to nest within Sacramento city limits, these nest sites are usually associated with residential or suburban areas with dense tree canopy cover and proximity to suitable habitat.
foraging areas, such as open grasslands and agricultural fields. Raptors are not likely to nest on-site because the street trees lack dense canopy cover, the area is highly urbanized, there are extensive disturbances from traffic and other human activities, and there is very limited suitable foraging habitat in the immediate vicinity.

**Bats**

Some species of bats may use buildings for day, maternity, or wintering roosts. Bats may roost in abandoned or little-used structures in wall sections, behind fascia, in spaces between vaulted interior ceiling and roofing materials, and in similar enclosed spaces that provide thermal protection. Species of bats known to roost in buildings in the downtown area include Mexican free-tailed bat (*Tadarida brasiliensis*) and big brown bat (*Eptesicus fuscus*). Neither is considered a special-status species, although bat roosts, and in particular maternity roosts, can be considered an important biological resource. The CDFA Annex building is currently vacant, potentially making it more suitable for bat use. However, the building does not have exterior overhangs, eaves, fascia, or other features likely to support bat roosts. Two deceased bats and several deceased birds were found during a February 2017 survey of the interior of the building. One of the bats was identified as Mexican free-tailed bat, the other, long deceased, was not identifiable. Bats and birds had entered the building through a broken window and potentially other damaged areas of the building and became trapped. These points of entry for wildlife have been identified and repaired to exclude other bats and birds from entering the building. The survey confirmed that the architecture of the existing building is such that there is no suitable roosting habitat available for bats inside or outside the structure.

**Sensitive Natural Communities**

Sensitive natural communities include those that are of special concern to resource agencies or are afforded specific consideration through CEQA or other federal or State laws. Sensitive natural communities may be of special concern to regulatory 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. Many of these communities are tracked in CDFW’s CNDDB. There are no sensitive natural communities within or adjacent to the project site.

### 4.13.3 Environmental Impacts and Mitigation Measures

**ANALYSIS METHODOLOGY**

This impact evaluation is based on data collected during a reconnaissance-level field survey conducted in January 2017, a survey of the interior and exterior of existing CDFA Annex building in February 2017, review of aerial photographs, and information from several previously completed documents that address biological resources in the project vicinity.

**THRESHOLDS OF SIGNIFICANCE**

An impact on biological resources is considered significant if implementation of 1215 O Street Office Building Project would do any of the following:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;

- have a substantial adverse effect on federally protected 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 resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of 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; and

- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife species 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.

### ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

As described above, the project site does not include any potential habitat for special-status plant species. The only potential special-status wildlife species with potential to occur in the project vicinity are Swainson’s hawk and white-tailed kite, and the project site does not provide suitable habitat for either of these species. Therefore, no impact 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 would occur during construction or operation of the proposed project and this issue is not discussed further.

The project site does not contain riparian habitat or other sensitive natural communities. The project site is in a developed urban environment. There are no riparian habitats or other sensitive habitats on or adjacent to the project site that would be affected directly or indirectly by project construction or operation. Therefore, no impact on riparian habitat or other sensitive natural communities would occur during construction or operation of the proposed project and this issue is not discussed further.

The project site does not contain federally-protected wetlands or other features regulated under Section 404 of the Clean Water Act. The project site does not support any wetlands or waters regulated by other agencies. Therefore, no impact on wetlands would occur during construction or operation of the proposed project and this issue is not discussed further.

There is no adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan that applies to the project site. The South Sacramento Habitat Conservation Plan, which is currently in preparation, does not encompass the project area. The project would not conflict with any habitat conservation plans, and this impact is not discussed further.

The project site does not contain any aquatic habitats, including any waterways supporting fish populations. In addition, runoff from the project site drains into the City’s combined stormwater/sewer system and is treated prior to discharge. Therefore, the project would not have a direct or indirect effect on fisheries habitat or cause fish species to drop below self-sustaining levels. Impacts related to fishery resources are not discussed further.

The project site and surrounding downtown Sacramento area is characterized by urban development with limited vegetation, which consists primarily of ornamental trees and shrubs. There are no areas of native habitats or vegetation in the project vicinity. The project site does not support roosting habitat, including maternity roosts, for bat species, as discussed above. The project site neither connects nor separates any significant wildlife habitat areas. Furthermore, construction of the project is not expected to have any indirect effects to wildlife in Capitol Park because the level of disturbance from project construction would not be substantially greater than existing disturbances (e.g., traffic, construction, deliveries) in the area. Therefore, redevelopment of the site would not substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife species to drop below self-sustaining levels; threaten to eliminate a plant or animal community; interfere substantially with the movement of any resident or migratory fish or wildlife species or
with established resident or migratory wildlife corridors; or impede the use of wildlife nursery sites. Impacts related to these significance criteria are not discussed further.

**ENVIRONMENTAL IMPACTS**

**Impact 4.13-1: Conflict with any local applicable policies protecting biological resources**

Implementation of the project could result in the direct loss or temporary disturbance of trees protected under the City of Sacramento Tree Preservation Ordinance. This impact would be potentially significant.

Some trees on the project site may need to be removed for demolition of the CDFA Annex, construction of the 1215 O Street office building, and repaving of the CalVet surface parking lot. These would include small ornamental trees/shrubs adjacent to the existing CDFA Annex and the two palm trees on the northwest corner of the CalVet surface parking lot. Trees on State-owned land are generally not subject to the City of Sacramento Tree Preservation Ordinance. However, several trees along 12th Street and O Street between the sidewalk and adjacent streets, may qualify as “City street trees” (see the discussion of the City of Sacramento Tree Preservation Ordinance in Section 4.13.1, “Regulatory Background”). It is not anticipated that any of these trees along the perimeter of the project site would be removed; however, it is possible that as final site plans and construction access and operations requirements are developed, one or more City street trees may need to be pruned, roots may need to be cut during excavations, or a tree may need to be completely removed.

Although trees at the project site do not provide important wildlife habitat, loss or disturbance of City street trees would conflict with tree protection requirements in the City of Sacramento Tree Preservation Ordinance. This impact is considered potentially significant.

**Mitigation Measures**

**Mitigation Measure 4.13-1: Remove and replace trees consistent with the City of Sacramento Tree Preservation Ordinance**

Prior to construction, DGS will complete a survey of trees at the project site and prepare and submit a detailed tree removal, protection, replanting, and replacement plan to the City arborist. The tree removal plan will be developed by a certified arborist. The plan shall include the following elements:

- The number, location, species, health, and sizes of all trees to be removed, relocated, and/or replaced. This information will also be provided on a map/design drawing to be included in the in the project plans.

- Planting techniques, necessary maintenance regime, success criteria, and a monitoring program for all trees planted on, or retained on the project site.

DGS will ensure implementation of the tree relocation/removal/replacement plan during project construction and operation.

**Significance after Mitigation**

Implementation of this mitigation measure would reduce potentially significant impacts associated with tree removal to a less-than-significant level by providing replacement trees and complying with the City’s Tree Preservation Ordinance.
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4.14  PUBLIC SERVICES AND RECREATION

This section provides an overview of existing public services in the City of Sacramento and evaluates the potential for implementation of the 1215 O Street Office Building Project to affect availability, service level, and/or capacity of public services, including fire-protection services, police-protection services, solid waste disposal, parks and recreation, and public schools, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Other publicly provided utility services, such as water and wastewater treatment, stormwater management, electricity, and natural-gas services, are addressed in Section 4.5, “Utilities and Infrastructure.”

4.14.1  Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws are applicable to the provision of public services for the 1215 O Street Office Building Project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Fire Code
The 2016 California Fire Code, which incorporates by adoption the 2015 International Fire Code, contains regulations related to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code
State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire-suppression training.

California Building Standards Code (Title 24)
Energy consumption of new buildings in California is regulated by State Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The 2016 Building Energy Efficiency Standards have improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide energy consumption reduction.

Effective January 1, 2011, CALGreen became California’s first green building standards code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. CALGreen establishes mandatory minimum green building standards and requirements for construction and demolition (C&D) material diversion. Under Section 5.408 of the CALGreen Code, projects involving C&D activities are required to recycle and/or salvage for reuse a minimum of 65 percent of their nonhazardous C&D material. Applicable projects, such as the 1215 O Street Office Building Project, are required to prepare and implement a construction waste management plan.
California Integrated Waste Management Act
To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of their generated waste from landfill facilities by January 1, 1995 and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city’s AB 939 plan will be integrated with the county plan. In order of priority, the plans must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 1999, Governor Davis signed AB 75 (Chapter 764, Statutes of 1999), which mandated that State agencies comply with AB 939 diversion requirements.

In addition to the requirements of AB 75, the following policies and statutes address State agency recycling:

- Executive Order W-7-91 requires California State agencies to buy recycled products and set up recycling programs.
- Public Contract Code (PCC) Sections 12164.5–12167.1 require the CalRecycle to develop a recycling plan and implement recycling programs for the Legislature and all State-owned and leased buildings.
- PCC 12167.1 requires State agencies and institutions to report materials collected for recycling to the CalRecycle.
- PRC 42560–42562 requires the CalRecycle to recycle high-grade white office paper in California State offices.
- California State Administration Manual Chapter 1990 encourages employees at State facilities to prevent waste, reuse, and recycle.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this EIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the 1215 O Street Office Building Project. This evaluation is also intended to be used by local agencies for determining, as part of their permit process, the project’s consistency with local plans, policies, and regulations.

City of Sacramento 2035 General Plan
The following goals and policies in the General Plan Public Health and Safety Element are relevant to the analysis of effects on law enforcement, fire, and emergency services. The goals and policies listed below from the Education, Recreation, and Culture Element are relevant to the analysis of effects on schools, parks, and recreation. The goals and policies listed below from the Utilities Element are relevant to effects on solid waste.
Public Health and Safety Element

Goal PHS 1.1: Crime and Law Enforcement. Work cooperatively with the community, regional law enforcement agencies, local government, and other entities to provide quality police service that protects the long-term health, safety and well-being of our city, reduce current and future criminal activity, and incorporate design strategies into new development.

- **Policy PHS 1.1.2: Response Time Standards.** The City shall strive to achieve and maintain optimal response times for all call priority levels to provide adequate police services for the safety of all city residents and visitors.

- **Policy PHS 1.1.3: Staffing Standards.** The City shall maintain optimum staffing levels for both sworn police officers and civilian support staff in order to provide quality police services to the community.

- **Policy PHS 1.1.4: Timing of Services.** The City shall ensure that police facilities and services will keep pace with all development and growth in the city.

- **Policy PHS 1.1.7: Development Review.** The City shall continue to include the Police Department in the review of development proposals to ensure that projects adequately address crime and safety, and promote the implementation of Crime Prevention through Environmental Design principles.

- **Policy PHS 1.1.12: Cooperative Delivery of Services.** The City shall work with local, State, and Federal criminal justice agencies to promote regional cooperation in the delivery of services.

Goal PHS 2.1: Fire Protection and Emergency Medical Services. Provide coordinated fire protection and emergency medical services that address the needs of Sacramento residents and businesses and maintains a safe and healthy community.

- **Policy PHS 2.1.2: Response Time Standards.** The City shall strive to maintain emergency response times that provide optimal fire protection and emergency medical services to the community.

- **Policy PHS 2.1.3: Staffing Standards.** The City shall maintain optimum staffing levels for sworn, civilian, and support staff, in order to provide quality fire protection and emergency medical services to the community.

- **Policy PHS 2.1.4: Response Units and Facilities.** The City shall provide additional response units, staffing, and related capital improvements, including constructing new fire stations, as necessary, in areas where a fire company experiences call volumes exceeding 3,500 in a year to prevent compromising emergency response and ensure optimum service to the community.

- **Policy PHS 2.1.5: Timing of Services.** The City shall ensure that the development of fire facilities and delivery of services keeps pace with development and growth of the city.

Goal Policy PHS 2.2: Fire Prevention Programs and Suppression. The City shall deliver fire prevention programs that protect the public through education, adequate inspection of existing development, and incorporation of fire safety features in new development.

- **Policy PHS 2.2.2: Development Review.** The City shall continue to include the Fire Department in the review of development proposals to ensure projects adequately address safe design and on-site fire protection and comply with applicable fire and building codes.

- **Policy PHS 2.2.3: Fire Sprinkler Systems.** The City shall promote installation of fire sprinkler systems in new commercial and residential development, and shall encourage the installation of sprinklers in existing structures when it is reasonable and not cost prohibitive.
Policy PHS 2.2.4: Water Supply for Fire Suppression. The City shall ensure that adequate water supplies are available for fire-suppression throughout the city, and shall require development to construct all necessary fire suppression infrastructure and equipment.

Policy PHS 2.2.5: High-Rise Development. The City shall require that high rise structures include sprinkler systems and on-site fire suppression equipment and materials, and be served by fire stations containing truck companies with specialized equipment for high-rise fire and/or emergency incidents.

Education, Recreation, and Culture Element

Goal ERC 1.1: Efficient and Equitable Distribution of Facilities. Provide efficient and equitable distribution of quality educational facilities for life-long learning and development of a highly-skilled workforce that will strengthen Sacramento’s economic prosperity.

Policy ERC 1.1.1: School Locations. The City shall work with school districts at the earliest possible opportunity to provide school sites and facilities that are located in the neighborhoods they serve.

Policy ERC 1.1.3: Schools in Urban Areas. The City shall work with school districts in urban areas to explore the use of existing smaller sites to accommodate lower enrollments, and/or higher intensity facilities (e.g., multi-story buildings, underground parking, and playgrounds on roofs, or parking areas).

Goal ERC 2.2: Parks, Community and Recreation Facilities and Services. Plan and develop parks, community and recreation facilities and services that enhance community livability; improve public health and safety; are equitably distributed throughout the city; and are responsive to the needs and interests of residents, employees, and visitors.

Policy ERC 2.2.2: Timing of Services. The City shall ensure that the development of parks and community and recreation facilities and services keeps pace with development and growth within the city.

Policy ERC 2.2.3: Service Level Radius. The City shall strive to provide accessible public park or recreational open space within one-half mile of all residences.

Policy ERC 2.2.4: Park Acreage Service Level. The City shall strive to develop and maintain 5 acres of neighborhood and community parks and recreational facilities per 1,000 population.

Policy ERC 2.2.18: Private Commercial Recreational Facilities. The City shall encourage the development of private commercial recreational facilities to help meet recreational interests of Sacramento’s residents, workforce, and visitors.

Utilities Element

Goal U 5.1: Solid Waste Facilities. Provide adequate solid waste facilities, meet or exceed State law requirements, and utilize innovative strategies for economic and efficient collection, transfer, recycling, storage, and disposal of refuse.

Policy U 5.1.1: Zero Waste. The City shall achieve zero waste to landfills by 2040 through reusing, reducing, and recycling solid waste; and using conversion technology if appropriate. In the interim, the City shall achieve a waste reduction goal of 75 percent diversion from the waste stream over 2005 levels by 2020 and 90 percent diversion over 2005 levels by 2030, and shall support the Solid Waste Authority in increasing commercial solid waste diversion rates to 30 percent.

Policy U 5.1.8: Diversion of Waste. The City shall encourage recycling, composting, and waste separation to reduce the volume and toxicity of solid wastes sent to landfill facilities.

Policy U 5.1.9: Electronic Waste Recycling. The City shall continue to coordinate with businesses that recycle electronic waste (e.g., batteries, fluorescent lamps, compact-fluorescent (CFL) bulbs) and the California Product Stewardship Council to provide convenient collection/drop off locations for city residents.
Policy U 5.1.14: Recycled Materials in New Construction. The City shall encourage the use of recycled materials in new construction.

Policy U 5.1.15: Recycling and Reuse of Construction Wastes. The City shall require recycling and reuse of construction wastes, including recycling materials generated by the demolition and remodeling of buildings, with the objective of diverting 85 percent to a certified recycling processor.

Sacramento Parks and Recreation Master Plan
The Sacramento Parks and Recreation Master Plan is a policy document that addresses: recreation and human services; children’s and teen programs; community centers; park planning and development; partnerships; maintenance and tree planting; park operations and maintenance; marketing and special events; sustainability and department-wide administrative services. Some of the Parks and Recreation Master Plan policies that are relevant to the project are listed here.

Policy 3.5. Encourage integration of park and recreational amenities into the design of commercial, infill, employment, redevelopment, and transit oriented development.

Policy 12.1. Achieve Park Acreage Service Level Goals to provide public recreational opportunities within a reasonable distance of all residences and work places as follows:

a) 5.0 acres per 1,000 population consisting of two park categories:
   (1) Neighborhood Serving: 2.5 acres per 1,000 population with a service area guideline of ½ mile.
   (2) Community Serving: 2.5 acres per 1,000 population with a service area guideline of three miles, portions of which may also serve neighborhood needs.

b) Citywide/Regionally Serving: 8.0 acres per 1,000 population, portions of which may also serve either neighborhood or community needs.

c) Linear Parks/Parkways and Trails/Bikeways: 0.5 linear miles/1,000 population of trails/bikeways implemented per adopted City Bikeway and Pedestrian Master Plans.

Policy 12.9. Take an active role in ensuring sufficient parks, open space, parkways, and trails by participation in the land use planning and development processes of the City and other agencies.

Policy 12.10. Through the development conditioning process, encourage provision of private open space and recreation facilities in high density residential projects, mixed use projects, and employment centers in the vicinity of transit corridors to meet a portion of the open space and recreational needs of residents, employees, and visitors that will be generated by that development.

4.14.2 Existing Conditions

FIRE PROTECTION
The Sacramento Fire Department (SFD) provides fire prevention and protection services to the entire city, including the 1215 O Street Office Building Project evaluated in this EIR, and some small areas outside the city boundaries within the county. Contracted areas within SFD’s jurisdiction include the Fruitridge, Natomas, and Pacific Fire Protection Districts (SFD n.d.:3).

Under the direction of the Fire Chief, SFD is divided into three divisions: Office of the Chief, Office of Operations, and Office of Support Services. In addition to fire prevention and protection services, SFD manages emergency medical services, a hazardous materials program, a domestic preparedness program, an urban search and
Public Services and Recreation

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rescue task force, and a swift water rescue program. SFD also maintains automatic aid agreements with all of its neighboring agencies, and participates in the State mutual aid response system in coordination with the California Emergency Management Agency (CALEMA).

Twenty-four fire stations and engine companies are strategically located throughout the city to provide assistance to area residents. Each fire station operates within a specific district that comprises the immediate geographical area around the station. Seven stations are located in the downtown and eastern sections of the city (SFD n.d.:8). SFD also operates eight truck companies, one rescue company, and 14 medic units (SFD n.d.:5). During 2015, SFD responded to over 76,000 incidents with an additional approximately 7,200 incidents with mutual aid jurisdictions (SFD n.d.:11).

Fire stations closest to the 1215 O Street Office Building Project include:

- Station 1 at 624 Q Street,
- Station 2 at 1229 I Street,
- Station 5 at 731 Broadway, and
- Station 14 at 3145 Granada Way.

Suppression companies (engines and trucks) are staffed with four personnel consisting of a company officer (captain), engineer, and two firefighters. Ambulances are staffed with two firefighter paramedics or one firefighter paramedic and one firefighter-emergency medical technician (EMT) (SFD n.d.:10).

Station 1 would provide first responder service to the project site. This station is equipped with one engine and one medic transport with a staff of six personnel during one shift. In 2015, Station 1 responded to approximately 2,390 incidents (SFD n.d.:11).

The recommended standard for first-due fire unit is to arrive within 7 minutes of fire dispatch receiving the 911 call (for 90 percent of the calls) and 8-minute travel time or 11-minute total response time from fire dispatch receiving the call for an ambulance. The SFD current average response time is 8 minutes and 24 seconds to 90 percent of fire/Emergency Medical Services (EMS) incidents (Tunson, pers. comm., 2017a).

An important requirement for fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute (gpm), available to control a given fire and the length of time this flow is available. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code.

LAW ENFORCEMENT

California Highway Patrol

Police protection to State-owned property is provided by the CHP Capitol Protection Section (CPS). CPS is located at 1801 Ninth Street in Sacramento. This specific CHP office is responsible for providing police and safety services to the occupants and visitors to the State Capitol, Capitol Park, and hundreds of State-owned facilities in downtown Sacramento. CPS personnel, which includes 96 officers, are on duty all day and every day of the year (CHP 2017; White, pers. comm., 2017).

City of Sacramento Police Department

Police protection services are provided by Sacramento Police Department (SPD) for areas within the city. Patrol units for downtown Sacramento originate at the Richards Station (300 Richards Boulevard) (Wann, pers. comm., 2017). Police headquarters are located at the Public Safety Center, Chief John P. Kearns Administration Facility (5770 Freeport Boulevard). The Central Command, providing services to the downtown area, includes mounted, bike, marine, and foot beat units (SPD n.d.:14). The department uses a variety of data
that include geographic information systems (GIS)–based data, call and crime frequency information, and available personnel on an annual basis to meet the changing law enforcement demands of the city.

SPD maintains an unofficial goal of 2.0 to 2.5 sworn police officers per 1,000 residents. In 2015, SPD had 639 sworn employees (1.33 police officers per 1,000 residents) and 303 civilian employees. The 2015/2016 budget provided funding for 740 sworn and 292 civilian full-time equivalent (FTE) positions (SPD n.d.:9, 11). This would allow for 1.54 police officers per 1,000 residents. In 2015, SPD responded to Priority 2 calls (those classified as emergency situations requiring immediate police response) in approximately 9.5 minutes (SPD n.d.:24). SPD does not have an adopted response time standard.

SCHOOLS
The Sacramento City Unified School District (SCUSD) provides educational services to the City of Sacramento, including the 1215 O Street Office Building project site. SCUSD serves over 43,000 students in 77 schools. The three schools that serve the project vicinity are William Land Elementary School, Sutter Middle School, and C.K. McClatchy High School. As shown in Table 4.14-1, enrollment numbers have declined in the last 5 years. Currently, each of these schools has available capacity for additional students.

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Students</th>
<th>Available Capacity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Land Elementary School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011/2012</td>
<td>282</td>
<td>Yes</td>
</tr>
<tr>
<td>2012/2013</td>
<td>291</td>
<td></td>
</tr>
<tr>
<td>2013/2014</td>
<td>427</td>
<td></td>
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<tr>
<td>2014/2015</td>
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<tr>
<td>2015/2016</td>
<td>466</td>
<td></td>
</tr>
<tr>
<td>School Capacity</td>
<td>540</td>
<td></td>
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<tr>
<td>Sutter Middle School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011/2012</td>
<td>1,353</td>
<td>Yes</td>
</tr>
<tr>
<td>2012/2013</td>
<td>1,257</td>
<td></td>
</tr>
<tr>
<td>2013/2014</td>
<td>1,115</td>
<td></td>
</tr>
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<td></td>
</tr>
<tr>
<td>2015/2016</td>
<td>1,205</td>
<td></td>
</tr>
<tr>
<td>School Capacity</td>
<td>1,311</td>
<td></td>
</tr>
<tr>
<td>C.K. McClatchy High School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011/2012</td>
<td>2,365</td>
<td>Yes</td>
</tr>
<tr>
<td>2012/2013</td>
<td>2,350</td>
<td></td>
</tr>
<tr>
<td>2013/2014</td>
<td>2,321</td>
<td></td>
</tr>
<tr>
<td>2014/2015</td>
<td>2,239</td>
<td></td>
</tr>
<tr>
<td>2015/2016</td>
<td>2,268</td>
<td></td>
</tr>
<tr>
<td>School Capacity</td>
<td>2,358</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.14-1 School Enrollment

Source: California Department of Education 2017, City of Sacramento 2014:5-66 through 5-67

RECREATION
Recreational facilities in the vicinity of the 1215 O Street Office Building Project includes approximately 37 acres of parks serving the Capitol Area, including the 26-acre Capitol Park; the approximately 3-acre Roosevelt Park; the approximately 3-acre Fremont Park; and other parks more distant from the project site. Each of these parks is within less than 0.2 mile of the project site.

Capitol Park
Capitol Park encompasses 37 acres and 10 square blocks, bounded on the north by L Street, on the south by N Street, on the west by 10th Street, and on the east by 15th Street. Capitol Park is maintained by DGS. The dominant feature is the Capitol building itself and its office annex, but the park also includes memorials to veterans, rose gardens, shaded paved paths, and a wide variety of trees and shrubs.

City of Sacramento Parks and Recreation Department
The City Parks and Recreation Department provides recreation and leisure opportunities to the city with its park facilities and recreation programming. As of 2014, the City operated and maintained approximately 3,178 acres of developed parkland in 222 parks (City of Sacramento 2014:5-31). Within the Central City, there are 30 parks covering a total of 297 acres. These types of park facilities include neighborhood parks, community parks, city regional parks, city parkways, open space, and school parks.

The City owns and maintains Roosevelt Park and Fremont Park approximately 0.25-mile, or about three blocks, from the project site. Roosevelt Park is located at 1615 Ninth Street, located between Ninth and 10th Streets and P and Q Streets. This approximately 3-acre park includes picnic areas, a lighted baseball field, and a full-size soccer field. Fremont Park is located at 1515 Q Street between 15th and 16th Streets.
Public Services and Recreation

and P and Q Streets. This approximately 3-acre park includes a playground, central seating area, individual picnic tables, and walkways.

The City’s desired service area goal, identified in the policies listed above, is to provide public recreational opportunities within a reasonable walking or driving distance of all residences and concentrations of worker populations. The Parks and Recreation Master Plan provides a mechanism for acquiring parkland dedications and providing long-range planning for accommodating the future recreational needs of the city. As of 2014, the following service levels of parks were provided throughout the city:

- Neighborhood-serving: 1.6 acres per 1,000 residents of City-owned or -controlled and 2.5 acres per 1,000 residents with school sites included in the park acreage total.
- Community-serving: 1.8 acres per 1,000 residents of City-owned or -controlled and 2.4 acres per 1,000 residents with school sites included in the park acreage total.
- Citywide/regionally serving: 3.3 acres per 1,000 residents of City-owned or -controlled and 3.3 acres per 1,000 residents with school sites included in the park acreage total.

The total service levels for neighborhood and community parks and recreational facilities are not meeting the 5 acres per 1,000 population target identified in 2035 General Plan Policy 2.2.4.

SOLID WASTE

The waste stream generated in the City of Sacramento is over 474,000 tons per year and includes everything from recycling to C&D material to garden refuse (CalRecycle 2017a). The City collects all residential solid waste within city boundaries. Most of the residential waste is disposed at the Sacramento County Kiefer Landfill. Commercial solid waste is collected by private franchised haulers authorized by the Sacramento Solid Waste Authority. There are seventeen different solid waste haulers that provide solid waste collection for commercial properties and businesses in Sacramento. Waste collected in the city is disposed of at various facilities including Kiefer Landfill, the Yolo County Landfill, and L and D Landfill. For the landfills that serve the city, between 68 percent and 96 percent of their respective total capacities remain (see Table 4.14-2). Each of these landfills have a substantial amount of capacity remaining; approximately 68 percent of L and D Landfill’s capacity remains and 96 percent of Kiefer Landfill’s capacity remains.

<table>
<thead>
<tr>
<th>Table 4.14-2</th>
<th>Landfill Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>Average Amount of Waste Received per Day (tons)¹</td>
</tr>
<tr>
<td>L and D Landfill</td>
<td>444</td>
</tr>
<tr>
<td>Sacramento County Kiefer Landfill ²</td>
<td>1,632</td>
</tr>
<tr>
<td>Elder Creek Transfer and Recovery Station</td>
<td>NA</td>
</tr>
<tr>
<td>North Area Transfer Station</td>
<td>NA</td>
</tr>
<tr>
<td>Sacramento Recycling and Transfer Station</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note: NA = not applicable

¹ Calculated based on the total tons received in 2014 divided by 313 days and 365 days for L and D Landfill and Kiefer Landfill, respectively.

Source: CalRecycle 2017b, 2017c, 2017d, 2017e, 2017f
4.14.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Evaluation of potential public service impacts was based on a review of documents pertaining to the proposed project, including the City General Plan; the Capitol Area Plan (CAP); consultation with appropriate public service providers, such as SFD, CHP, SPD, and SCUSD; and field review of the project study area and surroundings. Impacts on public services that would result from the 1215 O Street Office Building Project were identified by comparing existing service capacity and facilities against future demand associated with project implementation.

Solid Waste

Solid waste disposal estimates for project operations were determined based on per-employee waste disposal rates for business groups as identified by CalRecycle. Rates are based on samples from similar types of businesses, including public administration and restaurants (CalRecycle 2017g). Public administration businesses generate an estimated 0.37 tons of solid waste per year per employee. Restaurants generate an estimated 1.92 tons of solid waste per year per employee. To provide a conservative estimate of solid waste generated by the project, these assumptions include waste that was recycled. Based on estimates by CalRecycle, 1 cubic yard of waste, compacted in a landfill, weighs 0.75 ton (CalRecycle 2017h).

THRESHOLDS OF SIGNIFICANCE

A public services impact is considered significant if implementation of the O Street Office Building Project would do any of the following:

- result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for
  - fire,
  - police protection,
  - schools,
  - parks, and
  - other public facilities;

- result in the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;

- result in the construction or expansion of recreational facilities that might have an adverse physical effect on the environment;

- generate solid waste beyond the capacity of existing landfills; or

- violate federal, State, or local statutes and regulations related to solid waste.
ENVIROMENTAL IMPACTS

Impact 4.14-1: Increased demand for fire protection facilities, equipment, and services

The 1215 O Street Office Building Project would result in an increased demand for fire protection facilities, equipment, and services. SFD would have adequate facilities and equipment to serve the project, would participate in the environmental review process, and would recommend fire prevention measures. In addition, the project would meet the minimum necessary fire protection and safety requirements identified in applicable codes and regulations. This impact would be less significant.

The 1215 O Street Office Building Project would demolish an existing, vacant four-story office building and develop up to 350,000 square feet of office space for up to 1,200 staff, ground floor commercial, and underground parking at 1215 O Street. The project also includes installation of photovoltaic solar panels over an existing surface parking lot located across O Street. A new fire water service with backflow, fire department connection, and a new fire hydrant would be constructed. The connection to the water system would be under 12th Street. Fire protection features would comply with the California Fire Code, including two fire pumps (one electric and one diesel powered) tied to a water storage tank in the basement, a sprinkler system throughout the building, and breathing air systems provided in the building.

The project site is located within the service area of SFD and Fire Station No. 1 would provide first responder service. There are no standard criteria for nonemergency response times; however, the average emergency response time for SFD is 8 minutes and 24 seconds to 90 percent of fire/EMS incidents (Tunson, pers. comm., 2017a), which does not meet the 7-minute recommended standard. Although SFD has the primary responsibility for fire prevention and fire suppression in the city, firefighting agencies generally work together under mutual aid agreements during emergencies. These teaming arrangements are handled through CALEMA (see “Fire Protection” in Section 4.14.2, “Existing Conditions,” above). Because the project site is located in a highly urbanized area, currently served by SFD, and is already developed with an existing structure, replacement of the existing structure with a new structure and adding solar panels to the existing parking lot would not affect the current demand for fire protection service at the site and would also not affect response times.

SFD has equipment designed to fight multistory building fires, including a 150-foot aerial ladder used for high-rise structures. In addition, buildings over 75 feet must conform to the portions of the State of California Building Code applicable to high-rise buildings, which require fire suppression items such as sprinkler systems. Because the office building would be up to 150 feet, the building would be equipped with sprinkler systems.

The State Fire Marshal would defer to the local fire authority, SFD, for water and fire access (Tunson, pers. comm., 2017a). As part of the project, SFD would participate in the environmental review process by reviewing project design plans and recommend additional design features or other fire safety prevention measures, as necessary. SFD conducts regular inspections to enforce fire protection and building code and safety standards in existing structures and new construction. In addition, fire safe construction activities are encouraged through inspection and plan checks of site access for emergency equipment, and through the confirmation of the availability of water supplies for new construction. The project would replace an existing old structure with a new structure that would be constructed according to minimum necessary fire protection and safety requirements identified in the Uniform Fire Code, Uniform Building Code, and other applicable regulations such as the portions of the State of California Building Code applicable to high rises; therefore, impacts on fire protection facilities, equipment, and services would be less than significant.

Mitigation Measures

No mitigation is required.
Impact 4.14-2: Increased demand for fire flow

The 1215 O Street Office Building Project would include the development of an office building up to 150 feet tall and ground floor commercial uses that would require adequate available water flow for fire suppression (fire flow). Because the project incorporates the necessary fire protection infrastructure into the building to meet this need, this impact would be less than significant.

SFD maintains oversight authority to ensure that adequate water volume and pressure are available in the department’s service area. Methods to calculate minimum fire flow involve design specific calculations, including the density of structures, height, number of stories, square footage, building materials, and structural design. In accordance with 2016 California Fire Code, fire flow requirements are 6,000 gpm (measured at 20 psi) with a minimum 4-hour duration for the 1215 O Street Office Building Project (Tunson, pers. comm., 2017b).

As described in Impact 4.14-1, the project would construct fire protection infrastructure that meets current code, including a new fire water service with backflow, fire department connection, fire hydrant, a water connection under 12th Street, fire pumps connected to a water storage tank, and a building sprinkler system. The project would construct the necessary fire suppression infrastructure to serve the building, and because DGS would not authorize the occupancy of any structures until the provision of fire flows as required by SFD and the California Fire Code has been confirmed, this impact would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.14-3: Increased demand for police protection facilities, services, and equipment

Implementation of the 1215 O Street Office Building Project would result in an increase in the demand for police services, which could result in a need for additional police officers, support staff, and related facilities. However, because the project would consolidate existing State offices and because CHP and SPD share a concurrent jurisdictional relationship for this service area, existing police services would be adequate to serve the 1215 O Street Office Building Project. This impact would be less than significant.

The CHP CPS provides patrol services to the project vicinity. The project would replace the existing four-story building at 1215 O Street with higher density State office uses, ground floor commercial, and install solar panels above the surface parking lot located across O Street, all of which would remain as State-owned facilities. Because CHP already provides service to this project site, the proposed project would not result in the need for additional equipment or police services beyond what is already provided by the CHP. The CPS unit of the CHP that serves the project site currently has adequate capacity to serve the proposed project (White, pers. comm., 2017). Additionally, the CPS unit participates in the Capitol Area Committee, through which CHP obtains information about planned additional State facilities and helps determine when additional staff, equipment, or facilities would need to be added.

Police services for the ground-level commercial services that would be located within the office building would be provided by SPD’s Richards Station, approximately 2.5 miles north of the project site. SPD does not have an adopted response time standard. In 2015, SPD responded to Priority 2 calls in 9.5 minutes (SPD n.d.:24). Although the office building would not be located in close proximity to the police station, police emergency response times would not be expected to increase, as emergency response often originates from squad cars on patrol beats, rather than the station itself. SPD currently has adequate capacity to serve the project (Wann, pers. comm., 2015).

In addition, CHP and SPD share a concurrent jurisdictional relationship within the area surrounding the Capitol, including the project site. Therefore, the levels of service provided by these departments would be adequate to serve the new 1215 O Street office building. This impact would be less than significant.
Mitigation Measures
No mitigation is required.

Impact 4.14-4: Increased demand for school services

Public schools that serve the project site include William Land Elementary School, Sutter Middle School, and C.K. McClatchy High School. The proposed project includes replacement of an existing office building with a new office building (including ground-level commercial uses); the project does not include residential uses that would create a more direct demand for public schools. Most of the employees that would occupy the new office building are current State employees that work in the immediate project vicinity. It is anticipated that new employees would either be current residents of the City of Sacramento or would commute from other areas within Sacramento County, rather than relocating to Sacramento from a distant city or another state. For these reasons, the project would be unlikely to result in substantial additional students within SCUSD facilities and the project would not result in any substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities the construction of which could cause significant environmental impacts. This impact is less than significant.

Most of the employees that would occupy the new office building would be relocated from existing State office buildings in the vicinity. The new employees (about 200) at the 1215 O Street office building could increase the number of residents in Sacramento and the surrounding area and, thus, increase the number of school age children attending SCUSD schools. It is anticipated that most employees would either be current residents of the City of Sacramento or would commute from other areas within Sacramento County, rather than relocating to Sacramento from a distant city or another state.

The schools that serve the project site have experienced declining enrolment numbers in the last 5 years (Table 3.14-1). Based on the most recent enrollment data, the three schools that serve the project site had a combined available capacity of 270 students. The increase in employment at the project site would not be expected to require new homes or the generation of employees that would exceed existing available capacity at nearby by schools, or elsewhere within the SCUSD. Because the schools that serve the project site have adequate capacity to serve project students, no new school facilities would be required.

The proposed project is unlikely to result in substantial additional students within SCUSD facilities. For these reasons, the project would not result in any substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities the construction of which could cause significant environmental impacts. This impact is less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.14-5: Increased demand for recreational facilities

The 1215 O Street Office Building Project would add about 200 employees in the immediate project vicinity. With the addition of this small number of employees, daytime use of nearby parks by employees associated with the proposed project would not substantially increase above the current level of use. Because construction at or expansion of existing parks and recreational facilities would not be necessary as a result of this incremental increase in park/recreational facility use, this impact is considered less than significant.

The 1215 O Street Office Building Project includes replacement of an existing office building, which would be occupied mostly by relocating existing State employees currently working in the project vicinity, but would include approximately 200 new employees (12 associated with the proposed ground-floor commercial use and approximately 150 associated with anticipated staff growth between existing conditions and the opening of the proposed new building).
With implementation of the proposed project, most employees occupying the new facility would be relocated from existing State buildings in the vicinity of the project and would therefore be expected to use the same parks as they used previously, particularly Capitol Park, maintained by DGS, and Roosevelt Park and Fremont Park, maintained by the City, which are within walking distance of the project site. Daytime use of these parks would minimally increase because of the approximately 200 new employees generated by the proposed project. Construction of new parks or expansion of existing parks and recreational facilities would not be necessary as a result of this minimal increase in park/recreational facility use. DGS is not required to pay City park-development fees for nonresidential development, and ongoing maintenance of Capitol Park is funded through bonds, grants, and visitor fees collected from museums and concessions. Because the proposed project would not increase demand or use of parks that would require new or expanded parks facilities, the potential for an adverse environmental effect to occur is minimal, and the impact is considered less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.14-6: Increased generation of solid waste beyond the capacity of existing landfills**

The 1215 O Street Office Building Project would generate up to 50,000 cubic yards of C&D waste during project construction, which would be reduced to an estimated 17,500 cubic yards after meeting recycling and/or salvaging requirements. The increase in employees generated by the project would result in an estimated 0.13 tons/day and approximately 47 tons/year (62 cubic yards/year) of solid waste generated during project operations after meeting recycling requirements. Multiple landfills are located throughout the region and have adequate capacity for disposal of solid waste generated by construction and operation of the project. Therefore, this impact is considered less than significant.

Approximately 1,200 State employees would relocate from their existing location at the Bateson Building to the 1215 O Street office building. As described in Impact 4.3-2 in Section 4.3, “Population, Employment, and Housing,” the proposed project would indirectly generate new jobs up to the amount that currently exist in the Bateson Building, which would be an estimated 1,200 employees. Additionally, as described in Impact 4.3-2 in Section 4.3, “Population, Employment, and Housing,” the proposed project would result in up to approximately 200 new full-time equivalent employees associated with the ground floor commercial uses in the 1215 O Street office building and anticipated growth in State jobs between existing conditions and the opening of the proposed new building. This analysis discusses the estimated waste associated with approximately 200 new employees.

Operation of the proposed project would generate an estimated 93 tons/year, primarily generated by the office uses (see Table 4.14-3). The amount of waste generated by operation of the project would be less than shown in Table 4.14-3 because the project would be required to recycle a minimum of 50 percent of their waste, as required for State operations by AB 75 and AB 939. With implementation of waste diversion and reduction requirements, it is estimated that approximately 0.13 tons/day and approximately 47 tons/year (62 cubic yards/year) of waste generated by the increase in employees resulting from implementation of the 1215 O Street Office Building Project would be disposed in a landfill. Because the project involves relocating 1,000 State employees, it is estimated that the waste generated by those employees would be relocated from their existing building location to the 1215 O Street building. It is reasonable to assume that the existing employees generate an estimated 370 tons/year (493 cubic yards/year) of solid waste, but with implementation of waste diversion and reduction requirements an estimated 185 tons (247 cubic yards) would be disposed of in a landfill each year.
### Table 4.14-3  Estimated Solid Waste Generated by Operation of the Proposed Project

<table>
<thead>
<tr>
<th>Employment Type</th>
<th>Number of Employees</th>
<th>Disposal Rate&lt;sup&gt;1&lt;/sup&gt; (tons/employee/year)</th>
<th>Tons per Day</th>
<th>Tons per Year</th>
<th>Cubic Yards per Day</th>
<th>Cubic Yards per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>188</td>
<td>0.37</td>
<td>0.19</td>
<td>70</td>
<td>0.25</td>
<td>93</td>
</tr>
<tr>
<td>Food Court</td>
<td>12</td>
<td>1.92</td>
<td>0.06</td>
<td>23</td>
<td>0.08</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>NA</td>
<td>0.25</td>
<td>93</td>
<td>0.34</td>
<td>124</td>
</tr>
</tbody>
</table>

Note: NA = not applicable

<sup>1</sup> To provide a conservative estimate of waste generated by the project, the generation rates used here include waste that may be recycled or otherwise diverted from the landfill.

Source: CalRecycle 2017g

Before construction of the 1215 O Street office building begins, the existing CDFA Annex building would be demolished and removed. During demolition, materials such as concrete and steel would be separated, sorted, and recycled. As demolition proceeds, concrete, metals, and other recyclable materials would be taken to local recycling centers. An estimated 20,000 cubic yards of waste would be generated by demolition of the existing building and up to 30,000 cubic yards of waste would be generated during construction of the proposed project. In accordance with Section 5.408 of the CALGreen Code, the project would implement a Construction Waste Management Plan for recycling and/or salvaging for reuse of a minimum of 65 percent of C&D debris generated during project construction. Additionally, the proposed project would also be required to meet Leadership in Energy and Environmental Design version 4 (LEED v4) requirements for waste reduction during construction (see Appendix K for LEED v4 checklist). After recycling and/or salvaging a minimum of 65 percent of C&D debris, if waste haulers choose to take C&D waste to one of the nearby landfills, the project’s remaining C&D waste, 17,500 cubic yards, would be 0.42 percent of L and D Landfill’s remaining capacity and 0.02 percent of Kiefer Landfill’s remaining capacity.

Individual businesses, including State buildings and facilities, are required to contract their own solid waste collection service. Commercial solid waste haulers can dispose of the collected waste at any landfill facility or transfer station they select. Multiple landfills, including Sacramento County Kiefer Landfill, L and D Landfill, and recycling and transfer stations, are located throughout the region. Table 4.14-2, above, shows the permitted daily disposal capacities, total landfill capacity, and remaining landfill capacity of these facilities. The estimated amount of waste generated by the project on a daily basis, after diverting recyclable material, would represent approximately 0.005 percent of the permitted daily disposal capacity of the transfer stations and L and D Landfill and 0.001 percent of Kiefer Landfill’s permitted daily disposal capacity. The annual amount of solid waste generated by the project, after diverting recyclable material, would be approximately 0.002 percent of the remaining capacity of L and D landfill and approximately 0.00005 percent of Kiefer Landfill’s remaining capacity. While the private hauler that would serve the 1215 O Street office building may take solid waste to a transfer station or landfill of their choice, as discussed above, there is adequate capacity at transfer stations and landfills in the region to serve the project. These facilities have adequate capacity for disposal of solid waste generated by construction and operation of the 1215 O Street Office Building Project. This impact would be less than significant.

**Mitigation Measures**

No mitigation is required.
4.15 AESTHETICS, LIGHT, AND GLARE

This section provides a description of existing visual conditions, meaning the physical features that make up the visible landscape, near the 1215 O Street Office Building Project site and an assessment of changes to those conditions that would occur from project implementation. The effects of the project on the visual environment are generally defined in terms of the project’s physical characteristics and potential visibility, the extent to which the project’s presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the project would alter existing views. The “Analysis Methodology” discussion below provides further detail on the approach used in this evaluation.

4.15.1 Regulatory Background

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the 1215 O Street Office Building Project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Capitol Area Plan

The 1997 Capitol Area Plan (CAP) serves as the master plan for development of state-owned land within the Capitol Area. A few of the statutory objectives and related principles that form the basis of the CAP both directly and indirectly address design objectives and aesthetic issues, as follows:

- **Land Use.** To establish patterns of land use in the Capitol Area which are responsive to the goals of the Capitol Area Plan, which provide for flexibility in meeting future State needs, and which protect the State’s long-term interest without inhibiting the development process.

  - **Principle 3:** Consider transit accessibility, protection of the State Capitol Building’s prominence, and linkage to surrounding neighborhoods in the location, intensity, and design of development.

- **State Offices.** To provide offices and related services to meet present and future space requirements for the State of California near the State Capitol and in the context of metropolitan Sacramento, in the most effective manner.

  - **Principle 3:** Ensure that building massing for office development enhances the Capitol Area’s urban character, respects and maintains the State Capitol Building and Capitol Park as the focus of the Capitol Area, and provides adequate transition to the surrounding neighborhoods.

  - **Principle 5:** Intensify office space use on underutilized sites or in aging State facilities through renovation of existing buildings or through redevelopment.

- **Open Space and Public Amenities.** To develop within the Capitol Area a network of attractive and convenient open spaces and access routes to improve the environment for workers, residents and visitors, and to encourage a favorable response to alternatives for moving within and using the resources of the Capitol Area.

  - **Principle 2:** Incorporate open space features into new office facilities and housing developments.
Principle 4: Ensure a streetscape that enhances the Capitol Area's identity and sense of place, is responsive to the needs of pedestrians and the requirements of adjacent activities, and orients visitors to destinations and services within the Capitol Area. Chapter 11 of the 1997 Capitol Area Plan includes a set of “Urban Design Guidelines,” which are broadly intended to promote the Capitol Area’s identity, vitality, and sense of place, and foster an environment that is conducive to living, working, and visiting. The relationship between buildings and streets, pedestrian shade and comfort, visitor orientation, and safety are all important components of neighborhood building.

The following Urban Design Guidelines included in the CAP do not represent commitments to specific design solutions, nor are they implementing actions. These guidelines outline an advisory framework to guide the character and quality of the urban environment. They are intended as suggestions to be used by architects, site planners, and developers for development of specific sites (DGS 1997). The Urban Design Guidelines are as follows:

- Guideline 1. Maintain the State Capitol Building as the focus of the Capitol Area.
- Guideline 2. Ensure that all development complies with the stipulations of the Capitol View Protection Act.
- Guideline 3. Promote mixed-use development.
- Guideline 4. Maintain building intensities that are appropriate to the role of the Capitol Area and its setting.
- Guideline 5. Promote harmony between the old and the new.
- Guideline 6. Promote development that is pedestrian-friendly and has a neighborhood orientation.
- Guideline 7. Facilitate building identification and visitor orientation through a comprehensive signage program.
- Guideline 8. Promote streetscapes that further the Capitol Area’s identity, and promote pedestrian comfort and safety.

Capitol View Protection Act
The Capitol View Protection Act (Government Code Section 8162 et seq.) was enacted to maintain the visual prominence of the State Capitol by setting height restrictions in zones surrounding the Capitol building (See Exhibit 4.15-1), and to maintain the existing urban edge of surrounding streets by requiring certain building setbacks. The specified height limit does not apply to decorative building caps or rooftop mechanical equipment that is screened and placed in the farthest possible location when viewed from the State Capitol or Capitol Park. Building heights at the 1215 O Street Office Building Project site are limited to 150 feet on the portion of the site that includes the CDFA Annex, and 250 feet on the portion of the site that includes the CalVet surface parking lot (DGS 2005: 4.15-4). There are no setback requirements for structures on the project site (California Office of Historic Preservation 2015: pp. 32-35).

California Green Building Standards Code
The California Green Building Standards Code (CALGreen Code) is Part 11 of the California Buildings Standards Code and is the first statewide green building code in the U.S. The purpose of CALGreen is to improve public health, safety and general welfare by enhancing the design and construction of buildings using building concepts that have a positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to State-owned buildings, among others. The 2016 California Green Building Standards Code includes mandatory standards to reduce light pollution for subject properties (California Building Standards Commission [CBSC] 2017a; CBSC 2017b). The provisions of the code include maximum allowable backlight, uplight, and glare ratings intended to minimize light pollution to maintain dark skies and to ensure that newly constructed projects reduce the amount of backlight, uplight, light and glare from exterior sources.
Exhibit 4.15-1  
Capitol View Protection Act Height Restrictions
California Scenic Highway Program
The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the highways. The closest highway to the 1215 O Street Office Building Project site that is designated scenic is State Route (SR) 160. SR 160 parallels the Sacramento River and is designated scenic between the Contra Costa/Sacramento County line and the south city-limit line for the City of Sacramento. The north terminus of the segment of the highway that is designated scenic is more than 7 miles from the 1215 O Street Office Building Project site, and the site is not visible from this location. No other state-designated scenic highways are near the project site (Caltrans 2017).

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS
The 1215 O Street Office Building Project is located on State-owned property, has been authorized and funded by the State of California through the State Projects Infrastructure Fund (SPIF), and would be implemented by the Department of General Services (DGS). As explained in Section 4.2 “Land Use” of this DEIR, under Section 4.2.1 “Local Plans, Policies, Regulations, and Laws,” State agencies are not subject to local plans, policies, and zoning regulations. Nevertheless, in the exercise of its discretion, DGS does reference, describe, and address local plans, policies, and regulations that are applicable to the project. This evaluation is also intended to be used by local agencies for determining, as part of their permit processes, the project’s consistency with local plans, policies, and regulations.

City of Sacramento 2035 General Plan
The following goals and policies from the Land Use and Environmental Resources Elements of the City of Sacramento 2035 General Plan (2035 General Plan) are relevant to the analysis of aesthetics, light, and glare effects.

Goal LU 2.4 City of Distinctive and Memorable Places. Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento’s unique historic, environmental, and architectural context, and create memorable places that enrich community life.

- Policy LU 2.4.1 Unique Sense of Place. The City shall promote quality site, architectural and landscape design that incorporates those qualities and characteristics that make Sacramento desirable and memorable including: walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles.

- Policy LU 2.4.2 Responsiveness to Context. The City shall require building design that respects and responds to the local context, including use of local materials where feasible, responsiveness to Sacramento’s climate, and consideration of cultural and historic context of Sacramento’s neighborhoods and centers.

Goal LU 2.7 City Form and Structure. Require excellence in the design of the city’s form and structure through development standards and clear design direction.

- Policy LU 2.7.3 Transitions in Scale. The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.

- Policy LU 2.7.6 Walkable Blocks. The City shall require new development and reuse and reinvestment projects to create walkable, pedestrian-scaled blocks, publicly accessible mid-block and alley pedestrian routes where appropriate, and sidewalks appropriately scaled for the anticipated pedestrian use.

- Policy LU 5.6.5 Capital View Protection. The City shall ensure development conforms to the Capital View Protection Act.
Policy ER 7.1.1 Protect Scenic Views. The city shall avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall.

Policy ER 7.1.3 Lighting. The city shall minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare.

Policy ER 7.1.4 Reflective Glass. The city shall prohibit new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building.

The 1215 O Street Office Building Project site is located within the Central Business District as designated in the 2035 General Plan. The 2035 General Plan includes Urban Form Guidelines that apply to this area. The Central Business District is Sacramento’s most developed area, and the vision for this area includes a vibrant downtown core that will continue to serve as the business, governmental, retail, and entertainment center for the city and the region. A significant element envisioned for the future is to include new residential uses intended to add vitality to this area. The Urban Form Guidelines identify a mixture of mid- and high-rise buildings creating a varied and dramatic skyline and mixed-use development as key urban form characteristics.

Central City Community Plan
The Central City Community Plan, which is intended to supplement the citywide policies above, includes the following relevant policies:

Policy CC.LU 1.4 Office Development. The city shall encourage public and private office development, where compatible with the adjacent land uses and circulation system, in the Central Business District, Southern Pacific Railyards, and Richards Boulevard area.

Policy CC.LU 1.5 Central Business District. The city shall improve the physical and social conditions, urban aesthetics, and general safety of the Central Business District.

Sacramento Central City Urban Design Guidelines
The City has design guidelines for each design review district within the city. The guidelines are used by the City’s Design Review and Preservation Board to integrate projects with the appearance, scale, capacity, and character of various neighborhoods or districts in the city. The 1215 O Street Office Building Project is located in the Central Business District and the Central Core Design Guidelines Area (City of Sacramento 2009). These guidelines convey the City’s expectations for design excellence in the Central City (City of Sacramento 2009: 1.1-1 – 1.1-6).

The intent is to ensure that all development in the Central City contributes to making downtown Sacramento a unique and special place that includes a residential component integrated into the commercial center. To advance the vision set forth in the 2030 General Plan to be “the most livable city in America,” the new Central Core Design Guidelines (Section 3 of the Urban Design Guidelines) are intended to ensure that proposed higher density development also provides the qualities and amenities that will create an attractive, livable downtown with a lively mix of uses, walkable streets, an open and interesting skyline, and a high level of design expression (City of Sacramento 2009: 1.1-1 – 1.1-6).
### 4.15.2 Existing Conditions

#### VISUAL CHARACTER OF THE PROJECT SITE

Exhibit 4.15-2 shows the location of views of the project site and surrounding areas that correspond to Exhibits 4.15-3 through 4.15-6. The existing visual conditions of the project site are shown in Exhibit 4.15-3; the existing CDFA Annex is shown in Photo 1 and the CalVet surface parking lot is shown in Photo 2.

The vacant 115,000 square-foot (sq. ft.), four-story CDFA Annex was constructed in 1953. It is an unarticulated rectangular building, painted in taupe and cream, with rows of large windows at each floor. The art-deco style entrance faces O Street, which is closed to vehicular through traffic in that location. The building fills the site, with setbacks that include a small dirt area and a landscape strip with shrubs and small trees between the building and the sidewalks on 12th Street and O Street. There are shrubs and small trees bordering the building on the O Street facing side, and street trees set in the sidewalk along 12th Street and O Street. Street parking is provided along 12th Street and O Street. The CDFA Annex is connected to the main Food and Agriculture building with a skybridge over Neighbors Alley. The Food and Agriculture building faces N Street directly across from Capitol Park and southeast of the California State Capitol Building. South of the CDFA Annex, across O Street, is a paved surface parking lot, surrounded by a landscaped hedge, with two large palm trees in the northwest corner, and street trees set in the sidewalk. This surface parking lot is used for employee parking for the California Department of Veterans Affairs (CalVet). The corner of 12th and O Streets has overhead lines serving the Regional Transit light rail line that runs along O Street to the west and south on 12th Street.

#### VISUAL CHARACTER OF THE SURROUNDING AREA

Land uses surrounding the 1215 O Street building site include State office buildings: the five-story Department of Transportation (Caltrans) Headquarters building to the west across 12th Street; the historic four-story Food and Agriculture building to the north, and the six-story California Department of Veterans Affairs building directly to the east at the corner of O Street and 13th Street. Neighbors Alley runs between the four-story CDFA Annex and the Food and Agriculture building to the north and N Street and Capitol Park are located just north of the Food and Agriculture building. The high-rise (14-story) tower Park Place Affordable Senior Studios and the three-story Westminster Presbyterian Church are located at the intersection of N Street and 13th Street to the northeast of the project site. In addition, there are surface parking lots, parking garages, and a light rail station and tracks in 12th Street and O Street.

As described above, a mix of low-rise, mid-rise, and high-rise buildings surround the project site. For the purposes of this analysis, low-rise buildings are considered to include those that stand from one to four stories above ground level; mid-rise buildings include those that stand five to 12 stories above ground level; and high-rise buildings include those that stand 13 or more stories above ground. The tallest building—the Park Place Affordable Senior Housing Studios—stands at 14 stories with unscreened rooftop appurtenances (such as individual satellite discs) and is located at the southwest corner of N Street and 13th Street (the same block as the CDFA Annex, and kitty corner to the project site). The Westminster Presbyterian Church at the corner of 13th and N Streets also features a bell tower that extends well beyond the rooftop of the main structure and is a prominent feature in the area. Streets are generally framed by buildings and mature ornamental trees. Most buildings have minimum setbacks from the street.

#### VIEWS OF THE PROJECT SITE AND SURROUNDING AREA

As described above, Exhibit 4.15-3 (Photos 1 and 2) shows the existing CDFA Annex from a viewpoint looking northwest from the corner of 12th Street and O Street (Photo 1) and the existing CalVet surface parking lot looking southwest from the same vantage point (Photo 2).
Exhibit 4.15-3

Photo Location Map
Exhibit 4.15-4 shows the buildings located north of the project site (on the same block between 12th and 13th Streets), the Food and Agriculture Building (Photo 3) and the Park Place Affordable Senior Studios (Photo 2), which face N Street and Capitol Park. The Food and Agriculture Building is a four-story historic art-deco State office building. The Park Place Affordable Senior Studios include a 14-story tower; the low-rise entry and the balconies of the tower are shown in the background of Photo 4.

Exhibit 4.15-5 shows the mid-rise Caltrans Headquarters Building (Photo 5) and light rail cars/track adjacent to the west of the project site at the corner of 12th and O Streets (Photo 6).

Exhibit 4.15-6 shows the surface parking lot and a mid-rise parking structure across from the CalVet surface parking lot to the west on 12th Street (Photo 7) and residential apartment building on the south side of O Street, east of the CalVet surface parking lot (Photo 8).

**LIGHT AND GLARE CONDITIONS**

Existing sources of light and glare are uniformly present in the project vicinity. Existing sources of light include street lights along project roadways; lights in parking lots, along walkways, and on the exteriors of buildings; lights associated with the light rail system; and interior lights in buildings.

Natural and artificial light reflect off various surfaces and can create localized occurrences of daytime and nighttime glare. Buildings and structures made with glass, metal, and polished exterior roofing materials exist throughout the Capitol Area; however, there are no reported occurrences of excessive daytime or nighttime glare in the project vicinity.

**SHADOWS**

The evaluation of shading and shadows in this DEIR is limited to daytime shadows cast by objects blocking sunlight. The angle of the sun, and hence the character of shadows, varies depending on the time of year and the time of day; however, in the Northern Hemisphere, the sun always arcs across the southern portion of the sky. During the winter, the sun is lower in the southern sky, casting longer shadows compared to other times of year. During the summer months, the sun is higher in the southern sky, resulting in shorter shadows. During the summer, the sun can be almost directly overhead at midday, resulting in almost no shadow being cast. During all seasons, as the sun rises in the east in the morning, shadows are cast to the west; at mid-day, the sun is at its highest point and shadows are their shortest, and cast to the north; and as the sun sets in the west in the afternoon/evening, shadows are cast to the east. Because of the climate in the Sacramento area, midday and afternoon shade in summer can be beneficial. In the winter, however, access to sunlight can be beneficial.

Tall buildings are common in downtown Sacramento and frequently cast substantial shadows for a portion of the day. The numerous street trees and interior trees in the area also provide a substantial source of shade and shadow, which is considered an amenity during the Sacramento area’s hot summers. There are few areas in downtown Sacramento that are not shaded during at least part of the day.
Ascent Environmental  Aesthetics, Light, and Glare

California Department of General Services
1215 O Street Office Building Project Draft EIR 4.15-9

Exhibit 4.15-3 Project Site – Existing Conditions

Photo 1: View of CDFA Annex looking northeast from the corner of 12th and O Streets

Photo 2: View of CalVet surface parking lot looking southeast from the corner of 12th and O Streets

Source: Ascent Environmental 2017
Exhibit 4.15-4  Views of Surrounding Land Uses

Photo 3: View of Food and Agriculture Building looking east from the corner of 12th and N Streets

Photo 4: View of Park Place Affordable Senior Housing Studios looking west from the corner of 13th and N Streets
Source: Ascent Environmental 2017
Photo 5: View of Caltrans Headquarters Building looking northwest from the corner of 12th and O Streets

Photo 6: View of light rail cars looking southwest from the CDFA Annex at the corner of 12th and O Streets

Source: Ascent Environmental 2017
Photo 7: View of surface parking and parking garage looking south from the corner of 12th and O Streets

Photo 8: View of residential apartments on O Street looking south from the California Department of Veterans Affairs building at the corner of 13th and O Streets

Source: Ascent Environmental 2017
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

ANALYSIS METHODOLOGY

The method used for this assessment of impacts on aesthetics, light, and glare is adapted from guidelines prepared by the Federal Highway Administration (2015) for assessing visual impacts associated with transportation projects; these guidelines are easily transferred to other types of projects that could alter existing landscapes. The process of describing and evaluating visual resources near the 1215 O Street Office Building site and the surrounding areas involves the following steps:

- identify the visual features or resources that comprise and define the visual character of the viewsheds (A viewshed is a physiographic area composed of land, water, biotic, and cultural elements that may be viewed and mapped from one or more viewpoints and that has inherent scenic qualities and/or aesthetic values as determined by those who view it.);
- assess the quality of the identified visual resources relative to overall regional visual character;
- identify major viewer groups and describe viewer exposure; and
- identify viewer sensitivity, or the relative importance of views to people who are members of the viewing public.

The area of potential visual impacts for the 1215 O Street Office Building Project is limited to downtown areas south and southeast of the State Capitol. Elements considered when evaluating the general visual quality and character of the downtown Sacramento area include commercial buildings, office buildings, residences, parking lots, streets, and other structures; trees and landscaping; public outdoor spaces such as parks and plazas; and views of the State Capitol and Capitol Park.

Viewer exposure refers to the location of viewer groups, the number of viewers, and the frequency and duration of views. Viewer sensitivity varies depending on the characteristics and preferences of the viewer group. An assessment of viewer sensitivity can be made based on the extent of the public’s concern for a particular landscape or for scenic quality in general. Viewer sensitivity differs among various groups of people in the project vicinity. For this analysis, visual sensitivity of viewers is generally rated moderate in most portions of the visual impact area (i.e., the vicinity of city blocks or properties where project facilities could be located) for the reasons discussed below. Given the mix of office, commercial, and residential uses in downtown (Exhibit 3-2), the viewer group considered in this DEIR is comprised of commuters, office-workers, pedestrians (tourists), and residents/homeowners.

It is estimated that many viewers who would move through the local visual study area (i.e., the Capitol Area as defined above and shown on Exhibit 4.15-1) are commuters who acquire only fleeting views of the surrounding neighborhoods, and whose focus is on their travels. This group is considered to have a low visual sensitivity. Although this viewer group has ongoing views of elements within the project study-area viewsheds, viewer sensitivity tends to be somewhat lower for people driving to and from work or as part of their work environment.

Viewer sensitivity for office workers with daily fixed views of portions of the local visual study area is generally considered to be moderate. The members of this group may have extended and repeated views of their surroundings on a daily basis, but would generally have lower expectations for visual elements because they are in a work environment rather than at home or in a recreational area.

Viewer sensitivity for pedestrians who are viewing portions of the visual study area at the street level is generally expected to be high because of the location of foreground visual elements along city streets, and because a segment of this viewer group is likely to be tourists who are focused on the cultural environment around them. Viewer sensitivity for homeowners or other local residents is also expected to be high for the viewshed near their homes. Some local residents, including those who occupy the high-rise Park Place...
Affordable Senior Studios on the same block as the project on the corner of N Street and 13th Street, would have elevated views of elements of the proposed 1215 O Street Office Building.

Visual Simulations
Two visual simulations of the proposed 1215 O Street Office Building Project were prepared using photographs of existing conditions aligned with a schematic digital 3D model of the proposed office building. The proposed building and site improvements were rendered and shown as a massing, meaning that the building is shown as a simple 150-foot high block with generalized window and door cut-outs. Specific design elements such as decorative trim, roof overhang, and materials are not depicted because these final details of the building would be established by the Design-Build Team (see Section 3.3 of this DEIR for a description of the Design-Build process).

Shadow Analysis
Plan view images depicting the shadows that would be cast by the existing and proposed 1215 O Street Building Project were prepared to illustrate how shadows would be cast during summer, fall/spring equinox, and winter conditions. The images also compared the shadows that would be cast at 9:00 a.m., 12:00 p.m., and 4:00 p.m. The shadows for the proposed building used a generalized massing option reaching the 150-foot maximum building height.

THRESHOLDS OF SIGNIFICANCE
An impact on aesthetics, light, and glare is considered significant if implementation of the 1215 O Street Office Building Project would do any of the following:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a State scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings;
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area;
- create additional shadowing on shadow-sensitive uses (e.g., residences or parks) during a substantial portion of the day; or
- conflict with the provisions of the Capitol View Protection Act (Government Code Section 8162 et seq.).

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER
A scenic vista is considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. The project site is located in a developed urban setting and does not contain remarkable scenery or views of natural areas that would be considered a scenic vista. The east-facing view down Capitol Mall to the State Capitol is considered a scenic vista. However, although the east end of Capitol Mall is within 0.25 mile of the project site, the project site is not visible from the Mall, and Capitol Mall is not visible from the project site, because of intervening buildings. The project is also consistent with height limits set forth in the Capitol View Protection Act, which is discussed further below.

The project site is not located near a designated scenic highway corridor or area. As described previously, a portion of SR 160 between the Contra Costa/Sacramento County line and the Sacramento city limit line is a designated scenic route. The north terminus of the highway segment that is designated scenic is more than 7 miles from the project site, and the project site cannot be seen from this location. At this distance, the upper floors of taller buildings in the downtown Sacramento area may be visible from limited vantage points.
and would indicate the center of urban development in the region. However, an alteration of the skyline at this distance would be unremarkable.

The CalVet parking lot would be used as a staging area during demolition of the CDFA Annex and construction of the replacement building. Construction is anticipated to begin in early 2018, and tenant occupancy is anticipated some time in 2021. During this short-term period, neighboring businesses and residences may be exposed to unsightly views of the exposed dirt, construction equipment, construction fencing, and, between the time the foundation is laid until the building is finished, a partially complete structure. Temporary views of construction projects are common in an urban setting and do not constitute an adverse change in the permanent visual environment.

ENVIRONMENTAL IMPACTS

Impact 4.15-1: Substantially degrade existing visual character or quality

The 1215 O Street Office Building Project would replace the existing four-story CDFA Annex with a new office building, with a maximum height of 150 feet. The project is located within an urban setting in downtown Sacramento. The site design and building construction materials and finishes would be consistent with high-quality civic buildings in an existing prominent urban setting. Because the proposed project is located on a site with an existing office building and surface parking lot surrounded by a mix of low-rise, mid-rise, and high-rise buildings, the local visual character, as experienced by viewer groups in the area, would not be substantially altered. The replacement of the CDFA Annex at 1215 O Street and installation of solar panels on the rooftop and south face of that building and a solar array over the adjacent CalVet surface parking lot would not result in the substantial degradation of the existing visual character or quality of the site and its surroundings. Therefore, this impact is less than significant.

The viewshed for people near the project site includes a wide mix of architectural styles from different eras. The proposed project involves replacing the vacant four-story CDFA Annex with a new State office building up to 150 feet tall (estimated to be up to 10 stories above grade). The existing CDFA Annex is a rectangular four-story (low-rise) building and has a character indicative of other State office buildings in the surrounding area constructed in the 1950s. Replacement of the existing building with a new State office building would retain the general character of State offices in downtown Sacramento near the State Capitol. Although the new office building would be six stories taller than the existing CDFA Annex, it would blend with the existing mix of urban low-rise, mid-rise, and high-rise buildings in the immediate project surroundings. A conceptual example of the mass of a building that would generally meet the project height and capacity criteria is shown in Exhibits 4.15-7 and 4.15-8. In addition to being located amid a mix of low-rise, mid-rise, and high-rise buildings, the proposed 1215 O Street Office Building Project would comply with the CAP design objectives and guidelines, as well as the City’s Central City Urban Design Guidelines to the greatest degree possible.

High-sensitivity viewers in the project vicinity include pedestrians such as tourists, residents of the Park Place Affordable Senior Studios on the same block as the project site, residences on O Street to the east of the surface parking lot, residences located along 12th Street immediately south of the surface parking lot, and other residences in the area. In addition, many employees occupy the State office buildings adjacent to the project site, and they are expected to be moderately sensitive to views near their places of work. However, it is not anticipated that motorists on elevated highways that cross the region would be able to distinguish the proposed building from other taller buildings in the surrounding area.

The site design and building construction materials would be consistent with those used for similar high-quality contemporary buildings in the vicinity. Materials would be stable, durable, and timeless in quality, would not be prone to weathering or deterioration, and would require minimal maintenance and little or no replacement or refurbishment during the target 50- to 100-year lifespan of the project. The first floor is intended to be transparent and welcoming, such as with glass walls. The proposed project would also include a roof-mounted array of solar panels, with additional solar panels on the south building face, which could be visible to office-workers in nearby buildings, pedestrians, and nearby residents/homeowners.
Aesthetics, Light, and Glare

Exhibit 4.15-7 View of the Proposed 11-story Building Looking South from the intersection of N and 12th Streets

Existing 4-Story Office Building

Proposed 11-Story Office Building

Source: Ascent Environmental 2017
Exhibit 4.15-7

View of the Proposed 11-story Building Looking North from a Midpoint Location on 12th Street Between O and P Streets
The back of the proposed building may be visible in the distance from pedestrians and tourists at certain locations within Capitol Park. Intervening mature trees in Capitol Park, nearby mid-rise and high-rise buildings, and distance are expected to minimize views of the building such that the impact on the visual character or quality of these views would not be degraded.

The CalVet surface parking lot would be repaved after construction of the office building and an array of solar panels would be installed over the parking lot. The solar array would be approximately one to two stories in height. The solar panels would slightly alter the character of the parking lot by adding dimension to a flat surface, but the parking lot would remain consistent with the surrounding urban environment. Exhibit 4.15-7 shows the proposed solar array in the context of other nearby land uses.

The building design would include a pedestrian plaza at the proposed O Street building entrance that is intended to be an outdoor meeting and gathering place for employees and visitors. Plaza features would include drought tolerant native plant species, flexible seating arrangements, and an opportunity for public art.

The proposed project would include removal of the three-story skybridge that connects to the Food and Agriculture building at 1220 N Street. The skybridge removal would require reconstruction of the south façade of the 1220 N Street building facing Neighbors Alley, which would be in keeping with the fenestration pattern and materials that existed before incorporation of the skybridge. The landscape design would maintain the street tree canopy and if street trees would need to be removed, or if gaps were created in the canopy, trees would be planted. New street trees would include species consistent with downtown Sacramento’s existing street tree canopy. Deciduous shade trees would be used to provide summer shade and winter sun, would be able to thrive in urban conditions, have low water requirements able to thrive without a permanent irrigation system, and provide a large shade canopy at maturity.

The replacement of the existing CDFA Annex with a new office building and installation of solar panels over the CalVet surface parking lot would not result in a substantial change in the visual character of the project site or the surrounding area. Although the building would be six stories higher than the existing structure and the solar array would be a new structure over the parking lot, both would comply with the CAP and applicable design guidelines. Furthermore, the new office building would have a building height lower than the Park Place Affordable Senior Studios located on the same block. The new office building and solar array would be compatible with the adjacent mid-rise buildings. The architectural treatment of the new facility would be integrated with surrounding structures, few if any of the surrounding street trees would be removed, and any that are removed would be replaced. The local aesthetic character, as experienced by viewer groups in the area, would not be substantially altered. The 1215 O Street Office Building Project would not result in the substantial degradation of the existing visual character or quality of the site or its surroundings. Therefore, this impact is less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.15-2: Conflict with the provisions of the Capitol View Protection Act**

The Capitol View Protection Act was enacted to maintain the visual prominence of the State Capitol. The portion of the 1215 O Street Office Building Project site where the CDFA Annex is located is within the zone that limits building heights to 150 feet, and the portion that includes the CalVet surface parking lot is within the zone with a 250-foot height limit. The height of the proposed office building would be a maximum of 150 feet, consistent with the established height limit. The one-to-two story height of the proposed solar array above the surface parking lot would be well below the 250-foot height limit. Therefore, this impact is less than significant.

The Capitol View Protection Act was enacted to maintain the visual prominence of the State Capitol by setting height restrictions in zones surrounding the building, and to maintain the existing urban edge of surrounding streets by requiring certain building setbacks. The specified height limits do not apply to decorative building
caps or rooftop mechanical equipment that is screened and placed in the farthest possible location when viewed from the State Capitol or Capitol Park.

Under the Capitol View Protection Act, the building height limits that apply to the portion of the project site that includes the CDFA Annex and the portion of the project that includes the CalVet surface parking lot are 150 feet and 250 feet, respectively (Exhibit 4.15-1). The height of the proposed office building would be a maximum of 150 feet, consistent with the established height limit. The one-to-two story height of the solar array over the surface parking lot would be well below the 250-foot height limit. There are no building setback requirements specified in the Capitol View Protection Act for structures on the project site. Therefore, this impact is less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.15-3: Introduce new sources of light and glare that would adversely affect day or nighttime views

The 1215 O Street Office Building Project would involve new lighting for the office building and the potential for new reflective surfaces due to the proposed solar array on the rooftop and south face of the office building and over the CalVet surface parking lot. The proposed exterior building finishes would not include materials that are highly reflective or that would produce substantial glare. Project-related light sources would be similar to the current lighting in downtown Sacramento in amount and intensity of light. In addition, DGS plans to implement a lighting plan that is consistent with the U.S. Green Building Council’s Leadership in Energy and Environmental Design version 4 (LEED v4) Green Building Rating System, which would reduce both the generation of exterior light and the potential for light trespass to affect off-site areas. DGS would also be required to meet the lighting and glare standards contained in the CALGreen Code that also limit light and glare for State-owned buildings. For these reasons, project implementation would not create a new source of substantial light that would adversely affect day or nighttime views in the area.

The reflectivity of solar panels is generally lower than that of other nearby building materials (such as standard glass or steel), and the proposed solar panels would be oriented to the south and angled towards the sun. The rooftop solar panels would be well above any buildings to the south and would not produce glare on these structures. The solar array above the surface parking lot would likely not be high enough to reflect on buildings to the south, but could shine into north facing windows on the apartment buildings immediately south of the surface parking lot. Therefore, the proposed project could introduce new sources of light and glare that would adversely affect daytime views of adjacent residents. Therefore, this impact is potentially significant.

Downtown Sacramento has a large amount of widespread, ambient light from urban uses. Existing sources of light associated with the project site include exterior building lighting, street and parking lot lighting, and spillover of internal lights to the exterior. The 1215 O Street Office Building and repaved CalVet surface parking lot would not include additional light sources beyond the types of lighting that are found in the current urban environment. The only additional lighting would be related to the interior-to-exterior lighting associated with the additional building stories. LED (light-emitting diode) light fixtures would be used for all interior and exterior lighting and fixtures would be selected based on architectural aesthetic, efficiency, maintenance, and glare control. Because the amount and intensity of light emitted would be similar to the current surrounding urban setting, the nighttime views from sensitive (residential) land uses would not be significantly affected. Furthermore, the project would not contribute substantially to sky glow effects generated by the community at large.

Daytime glare could be produced by the increased amount of surface area of the taller building, which could reflect or concentrate light. However, appropriate building materials would be used such as natural stone, precast concrete panels, clear or lightly tinted glass, stainless steel, anodized aluminum, factory-coated...
metal, and composite panels. The project would avoid utilizing materials such as dark tinted or highly reflective glass; materials that can generate substantial glare; painted wood, stucco, and other lightweight commercial materials; or field painted ferrous steel or sheet metal. Although energy performance criteria encourage the use of reflective glass in architectural design to reduce penetration of solar radiation into the building interior, it would be avoided to prevent exterior reflections.

DGS intends to implement a lighting plan that is consistent with the U.S. Green Building Council’s LEED Green Building Rating System requirements. The new office building would achieve at least the U.S. Green Building Council’s LEED v4 Silver certification (see Appendix K for LEED v4 checklist). Consistency with LEED requirements would reduce both the generation of exterior light and the potential for light trespass to affect off-site areas. DGS would also be required to meet the lighting and glare standards contained in the CALGreen Code that limit light and glare for State-owned buildings, including reflectance from the proposed solar panels. Compliance with LEED and CALGreen Code requirements are generally consistent with Policies ER 7.1.3 and ER 7.1.4 of the Sacramento 2035 General Plan that pertain to lighting and reflective glass. The project would comply with LEED criteria and standards contained in the CALGreen Code for reducing light pollution and would avoid the use of highly reflective architectural materials for building design. For these reasons, project implementation would not create a new source of substantial light that would adversely affect day or nighttime views in the area.

The solar array proposed for the surface parking lot could be a source of glare. The amount of glare on a solar system depends not just on the angle of installation but also on the specific product installed. Different types of solar panels absorb different amounts of light. The installation of solar panels on new buildings is common in new construction projects in downtown Sacramento. Newer panels generally include at least one anti-reflective layer to maximize absorption and minimize glare and the reflectivity of solar panels is generally lower than that of other nearby building materials (such as standard glass or steel) (American Planning Association 2017). The solar array above the surface parking lot would likely be high enough not to reflect on buildings to the south, however, with the specific design of the array to be completed in the future by the selected design-build team, there is the potential that under some conditions reflection from the array could shine into north facing windows on the apartment buildings immediately south of the surface parking lot. Therefore, the proposed project could introduce new sources of glare that would adversely affect daytime views of adjacent residents. This impact is potentially significant.

Mitigation Measure 4.15-3: Direct solar panel reflection away from north facing windows on the apartment building immediately south of the CalVet surface parking lot

DGS shall ensure that adjacent residents will not be exposed to daytime glare by designing and constructing the solar panel array above the CalVet surface parking lot in such a manner that the panels do not reflect sunlight into north facing windows of the apartments immediately south of the parking lot.

Significance after Mitigation

Implementation of Mitigation Measure 4.15-3 would reduce the significant glare impact to a less-than-significant level by ensuring that the design and construction of the surface parking lot solar array does not reflect substantial light or glare into windows of adjacent land uses.

Impact 4.15-4: Potential for structures to cast shadows on shadow-sensitive uses

The proposed office building would be a maximum of 150-feet tall, which could cast shadows over shadow-sensitive nearby residences during various parts of the day, consistent with other mid- to high-rise buildings in the project vicinity. However, shadows generated by the project would not fall on any particular shadow-sensitive areas for a substantial portion of the day. The mass of the new office building would not be sufficient to shade public areas for an extended period. The solar array over the CalVet surface parking lot would provide shade and shadows on the parking lot, which is intended, but the one-to-two-story height of the panels would not result in shading of nearby residences. This impact is less than significant.
The creation of shadows would be a significant impact if the project were to cast shadows on shadow-sensitive uses during a substantial portion of the day. Shadow-sensitive uses are those areas where extensive shading would adversely affect the use and appreciation of the area. These areas typically are locations where outdoor activities take place, such as parks and residential front and back yards. In most cases, shadows generated by a single source are not sufficient to shade an area for a substantial portion of the day. As the sun moves across the sky, shadows generated by various structures move from west to east and do not remain on any particular area for an extended period. Therefore, structures would typically need to surround an area on two or more sides to adversely affect a use.

The project would replace the existing four-story CDFA Annex with an office building up to 150 feet tall. Shadow-sensitive land uses near the project site consist of the Park Place Affordable Senior Studios on the same block as the project site, the closest residences located at the corner of O Street and 13th Street, residences on 12th Street south of the surface parking lot, and other nearby residences.

Shadow simulations shown in Exhibits 4.15-9 and 4.15-10 identify shadowing under existing conditions and from the new office building on adjacent buildings during morning, noon, and afternoon periods during summer, fall/spring equinox, and winter conditions. Shadows generated by a single source such as the new office building are not sufficient to shade an area for a substantial portion of the day. As the sun moves across the sky, shadows generated by various structures move from west to east and do not remain on any particular area for an extended period. Therefore, structures would typically need to surround an area on two or more sides to adversely affect a use. The new office building, as shown in Exhibit 4.15-10 would incrementally increase the shadowing in each direction commensurate with the increased building height, but would not create additional shadowing on shadow-sensitive uses during a substantial portion of the day. Furthermore, the solar array proposed over the CalVet surface parking lot would provide shade and shadows on the parking lot, which is intended and beneficial, but the one-to-two-story height of the panels would not result in shading of neighboring residences.

As illustrated in Exhibits 4.15-9 and 4.15-10, neither the new office building nor the solar panels would create additional shading on shadow-sensitive neighboring residential uses for a substantial portion of the day. Therefore, this impact is considered less than significant.

**Mitigation Measures**

No mitigation is required.
Exhibit 4.15-9
Shadow Analysis – Existing Conditions

Source: hGA 2017

9:00 AM | 12:00 PM | 4:00 PM
Exhibit 4.15-10  
Shadow Analysis – Proposed Conditions
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5 CUMULATIVE IMPACTS

5.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This draft environmental impact report (DEIR) provides an analysis of cumulative impacts of the proposed 1215 O Street Office Building Project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the incremental contribution to any such cumulatively significant impacts by the project would be “cumulatively considerable” (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c]; and Communities for a Better Environment v. California Resources Agency [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the project site itself, and then to determine whether the project’s incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., “cumulatively considerable”).

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]).

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this DEIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- the cumulative effects of development without the project are not significant and the project’s additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term “measurably” is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 4 of this DEIR).
### 5.2 CUMULATIVE SETTING

#### 5.2.1 Geographic Scope

The geographic area that could be affected by the project and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 5-1.

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>State’s Capitol Area, as defined in the Capitol Area Plan, Central City of Sacramento, as defined by the 2035 General Plan and Central City Community Plan</td>
</tr>
<tr>
<td>Population, Employment, and Housing</td>
<td>City of Sacramento, Central City</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Can be defined differently for each species, based on species distribution, habitat requirements, and scope of impact from proposed activities</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>City of Sacramento (historic period resources)</td>
</tr>
<tr>
<td></td>
<td>Portions of Central Valley identified as the territory of the local Native American community (prehistoric archaeological resources and tribal cultural resources)</td>
</tr>
<tr>
<td>Transportation and Circulation</td>
<td>City of Sacramento and Sacramento region</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Sacramento Valley Air Basin (regional) and immediate project vicinity for highly localized pollutant emissions</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions and Climate Change</td>
<td>Global/statewide</td>
</tr>
<tr>
<td>Noise</td>
<td>Immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources</td>
</tr>
<tr>
<td>Geology, Soils, and Seismicity</td>
<td>City of Sacramento, Central City</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Sacramento River watershed</td>
</tr>
<tr>
<td>Utilities and Public Services</td>
<td>City of Sacramento</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>City of Sacramento, Central City</td>
</tr>
<tr>
<td>Visual Resources</td>
<td>City of Sacramento, Central City, within the viewshed of the project</td>
</tr>
</tbody>
</table>

Source: Compiled by Ascent Environmental in 2017

#### 5.2.2 Cumulative Context

The City of Sacramento was founded in 1849 along the Sacramento River waterfront and extended east along J Street towards Sutter’s Fort. The city’s current charter was adopted by voters in 1920, establishing a city council-and-manager form of government, still used today. The city expanded continuously over the years in the first half of the 1900s and in 1964 merged with the city of North Sacramento, just north of the American River. Large annexations were made of the Pocket area on the south and Natomas area on the north. Sacramento currently covers a total area of approximately 99 square miles (City of Sacramento 2015a).

Even with the City’s annexations and population growth, there remain substantial areas of land in North Natomas, North Sacramento, South Sacramento, and the Airport Meadowview planning areas that are undeveloped or lightly developed. In addition to these outlying areas, there are significant redevelopment areas in the City core, such as the Railyards, Richards Boulevard, and Docks areas, that are targeted for new higher density development (City of Sacramento 2015b).
In the recent past, during the 10-year period from 2000 to 2010, the population of the City of Sacramento increased from 407,018 to 466,488, or 14.6 percent (U.S. Census Bureau 2001, 2010). Population as of January 1, 2016, is estimated to be 485,683 (California Department of Finance 2016). Population growth in the city is projected to continue between 2020 and 2035, and most growth is expected to occur in the central city (City of Sacramento 2013:H 3-6) (see Table 4.3-1 of this DEIR). City of Sacramento population projections indicate that the city may have about 640,000 residents by 2035, an increase of approximately 174,000 residents, representing 21 percent of the region’s total population (Table 4.3-1 of this DEIR).

On a broad geographic basis, the Sacramento metropolitan area as a whole is facing numerous regional issues pertaining to degradation of air quality, traffic generation, loss of biological habitat, loss of farmland, and other environmental changes related to urban expansion. In response to these concerns, the City’s 2035 General Plan favors developing inward, in and near existing developed areas, over outward into greenfields on the edge of the city. The General Plan growth pattern focuses on infill and reuse of underutilized properties, intensifying development near transit and mixed-use activity centers, and locating jobs closer to housing. The General Plan includes policies to reduce carbon emissions that contribute to climate change including encouraging mixed-use development that supports walking, biking, and use of public transit; “green building” practices; use of solar energy systems; architectural design to reduce heat gain, recycled construction materials; and water conservation measures (City of Sacramento 2015b).

The project site is located within the Central Business District (CBD) of the Central City Community Plan area, which is the core of the City of Sacramento (City of Sacramento 2014a) (see Exhibit 4.2-2 of this DEIR). The CBD is identified in the City’s 2035 General Plan as a Priority Investment Area (PIA). PIAs are areas of the city that are the highest priority for investment and development through infill, reuse, or redevelopment. The CBD is an urban downtown area that includes State government buildings, corporate offices and businesses, high-rise condominiums, historic neighborhoods, parks and recreational areas, restaurants and shops, schools, and industrial and manufacturing complexes all within a tree-lined street grid. The City’s Housing Element estimated that the Central City Community Plan area had 32,367 residents in 2010, and projected that, by 2025, the area would have a total of 109,312 residents (City of Sacramento 2013:H 3-5 and H 3-6) (see Table 4.3-1 of this DEIR).

The State’s Capitol Area Plan (CAP), the statutory master plan for development on State-owned land surrounding the State Capitol (within the City’s Central City Community Plan area), also encourages moving offices within and using the existing resources of the Capitol Area. The CAP boundary is shown in Exhibit 4.2-1. The CAP speaks to increased energy conservation and use of the transit system in the Capitol Area, and suggests examination of underutilized State properties. The most recent 2015 CAP Progress Report described a site study by DGS (DGS 2010) that recommended replacing the existing CDFA Annex with a new, larger office building.

5.2.3 Regional Planning Environment

The 1215 O Street Office Building Project would redevelop an existing State-owned office building site within the Capitol Area (covered by the State’s CAP) and within the CBD PIA (covered by the City’s 2035 General Plan and Central City Community Plan). As such, the area most relevant to cumulative impacts is the Central City area of Sacramento. The plans that establish and assess the land use pattern and goals for development and growth in the Central City include the following:

- Capitol Area Plan, adopted in 1997;
- Capitol Area Plan EIR, certified in 1997;
- Capitol Area Plan Progress Report, January 2015;
5.2.4 Related Projects

The following analysis of cumulative impacts relies primarily on the plans for land use and growth in downtown Sacramento, as listed in above in Section 5.2.3. This is consistent with Section 15130(d) of the State CEQA Guidelines that states that “Previously approved land use documents, including but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis.”

However, this analysis also considers related projects, or those large past, present, and probable future projects located in downtown Sacramento that could relate to the project. This is consistent with Section 15130(b)(1)(A) of the State CEQA Guidelines that states that a discussion of significant cumulative impacts may include “A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency...” Past projects are those that have been constructed and are operational, which are considered as part of the existing baseline conditions, such as the Golden 1 Center (at 5th Street between J and L Streets) and the State’s Central Heating and Cooling Plant (between 6th and 7th Streets and P and Q Streets). The probable future projects considered herein are those in the project vicinity that are reasonably foreseeable, meaning projects that are proposed, approved, or planned. The analysis of cumulative environmental impacts associated with the project addresses the potential incremental impacts of the proposed project in combination with the related projects. This is not an all-inclusive list of projects in the region. Rather, it identifies projects approved or planned in downtown Sacramento that, based on the nature of environmental resources being examined, location, and project type, have the potential to interact on a cumulative basis with the proposed project. Each of the following projects is of substantial size, would generate or exacerbate many of the environmental effects being examined for the O Street project, and are located in the general vicinity of the O Street project.

Section 15130(b) of the State CEQA Guidelines provides that a cumulative impact analysis either consider a list of projects (the list approach) or relevant plans and planning documents (the plan approach). The following cumulative impact analysis exceeds the requirements of Section 15130(b) by implementing a plan approach, and supplementing the analysis with a modified list approach considering the projects likely to have the greatest cumulative interaction with the proposed project.

STATE OF CALIFORNIA

Renovation and Reoccupation of the Gregory Bateson Building

Construction of the 1215 O Street Office Building Project would allow the existing Gregory Bateson building (Bateson building) to be vacated, facilitating the future restoration and reoccupation of the Bateson building. Although there are no details currently available regarding the timing and nature of any renovation, or the tenants and building use associated with any future re-occupation of the Bateson building, it is reasonably foreseeable that a building at this location would continue to serve as a State office building with similar massing and similar occupancy. Therefore, for purposes of this cumulative analysis, it is assumed that in the
future the Bateson building site would go through some construction activities as part of renovation and then result in a similar size office building with approximately 1,000 employees.

**P Street Office Building Project**
The P Street Office Building Project, also proposed by DGS, would involve the demolition of an existing surface parking lot and construction of a new office building, or multiple buildings, on the block bounded by O and P Streets, and 7th and 8th Streets to accommodate approximately 800,000 gross square feet of office space, plus limited parking. The purpose of the new construction is to consolidate and upgrade State office space in the region, specifically to vacate the existing Resources Building located 1416 9th Street (on the southern half of the block between 8th and 9th Streets and N and O Streets). Vacating the existing Resources building would allow the eventual renovation and re-occupation of that building (see below). Development of the new office building may affect the historic Heilbron House in its current location, or it may be relocated. This project would also include ground-level commercial space and would be connected to the State-owned Central Plant for heating and cooling. The project is in the planning and environmental review phase; it is not yet approved.

**Renovation and Reoccupation of the Resources Building**
Construction of the P Street Office Building Project would allow the existing Resources Building to be vacated, facilitating the future restoration and reoccupation of the existing Resources Building. Although there are no details currently available regarding the timing or nature of renovation, or the tenants and building use associated with any future re-occupation of the Resources building, it is reasonably foreseeable that a building at this location would continue to serve as a State office building with similar massing and similar occupancy. Therefore, for purposes of this cumulative analysis, it is assumed that in the future the Resources building site would go through some construction activities as part of renovation and then result in a similar size office building with approximately 2,300 (DGS 2015) employees.

**CITY OF SACRAMENTO**

**Sacramento Commons Phase I**
Phase I of the Sacramento Commons, which has been approved, will involve construction of two 7-story midrise buildings with apartments, live-work units, open space terraces, retail spaces, and enclosed parking. The project is within the approved Sacramento Commons Planned Unit Development, with Phase I at the intersection of 5th and O Streets. The entire Sacramento Commons PUD site totals approximately 11.17 acres, and is bounded by 5th and 7th Streets and N and P Streets.

**The Railyards Project**
The Railyards property is located just north of downtown and south of the River District. Once serving as the western terminus of the 1860s Transcontinental Railroad, today the Railyards continues to house a major transportation hub. The 244-acre Railyards site will be a mixed-use hub for entertainment, retail, housing, office, theaters, parks, hotels, and museums. The guiding plan for the area envisions the site to include over one million square feet of retail, 2.3 million square feet of office, a hotel, varying residential housing units, and recreational and cultural uses.

The original Sacramento Railyards project (P05-097) was approved by the City Council on December 11, 2007. The project involved the development of a maximum of 12,100 dwelling units, 1.4 million square feet of retail, 1,100 hotel rooms, 2.4 million square feet of office, 485,390 square feet of historic/cultural space, and 491,000 square feet of mixed use. A subdivision modification for minor changes was approved by the Planning and Design Commission in 2012 (P10-040). The changes included revising sections of 5th Street and 7th Streets to show two-way traffic; changing the alignment of 5th and 6th Streets; revising the tentative map to reflect the realignment and to accommodate a parking garage. A planning entitlement application (submitted in June 2015) is currently under review for the following:

- 6,000-10,000 dwelling units;
- 514,270 square feet of retail;
2,757,027 - 3,857,027 square feet of office use;
771,405 square feet of flexible mixed use;
1,228,000 square feet of medical campus;
1,100 hotel rooms (keys);
485,390 square feet of historic and cultural uses;
33 acres of open space; and
A soccer stadium with 19,621 seats, and potential to expand to approximately 25,000 seats.

5.3 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the 1215 O Street Office Building Project, together with related projects and planned development in the Central City area of Sacramento, for each of the 14 environmental issue areas evaluated in this DEIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the “discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.”

When considered in relation to other reasonable foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed project alone.

For purposes of this EIR, the project would result in a significant cumulative effect if:

- the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the 1215 O Street Office Building Project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or

- the cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the 1215 O Street Office Building Project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

This cumulative analysis assumes that all mitigation measures identified in Chapter 4 to mitigate project impacts are adopted and implemented, and all elements of the design build performance criteria that would minimize environmental effects are implemented. The analysis herein analyzes whether, after implementation of project-specific mitigation and performance criteria that minimize environmental effects, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

5.3.1 Land Use

The State’s CAP and the City of Sacramento 2035 General Plan and Central City Community Plan establish land uses for State-owned land and for the city, respectively. Consistency with applicable land-use plans or policies adopted for the purpose of reducing or avoiding environmental impacts are site specific and addressed on a project-by-project basis. The related projects described in Section 5.2.4, above, are proposed on infill sites within Central City Community Plan area; the State project are also within the CAP boundaries. The related projects are, to the extent that proposed land uses have been identified, apparently consistent with land-use plans and policies. The related projects would not disrupt or divide established
communities in the project vicinity, but rather would develop sites within the Central City Community Plan area consistent with the State’s CAP and the City’s 2035 General Plan. In particular, the State’s proposed P Street Office Building Project would be consistent with the CAP by developing an underutilized space, now a surface parking lot, within downtown. Therefore, there is not an adverse cumulative land use condition.

No part of the 1215 O Street Office Building Project would extend beyond the existing urban boundaries of the CAP or the Central Business District, within the Central City Community Plan Area, in downtown Sacramento (see Exhibits 4.2-1 and 4.2-1 of this DEIR) and no element of the project would create a barrier within the established downtown community. The project would be compatible with surrounding land uses and would neither result in, nor contribute to a cumulative impact regarding potential division of an established community. In addition, the project would be consistent with the CAP, the CAP Implementation Plan, the 2015 CAP Progress Report, the Governor’s 216 Five Year Infrastructure Plan, and local plans and policies. Because no land-use impacts would occur on a project-specific basis, the project would not contribute to any potential cumulative land-use impacts.

5.3.2 Population, Employment, and Housing

During construction, the 1215 O Street Office Building Project would generate a temporary increase in employment in the City of Sacramento of up to 175-225 construction jobs during the peak construction activity. Similarly, the related projects would also generate a temporary increase in employment associated with construction (e.g., P Street Office Building Project, Sacramento Commons Phase I, and Railyards). It is likely that at least some of these projects would be constructed concurrently with the proposed project (2018 through 2021).

The SACOG 2016 MTP/SCS and the Sacramento 2035 General Plan anticipate a growth in jobs and housing for the region and within the city through 2036, which are anticipated to move the region and the city closer to the SACOG goal of 1.2 jobs per household (see Table 4.3-4; SACOG 2016:42). Although the amount of employment would continue to be greater than the amount of housing in the city, county, and region, the difference between the number of jobs and supporting households would narrow for the region and county. Additionally, the Sacramento 2035 General Plan is designed to balance future housing, office, retail, commercial and industrial uses to accommodate projected employment growth that encourages a jobs/housing balance (City of Sacramento 2014:3-9).

As identified in Table 4.3-3, in 2000, 32,400 residents in Sacramento County were employed in the construction industry, construction jobs declined to 23,500 in 2010 and have since started to rise again with 30,700 construction jobs in 2015 (EDD 2016). Based on the 2015 unemployment rate of 6.0 percent for Sacramento County, approximately 1,800 construction employees could be available in Sacramento County to work on the proposed project and cumulative development. The proposed project and cumulative development would be temporary and it is the nature of construction work that construction contractors bid and work on projects based on their availability and need for work. As existing construction projects near completion, contractors may seek out new construction projects to maintain employment for the same workers. Although it is possible that some construction workers could move to the city or the region because jobs are available, the existing labor force would be sufficient to meet construction employment needs for the project and cumulative development. Furthermore, the Sacramento 2035 General Plan anticipates continued growth in jobs and includes policies, such as Policy LU 2.8.6, that promote the designation of sufficient land and development potential for housing and employment opportunities for a range of incomes and household types throughout the city, and encourages a balance between job type, workforce, and housing development. For these reasons, substantial population growth or increases in housing demand in the region as a result of these construction jobs is not anticipated. Therefore, the construction of the 1215 O Street Office Building Project, in combination with other past, present, and reasonably probable future projects, would not generate the need for substantial additional housing. Because of these conditions, the cumulative impact related to population growth and housing demand associated with project construction
would be less than significant. Implementation of the project would not result in a cumulatively considerable contribution to a cumulative impact.

The 1215 O Street Office Building Project could indirectly generate employment opportunities after relocating about 1,000 State employees from the Bateson Building located at 1600 9th Street into the new office building. In the long-term, it is reasonably likely that the State will re-use the Bateson Building, presumably for office use for an estimated 1,000 additional employees. This increased future availability of office space would allow for a greater number of employees in the downtown area and contribute to an increase in the jobs/housing index. However, the type of tenant and timing of re-occupancy of the Bateson Building is unknown at this time. Assuming that the number of employees that could occupy the Bateson Building is the same as the current occupancy of 1,000 employees, the project could, in the long-term, generate up to approximately 1,000 additional jobs. Specific indirect potential cumulative impacts associated with increased employment, such as traffic congestion, air quality degradation, and noise generation, are addressed in each technical section of this DEIR as appropriate. The technical sections provide a detailed analysis of other relevant environmental effects as a result of development and operation of the project; therefore, indirect impacts are not discussed further in this section.

The jobs/housing index for the City of Sacramento was 1.04 in 2010 and is projected to increase to 1.48 through 2035 (see Table 4.3-2 in Section 4.3, “Population, Employment, and Housing”). As identified in the SACOG 2016 MTP/SCS, the Sacramento Central Business District (CBD)/Riverfront area had a jobs/housing index of 1.41 in 2008 and is projected to decrease to 1.22 in 2036 (see Table 4.3-3 in Section 4.3, “Population, Employment, and Housing”). For the county, the jobs/housing index was 1.22 in 2008 and is projected to slightly decrease to 1.19 in 2036. The region had a jobs/housing index of 1.18 in 2008 and is projected to also decrease slightly to 1.16 in 2036. Although the City of Sacramento is projected to continue to have an increasing number of jobs compared to housing units and move away from a jobs/housing balance, these values indicate that the ratio of jobs to housing units in the region is relatively balanced and is projected to move even closer to equilibrium in future planning periods for the city and region. Although the 1215 O Street Office Building Project could, in the long term, indirectly contribute to the generation of approximately 1,000 new jobs in Sacramento through the future renovation or replacement of the Bateson Building, when viewed in conjunction with current and future housing projects, overall housing opportunities in the Sacramento area should increase with increased housing demand. The Sacramento 2035 General Plan and 2016 MTP/SCS plan for growth in population, employment, and housing in the city and region through 2035 and 2036. As shown in Table 4.3-4, an additional 320,925 housing units are projected to be added in the region by 2036, which would include an additional 17,886 housing units in the central city area. It is expected that as development continues in the region, the jobs/housing index would remain relatively balanced. Therefore, no significant cumulative effect related to job generation is expected, and the 1215 O Street Office Building Project would not result in a significant cumulative effect when viewed in conjunction with other related projects.

5.3.3 Transportation and Circulation

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable future projects. The geographic area that could be affected by a project varies, depending on the type of environmental issue being considered. This cumulative impact analyses does not rely on a list of specific pending, reasonably foreseeable development proposals in the vicinity of the project; rather, it relies on existing and future development accommodated under the City’s General Plan, which is included in regional travel demand modeling.

For transportation and traffic impacts, the geographic focus of the cumulative analysis is the study area and intersections previously identified in Exhibit 4.4-1.
Traffic Forecasts
The most recent version of the SACMET regional travel demand model developed and maintained by SACOG was used to forecast cumulative (year 2036) traffic volumes within the study area. The cumulative version of this model accounts for planned land use growth within the City of Sacramento according to the City’s 2035 General Plan, as well as within the surrounding region. The SACMET model also accounts for planned improvements to the surrounding transportation system, including improvements identified in the City’s “Grid 3.0” plan for the Central City, and incorporates the current MTP/SCS for the Sacramento region. The version of the model used to develop the forecasts was modified to include the most recent planned land uses and transportation projects within the City of Sacramento. Modifications to the model included additional transportation network and land use detail within the study area to improve accuracy. Land use growth within the study area under cumulative conditions assumes backfill of the Bateson Building (1600 9th Street).

A forecasting procedure known as the “difference method” was used to develop the cumulative background forecasts. This method accounts for potential differences between the base year model and existing traffic counts that could otherwise transfer to the future year model and traffic forecast.

This forecasting procedure is calculated as follows:

\[
\text{Cumulative Traffic Forecast} = \text{Existing Count Volume} + (\text{Cumulative Model Forecast} - \text{Base Year Model Forecast})
\]

Intersection Operations
Cumulative-Plus-Project traffic volumes were determined following the traffic forecasting methodology previously presented. Exhibits 5-1A, 5-1B, 5-1C display the AM and PM peak hour intersection traffic volumes under cumulative-plus-project conditions.

Table 5-2 shows the cumulative-plus-project peak-hour intersection operations at the study intersections (refer to Appendix B for technical calculations). No vehicle delay or LOS is reported for Intersection 7 because there are no movements at this location that experience delay.

Under Cumulative-Plus-Project conditions, all intersections would operate at LOS D or better overall, except Intersection 20 (W Street/16th Street/US 50 Westbound Off-Ramp) and Intersection 21 (X Street/15th Street/US 50 Eastbound Off-Ramp) which would operate at LOS E in the PM peak hour. No intersections would operate at LOS F, that is, with delays that are unacceptable to most drivers occurring because of over-saturation, poor progression, or very long cycle lengths.

When measured against the significance criteria for effects to roadway segments and intersections, the project would not substantially degrade peak period roadway system operation, nor would cumulative traffic create conditions be consistent with General Plan Policy M 1.2.2. As discussed above, the City’s policy was adopted to allow decreased levels of service (i.e., LOS F) in the urbanized Core Area of the City that supports more transportation alternatives and places residents proximate to employment, entertainment, retail and neighborhood centers and thus reduces overall vehicle miles traveled and results in environmental benefits (e.g., improved air quality and reduced GHG emissions). Based on this evaluation, the City determined that LOS F is considered acceptable during peak hours within the Core Area. Because cumulative traffic would not substantially degrade roadway operations nor conflict with City General Plan policy, cumulative impacts would be less than significant, and therefore the project would not contribute considerably to a significant cumulative impact.
Exhibit 5-1A  Peak Hour Traffic Volumes and Lane Configurations – Cumulative-Plus-Project, Study Intersections 1 through 8

Exhibit 5-1B  Peak Hour Traffic Volumes and Lane Configurations – Cumulative-Plus-Project, Study Intersections 9 through 16

Source: Fehr & Peers 2017
Exhibit 5-1C

Peak Hour Traffic Volumes and Lane Configurations – Cumulative-Plus-Project, Study Intersections 17 through 22
### Table 5-2  Intersection Operations – Cumulative-Plus-Project Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Peak Hour</th>
<th>Cumulative-Plus-Project Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AM  PM</td>
<td>Delay^1</td>
</tr>
<tr>
<td>1. N Street / 9th Street</td>
<td>Signal</td>
<td></td>
<td>11  16</td>
</tr>
<tr>
<td>2. N Street / 10th Street</td>
<td>Signal</td>
<td></td>
<td>13  16</td>
</tr>
<tr>
<td>3. N Street / 12th Street</td>
<td>Signal</td>
<td></td>
<td>7   9</td>
</tr>
<tr>
<td>4. N Street / 13th Street</td>
<td>SSSC</td>
<td></td>
<td>1 (5) 2 (9)</td>
</tr>
<tr>
<td>5. N Street / 15th Street</td>
<td>Signal</td>
<td></td>
<td>6   12</td>
</tr>
<tr>
<td>6. N Street / 16th Street</td>
<td>Signal</td>
<td></td>
<td>19  14</td>
</tr>
<tr>
<td>7. Neighbors Alley / 12th Street</td>
<td>-</td>
<td>AM  PM</td>
<td>-   -</td>
</tr>
<tr>
<td>8. Neighbors Alley / 13th Street</td>
<td>SSSC</td>
<td></td>
<td>1 (3) 1 (5)</td>
</tr>
<tr>
<td>9. O Street / 12th Street</td>
<td>SSSC</td>
<td></td>
<td>3 (6) 3 (6)</td>
</tr>
<tr>
<td>10. O Street / 13th Street</td>
<td>SSSC</td>
<td></td>
<td>3 (7) 3 (9)</td>
</tr>
<tr>
<td>11. P Street / 3rd Street</td>
<td>Signal</td>
<td></td>
<td>10  31</td>
</tr>
<tr>
<td>12. P Street / 9th Street</td>
<td>Signal</td>
<td></td>
<td>16  48</td>
</tr>
<tr>
<td>13. P Street / 12th Street</td>
<td>Signal</td>
<td></td>
<td>12  22</td>
</tr>
<tr>
<td>14. P Street / 13th Street</td>
<td>SSSC</td>
<td></td>
<td>9 (55) 7 (26)</td>
</tr>
<tr>
<td>15. Q Street / 3rd Street</td>
<td>Signal</td>
<td></td>
<td>33  23</td>
</tr>
<tr>
<td>16. Q Street / 9th Street</td>
<td>Signal</td>
<td></td>
<td>20  13</td>
</tr>
<tr>
<td>17. Q Street / 10th Street</td>
<td>Signal</td>
<td></td>
<td>52  16</td>
</tr>
<tr>
<td>18. W Street / 11th Street</td>
<td>Signal</td>
<td></td>
<td>29  38</td>
</tr>
<tr>
<td>19. W Street / 15th Street / US 50 WB On-Ramp</td>
<td>Signal</td>
<td></td>
<td>15  44</td>
</tr>
<tr>
<td>20. W Street / 16th Street / US 50 WB Off-Ramp</td>
<td>Signal</td>
<td></td>
<td>38  75</td>
</tr>
<tr>
<td>21. X Street / 15th Street / US 50 EB Off-Ramp</td>
<td>Signal</td>
<td></td>
<td>36  78</td>
</tr>
<tr>
<td>22. X Street / 16th Street / US 50 EB On-Ramp</td>
<td>Signal</td>
<td></td>
<td>18  15</td>
</tr>
</tbody>
</table>

Notes: LOS = Level of Service. SSSC = Side-Street Stop Control

^1 For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For SSSC intersections, the LOS and control delay for the worst movement is shown in parentheses next to the average intersection LOS and delay. Impacts to intersections are determined based on the overall LOS and average delay. Intersection LOS and delay is calculated based on the procedures and methodology contained in the HCM 2010 (TRB, 2010). All intersections were analyzed in SimTraffic.

Source: Fehr & Peers 2017
### Freeway Off-Ramp Queuing

Table 5-3 displays the Cumulative-Plus-Project off-ramp queuing within the study area during the AM and PM peak hours. As shown, all study freeway off-ramp queues would remain within the available storage area.

<table>
<thead>
<tr>
<th>Location</th>
<th>Available Storage¹</th>
<th>Peak Hour</th>
<th>Cumulative Plus Project Queue²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate 5 SB Off-Ramp at Q Street</td>
<td>1,700 feet</td>
<td>AM</td>
<td>525 feet</td>
</tr>
<tr>
<td>(from Q Street/3rd Street)</td>
<td></td>
<td>PM</td>
<td>225 feet</td>
</tr>
<tr>
<td>Interstate 5 NB Off-Ramp at Q Street</td>
<td>2,075 feet</td>
<td>AM</td>
<td>550 feet</td>
</tr>
<tr>
<td>(from Q Street/3rd Street)</td>
<td></td>
<td>PM</td>
<td>225 feet</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 10th Street³</td>
<td>2,150 feet</td>
<td>AM</td>
<td>-</td>
</tr>
<tr>
<td>(from W Street/11th Street)</td>
<td></td>
<td>PM</td>
<td>-</td>
</tr>
<tr>
<td>US 50 WB Off-Ramp at 16th Street</td>
<td>1,050 feet</td>
<td>AM</td>
<td>275 feet</td>
</tr>
<tr>
<td>(from W Street/16th Street)</td>
<td></td>
<td>PM</td>
<td>300 feet</td>
</tr>
<tr>
<td>US 50 EB Off-Ramp at 15th Street</td>
<td>1,125 feet</td>
<td>AM</td>
<td>350 feet</td>
</tr>
<tr>
<td>(from X Street/15th Street)</td>
<td></td>
<td>PM</td>
<td>950 feet</td>
</tr>
</tbody>
</table>

Notes:

¹The available storage length for off-ramp queuing is measured from the noted off-ramp terminal intersection to the freeway off-ramp gore point.
²Maximum queue length is based upon output from SimTraffic microsimulation software.
³The US WB Off-Ramp at 10th Street (as specified by freeway wayfinding signage) is measured from the initial off-ramp terminal intersection of W Street/11th Street.

Source: Fehr & Peers 2017

### Vehicle Miles Traveled

Table 5-4 displays the daily vehicle miles traveled (VMT) per employee generated by the project under cumulative-plus-project conditions. Project-generated VMT was estimated using the most recent version of the SACMET regional travel demand model developed and maintained by SACOG. The project was input into the SACMET cumulative year (2036) travel demand model. The model was run, and all travel to/from the traffic analysis zone (TAZ) representing the project were tracked throughout the model. The model estimated that the project would generate 14,332 daily VMT under cumulative-plus-project conditions, which equates to 12.51 VMT per employee.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Project Employees</th>
<th>Project Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Daily Vehicle Trips</td>
</tr>
<tr>
<td>Cumulative Plus Project</td>
<td>1,146</td>
<td>2,010</td>
</tr>
</tbody>
</table>

Source: Fehr & Peers 2017

The refined SACMET cumulative year travel demand model was run with and without the project, and all travel to/from the traffic analysis zones representing the Core Area (bounded by the Sacramento River, American River, Alhambra Boulevard, and Broadway) were tracked throughout the model in both scenarios. As shown in Table 5-5, the model estimated that the inclusion of the project would increase daily VMT generated by the Sacramento Core Area from 5,973,838 to 5,998,346; however, this would result in a slight decrease in daily VMT per service population in the area from 31.01 to 30.95. The project is served by multiple transit, bicycle, and pedestrian facilities in close proximity that contribute to the lower automobile use and reduction in daily VMT per service population in the area.
### Table 5-5  Sacramento Core Area VMT per Service Population – Cumulative Plus Project Conditions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sacramento Core Area</th>
<th>Sacramento Core Area Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residents</td>
<td>Employees</td>
</tr>
<tr>
<td>Cumulative No Project</td>
<td>61,025</td>
<td>131,637</td>
</tr>
<tr>
<td>Cumulative Plus Project</td>
<td>61,025</td>
<td>132,783</td>
</tr>
</tbody>
</table>

Source: Fehr & Peers 2017

---

**Transit, Bicycle, and Pedestrian Facilities**

The State’s CAP and the City of Sacramento General Plan growth pattern focuses on infill and reuse of underutilized properties, intensifying development near transit and mixed-use activity centers, and locating jobs closer to housing. The General Plan includes policies to reduce carbon emissions that contribute to climate change, including encouraging mixed-use development that supports walking, biking, and use of public transit. The related projects described in Section 5.2.4, above, are proposed on infill sites within Central City Community Plan area; the State projects are also within the CAP boundaries. The downtown area provides sidewalks for pedestrian access, bicycle routes, and transit services that include Regional Transit light rail and numerous bus lines. Therefore, there is not an existing adverse cumulative condition related to transit services, or bicycle and pedestrian access.

The 1215 O Street Office Building project site is located adjacent to multiple light rail and bus lines; numerous on-street bike lanes and bike routes are available in the project study area; and continuous sidewalks line both sides of all streets adjacent to the project site. The proposed project would not alter existing or planned transit, bicycle, or pedestrian facilities. Intensifying use of the project site would support use of transit, bicycle, and pedestrian facilities in the downtown. The project would result in a less-than-considerable contribution to cumulative transit, bicycle, and pedestrian impacts.

**Construction Traffic**

The reasonably foreseeable projects in downtown Sacramento, including the P Street Office Building Project, Sacramento Commons, and the Railyards Project would result in construction vehicle trips that could overlap with construction of the 1215 O Street Office Building Project as well as roadway disruptions in downtown. Although temporary, because of the magnitude of the projects, duration of construction, and the number of roadways affected, the cumulative construction-related traffic increases and potential roadway impacts would be cumulatively significant.

Construction traffic impacts for the 1215 O Street Office Building would be localized and temporary. The project would use the CalVet lot immediately south of the project site for construction staging, and although O Street between 12th and 13th streets (between the project site and CalVet lot) would be disrupted due to construction, it is already closed to through traffic. Therefore, the project would have an ample area available for the construction contractor, which reduces potential disruption of more actively used streets, alleys, and sidewalks. Further, DGS or its contractor would prepare and implement a Construction Traffic Management Plan that meets with the approval of the City Traffic Engineer, in accordance with City Code, which would reduce the project’s temporary impact to the degree feasible. For these reasons, the project would result in a less than considerable contribution to the cumulative construction traffic impacts.

5.3.4 **Utilities and Infrastructure**

As indicated in Section 4.5, “Utilities and Infrastructure,” the project would generate less-than-significant impacts associated with all utility and infrastructure issues, including demands for water supply and delivery infrastructure, stormwater flows, increased demand for wastewater treatment and delivery infrastructure, and increased demands for electricity and natural gas. In terms of cumulative impacts, the City of
Sacramento is responsible for ensuring that water, wastewater, and stormwater conveyance are adequately provided within its jurisdictional boundaries and that development within the city limits can be adequately served by electrical and natural gas providers. The Sacramento 2035 General Plan identifies goals and policies associated with providing water, wastewater, stormwater conveyance, electricity, and natural gas to new development.

**WATER**

The City of Sacramento 2015 Urban Water Management Plan (UWMP) was prepared using information about planned growth included in the Sacramento 2035 General Plan. As shown in Table 4.5-5 of this DEIR, there are sufficient water supplies to meet existing and future demand associated with population and development growth in the city through 2040, including during normal, single dry, and multiple dry years. The cumulative water supply condition is therefore considered less than significant. A water supply assessment (WSA) was prepared by the City (DGS and City of Sacramento 2017) that determined there are sufficient water supplies for the project during normal, single dry, and multiple dry years over a 20-year period. In addition, there is sufficient water supply for the project and for buildout of the city through 2040; therefore, the project would have a less-than significant cumulative impact on water supply.

The City has indicated that water delivery infrastructure in the vicinity of the project site may not have sufficient capacity to supply water and meet fire flow demands for the proposed project (Ewart, pers. comm., 2015). As such, the condition of the water delivery infrastructure is considered an adverse cumulative condition. It is assumed that the development of related projects served by the City’s water system, and development of additional utility systems required to serve them, would be preceded by the required CEQA review. Additionally, in consultation with the City, individual projects are required to provide adequate facilities or pay their fair share of the cost for facilities needed to provide services to accommodate growth without adversely affecting current service levels. Development of the project could require construction of water delivery infrastructure improvements. However, with implementation of Mitigation Measure 4.5-2, the project’s contribution to the cumulative condition of water delivery infrastructure would be fully mitigated and less than significant. For these reasons, significant cumulative utilities impacts would not occur related to water delivery infrastructure and the project would not result in a considerable contribution to cumulative water delivery infrastructure impacts.

**WASTEWATER**

**Stormwater/Wastewater Conveyance Facilities**

Although stormwater runoff would not increase over existing conditions, wastewater generated by the 1215 O Street Office Building Project would exceed the capacity of the City’s combined sewer system (CSS) during large storm events. The City has indicated that the overall CSS capacity is inadequate and the 18-inch main in Neighbors Alley overflows during large storm events (Dalrymple, pers. comm., 2017a), which is considered an existing adverse cumulative condition. It is assumed that the development of related projects served by the CSS, and development of additional utility systems required to serve them, would be preceded by the required CEQA review. Additionally, in consultation with the City, individual projects are required to provide adequate facilities or pay their fair share of the cost for facilities needed to provide services to accommodate growth without adversely affecting current service levels. There is capacity for the project’s wastewater flows during dry weather and the project would include water conservation measures that would further reduce wastewater flows below levels estimated in Table 4.5-6 of this DEIR. Although there is existing overflow flooding that occurs from the 18-inch CSS main in Neighbors Alley during large storm events that could be exacerbated by the project, the project proponent would pay the City’s Sewer Development Fee required by the City to mitigate increases in wastewater flows to the CSS. The fee would be used for upgrades to the CSS system (Dalrymple, pers. comm., 2017a). Therefore, the project would not result in a considerable incremental contribution to the adverse cumulative impact.
Wastewater Treatment Facilities
Wastewater generated by the 1215 O Street Office Building Project would be treated at the Sacramento Regional Wastewater Treatment Plant (Regional San WWTP). The City of Sacramento and the Sacramento Regional County Sanitation District (Regional San) have an operating agreement that allows the City to convey up to 60 million gallons per day (mgd) to the Regional San WWTP. When flows exceed 60 mgd, wastewater in the CSS is conveyed to the Combined Wastewater Treatment Plant (CWTP) and Pioneer Reservoir for treatment and storage, if needed, prior to being discharged to the Sacramento River. Currently, the City conveys about 18 mgd to the Regional San WWTP, so there would be sufficient capacity to treat wastewater from the proposed project in addition to other similar projects during dry weather. However, there is currently insufficient capacity in the CSS wastewater treatment plants to treat wastewater during peak storm events. This is considered a cumulatively adverse condition. It is assumed that the development of related projects served by the Regional San WWTP, CWTP, and Pioneer Reservoir, and development of additional utility systems required to serve them, would be preceded by the required CEQA review. Additionally, in consultation with the City, individual projects are required to provide adequate facilities or pay their fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels. Furthermore, exceedance of treatment capacity at the CWTP and Pioneer Reservoir is a rare event (once in every 10 years), the City is implementing the Combined Sewer System Improvement Plan to make improvements throughout the system, and the project would pay the Combined Sewer Development Fee for their wastewater contributions to the CSS. For these reasons, and because there is sufficient capacity to treat wastewater flows from the proposed project during dry weather, implementation of the 1215 O Street Office Building Project would not result in a considerable incremental contribution to this cumulative adverse condition.

The related projects considered in this cumulative analysis would be located in downtown and could result in increases in stormwater runoff to the CSS. Similar to the proposed project, these related projects would be required to comply with the City’s requirements for demonstrating that stormwater runoff would not contribute to a cumulative impact on the CSS. In addition, the related projects would undergo separate environmental review to ensure that adequate surface drainage facilities are included as part of those projects. For these reasons, significant cumulative utilities impacts would not occur related to stormwater conveyance facilities. Because the proposed project would not result in an increase in stormwater that flows to the CSS, the project would not result in a cumulatively considerable incremental contribution to this cumulatively significant impact.

Electricity, Natural Gas, Energy Efficiency
The geographic area considered for cumulative impacts related to energy use includes the service areas for SMUD and PG&E. These providers employ various programs and mechanisms to support provision of these services to new development; various utilities charge connection fees and re-coup costs of new infrastructure through standard billings for services. There is currently sufficient infrastructure and energy supply to support existing demand.

Implementation of the 1215 O Street Office Building Project would result in an increase in demand for energy; however, the project’s energy goal is to achieve ZNE consistent with Executive Order B-18-12. The performance criteria will require the design builder to use solar panels that generate 2 to 2.5 million kilowatt hours (MKWH) per year and the proposed project would exceed energy efficiency requirements of Title 24 and would implement additional measures in order to meet the U.S. Green Building Council’s Leadership in Energy and Environmental Design version 4 (LEED v4) Green Building Rating System requirements for energy efficiency (see Appendix K for LEED v4 checklist). Additionally, the project is within the Central Plant’s approved long-term loads and would not increase the natural gas demand to the Central Plant. No other natural gas infrastructure would be constructed for the new office building. Transportation energy use associated with construction of the proposed project would also not be considered inefficient, wasteful, or unnecessary because the energy needs for project construction would be temporary and is not anticipated to require significant additional capacity or significantly increase peak or base period demands for electricity and other forms of energy. Construction equipment use and associated energy consumption would be typical of that associated with office and commercial projects in an urban setting. Transportation energy use
associated with operation of the proposed project would also not be considered inefficient, wasteful, or unnecessary because the project involves redevelopment of an existing site in a relatively accessible location and adjacent to a Regional Transit light rail station.

Cumulative development would increase the demand for electrical and natural gas supply. However, both SMUD and PG&E are establishing or gaining access to new energy sources to serve existing and future customers. Based on existing available energy supplies and new sources, it is expected that sufficient electricity and natural gas supplies are available to support cumulative development. Similar to the proposed project, the cumulative projects would also be required to implement energy efficiency measures in accordance with LEED v4 (see Appendix K of this DEIR) and Title 24 to reduce energy demand. In addition, electricity, natural gas, and energy efficiency impacts of related projects would undergo separate environmental review to ensure that adequate electricity and natural gas supplies and infrastructure would be sufficient and that the project would also not be considered inefficient, wasteful, or unnecessary. For these reasons, significant cumulative impacts would not occur related to electricity, natural gas, or energy efficiency from implementation of the cumulative impacts. The project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to demand for electricity and natural gas or related to inefficient use of energy.

5.3.5 Air Quality

Construction and operation of the 1215 O Street Office Building Project would result in emissions of criteria air pollutants (e.g., particulate matter with an aerodynamic diameter of 10 microns or less [PM10]) and precursors (e.g., oxides of nitrogen (NOx) and reactive organic gases (ROG) in Sacramento County, within the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Sacramento County is currently in nonattainment for ozone and PM10 with respect to the California Ambient Air Quality Standards (CAAQS) and ozone and PM2.5 with respect to the National Ambient Air Quality Standards (NAAQS).

Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving NOx, ROG, and sunlight. Only the largest individual sources emit NOx and ROG in amounts that could have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they can result in severe ozone problems. Because the region is in nonattainment for either CAAQS or NAAQS for ozone precursors (i.e., NOx and ROG), and criteria air pollutants (PM10 and PM2.5), emissions from cumulative development are considered to be cumulatively considerable.

Air districts in California in non-attainment for ozone precursors develop air quality attainment plans designed to reduce emissions of ozone precursors enough to attain the federal ozone standard by the earliest practicable date. Air quality attainment plans include a multitude of air pollution control strategies. When developing air quality attainment plans, air districts account for the emissions from all present and future development in the region by relying on city and county general plans. Because the proposed project would be consistent with the land use designation in the City of Sacramento 2035 General Plan (see Section 4.2, “Land Use”), emissions associated with the development of the project are accounted for in SMAQMD’s air quality attainment plan.

However, project-related construction emissions would exceed the applicable mass emission thresholds for NOx established by SMAQMD. The implementation of Mitigation Measure 4.6-1 would reduce the construction-related NOx emissions to a less-than-significant level. Therefore, the short-term contribution of NOx from project construction, combined with other cumulative sources of ozone precursors in the region would not be cumulatively considerable.

Long-term operation of the proposed project would result in regional emissions of ROG, NOx, PM10, and PM2.5 from area, energy, and mobile sources. Area-source emissions include those from the combustion of natural gas for space and water heating, the regular testing of the emergency backup generator and occasional
operation during power outages, and operation of landscape maintenance equipment. Energy-source emissions include those from the consumption of electricity. Mobile source emissions, for the purposes of this analysis, include the VMT associated with new employees that would occupy the 1215 O Street Office Building and those who would backfill the renovated Bateson Building. These are employees that would result in a net increase in the number of employees in the downtown Sacramento area relative to existing conditions. VMT estimates were derived from data generated in the traffic impact analysis conducted for the project (See Section 4.4, “Transportation and Circulation” and the discussion of cumulative transportation impacts above). Long-term operation-related emissions generated by the project would not exceed SMAQMD’s significance thresholds for ROG, NOX, PM10, or PM2.5 (see Table 5-6). Consequently, long-term operation of the proposed project would not contribute to an increase in regional emissions of ozone, PM10, and PM2.5 that would conflict with adopted air quality plans, and therefore would not be cumulatively considerable.

### Table 5-6 Summary of Cumulative Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2021)

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Maximum Daily Emissions (lb/day)</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG &lt;1</td>
<td>NOX &lt;1</td>
</tr>
<tr>
<td>Area</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>&lt;1</td>
<td>1</td>
</tr>
<tr>
<td>Mobile</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>18</td>
<td>26</td>
</tr>
<tr>
<td>Annual Emissions (tons/year)</td>
<td>2</td>
<td>65 lb/day</td>
</tr>
<tr>
<td>SMAQMD Threshold of Significance</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Exceed Significance Threshold?

Notes: CO = carbon monoxide; lb/day = pounds per day; NOX = oxides of nitrogen; PM10 = respirable particulate matter; PM2.5 = fine particulate matter; ROG = reactive organic gases.

Total values may not add correctly due to rounding. See Appendix C for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental 2017

Under cumulative plus project conditions, all intersections would continue to operate at level of service (LOS) D or better overall, except the intersections of W Street/16th Street/US 50 Westbound Off-Ramp and X Street/15th Street/US 50 Eastbound Off-Ramp, which would operate at LOS E in the p.m. peak hour. The downgrade of such intersections triggers the use of SMAQMD’s Second Tier for determining CO significance. The intersections affected by the project would not experience a volume of 31,600 vehicles per hour (See Section 4.4, “Transportation and Circulation”). Further, CO emission factors in future years are expected to be lower than current levels due to more stringent vehicle emissions standards and improvement in vehicle emissions technology. Ambient local CO concentrations under future cumulative conditions would continue to decline. Therefore, 1- and 8-hour CO concentrations for the future cumulative conditions would not be anticipated to exceed the significance thresholds of 20.0 parts per million (ppm) and 9.0 ppm, respectively. Consequently, the project would not result in cumulatively considerable incremental contribution such that a significant cumulative impact related to CO concentrations would occur.

The project plus the renovation of the Bateson Building would not generate significant health risks associated with toxic air contaminants because it would not expose any single receptor to a level of cancer risk that exceeds an incremental increase of 10 in one million, or to a hazard index of 1. Construction-generated emissions of diesel PM would be short-term and intermittent and would not occur for an extended period of time. Although the construction schedule and activities associated with the renovation of the Bateson Building are unknown at this time, it is anticipated that construction timing would be relatively short, as there would not be demolition. Similarly, renovation of an existing building would use few, if any pieces of heavy-duty diesel construction equipment relative to that needed to construct a new building. The
Bateson Building would be smaller in square footage than the proposed project, renovation is assumed not to include demolition of the existing building, and renovation would not involve the excavation and site grading typically associated with construction of a new building. Therefore, construction emissions are anticipated to be less than what was modeled for the project. In addition, emission factors in future years are expected to be lower than current levels due to more stringent diesel emissions standards and improvement in diesel emissions technology, thus construction-related emissions of criteria air pollutants and TACs would be lower in the future. The project’s diesel PM emissions from construction would not exceed 4 lb/day, which is below the threshold of 80 lb/day. For the reasons described above, it is not anticipated that the levels of health risk exposure from the implementation of the project or the renovation of the Bateson Building, in combination with health risk exposure of any other toxic air contaminant-emitting sources, would reach levels which would be considered a significant cumulative impact. The project’s contribution, therefore, would not be cumulatively considerable.

Neither the project nor the renovation of the Bateson Building would result in the generation of odor sources, as both projects would be used as general office buildings. There are no existing facilities in the project vicinity typically considered as sources of objectionable odors such as wastewater treatment facilities, landfills, food processing facilities, and livestock operations. None of the cumulative projects identified in Section 5.2.4, “Related Projects,” include land uses that would generate objectionable odors that would affect a substantial number of people or that would travel far enough to interact with other potential odor sources. There are no facilities or activities in the vicinity of the 1215 O Street project site or Bateson Building that would interact to create a significant cumulative odor impact, and neither the proposed project nor the reasonably foreseeable future projects would generate objectionable odors that would change this condition. This impact would not be cumulatively considerable.

### 5.3.6 Greenhouse Gas Emissions and Climate Change

The discussion of greenhouse gas (GHG) emissions generated by project construction and operation under Impact 4.7-1 this DEIR are inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions. GHG emissions resulting from the project would not exceed the threshold of 1,100 metric tons (MT) of carbon dioxide-equivalent emissions per year (CO2e/year). Thus, the project would not result in a considerable contribution to a significant cumulative GHG impact. Furthermore, implementation of Mitigation Measure 4.7-1 would ensure that the project implements measures to support the statewide GHG reduction goals. Therefore, the project’s contribution to the cumulative climate change impact would be less than significant.

### 5.3.7 Noise

Implementing the 1215 O Street Office Building Project would result in significant unavoidable noise impacts related to the potential for nighttime construction activities. Other noise and vibration impacts would either be less than significant, or reduced to a less than significant level with mitigation. Noise and vibration are localized issues in that they attenuate with distance, particularly vibration. Therefore, only reasonably foreseeable future development projects in the direct vicinity of the 1215 O Street Office Building Project site would have the potential to add to anticipated project-generated noise and vibration, and thus result in a cumulative noise or vibration impact. However, there are no reasonably foreseeable future projects in the vicinity of the 1215 O Street Office Building Project site close enough for noise and vibration from the reasonably foreseeable future project to be heard at the 1215 O Street Office Building Project site, and vice versa. Therefore, for stationary noise and vibration sources (project construction and building operation) there would not be a significant cumulative noise or vibration impact, and the noise and vibration generated by the 1215 O Street Office Building Project would not make a cumulatively considerable contribution to a significant cumulative impact.
While construction and stationary-source noise can be controlled on-site at the point of origin, traffic noise may extend beyond a project site along existing roadways and result in significant traffic noise impacts on sensitive uses along these roadways. Operation of the 1215 O Street Office Building Project would generate a minimal number of new vehicle trips (see Section 4.4, “Traffic”) and would not make a perceptible contribution to traffic noise (see Table 4.8-14). The types of standard duty cars and trucks associated with trips generated by the project would not generate perceptible groundborne vibration. If, under cumulative conditions, there were a significant cumulative traffic noise impact at a location where the 1215 O Street Office Building Project contributed vehicle trips, the noise contributed by the project would be imperceptible, and therefore would not be a significant contribution. The 1215 O Street Office Building Project would not make a cumulatively considerable contribution to a significant cumulative traffic noise impact.

5.3.8 Geology and Soils

The 1215 O Street Office Building Project site is not located on any known faults or traces of active faults. Construction of the office building would conform to the current California Building Code (CBC), which contains specifications to minimize adverse effects on structures caused by ground shaking from earthquakes and to minimize secondary seismic hazards (e.g., liquefaction). Through conformance with the California Building Code and implementation of site-specific engineering measures developed in compliance with these codes, development of the 1215 O Street Office Building Project would not result in exposure of people or structures to substantial adverse effects related to seismic hazards. In addition, the project site does not include soils susceptible to subsidence or shrink-swell potential. If shrink-swell soils were present, they could be addressed through conformance with the CBS and implementation of applicable measures. Therefore, the 1215 O Street Office Building Project would not create substantial risks to persons or structures associated with these soil conditions.

Implementation of the various related projects and other projects in the region could expose additional structures and people to seismic and soil hazards. The potential seismic and soil hazards, therefore, could represent a significant cumulative impact if projects are not developed to the latest building standards and do not incorporate recommendations from site-specific geotechnical reports and grading/erosion plans prepared for these projects. However, each project considered in this cumulative analysis must individually meet building code requirements, and no additive effect would result from the combination of the projects considered in this cumulative analysis and the 1215 O Street Office Building Project. Therefore, no significant cumulative effect related to seismic or soil hazards would occur.

Implementation of the 1215 O Street Office Building Project would not create additional facilities under increased risk of hazards and would not result in any cumulatively considerable incremental contributions to any significant cumulative impacts.

5.3.9 Hydrology and Water Quality

FLOOD PROTECTION

Both the Sacramento River and the American River flow through the project region. Flood-control levees in the cities of Sacramento and West Sacramento and in other jurisdictions along these rivers protect development in the floodplain, with the level of flood protection varying depending on the size, configuration, and quality of the levees. Much of downtown Sacramento, as well as other portions of the American River floodplain within the city, have been removed from the 100-year flood hazard area as a result of various flood protection improvements. The 1215 O Street Office Building Project site is located in an area that is protected from the 1-in-100 Annual Exceedance Probability event (i.e., the 100-year flood).

The 1215 O Street Office Building Project site, as well as the related projects and a vast majority of past, present, and probable future development in the project region are located outside the 100-year floodplain.
Therefore, there would not be a cumulative decrease in available flood storage or increase in flood elevations through the removal of areas from the 100-year floodplain. A significant cumulative flood protection impact would not occur through this mechanism.

Local and regional development could lead to an incremental increase in discharges of stormwater into the Sacramento River and the American River during storm events. In theory, this could lead to an incremental increase in peak stormwater runoff to these rivers and potential increases in downstream flood elevations. However, local jurisdictions implement various regulations and guidelines regarding stormwater detention, runoff rates, and discharge rates. These regulations and guidelines are in place, in part, to minimize runoff discharges during flood events. Therefore, there would not be a significant cumulative increase in downstream flood elevations because of increased generation of stormwater runoff associated with cumulative development. A significant cumulative flood-protection impact would not occur through this mechanism.

Overall, the 1215 O Street Office Building Project would not provide any cumulatively considerable incremental contributions to any significant cumulative flood-control impact or stormwater runoff related impact because the project replaces an office building use with the same use and does not change the flood control system or create additional impermeable surface that could increase stormwater flows.

**GROUNDWATER QUALITY**

Construction activities under the 1215 O Street Office Building Project, specifically excavation, could intersect with shallow groundwater and require dewatering. Sediments and construction-related contaminants (e.g., fuels, lubricants, oil, grease, paint) could enter the groundwater directly from construction activities where the groundwater table is breached. However, as part of project implementation, the State would be required to obtain and comply with a National Pollutant Discharge Elimination System (NPDES) general permit for construction activity, including preparation of a storm water pollution prevention plan (SWPPP). The NPDES permit would be required to include provisions for dewatering, and the SWPPP would be required to include a dewatering plan, measures to prevent/minimize sediment and contaminant releases into groundwater during excavation, and methods to clean up releases if they do occur. The related projects would be developed at multiple locations with varying depths to groundwater, would generate varying degrees of construction and urban runoff, and would likely implement varying levels of best management practices (BMPs) that would protect groundwater. Although there would likely be considerable variation among the related projects, and thus potentially varying levels of possible groundwater impacts, there are a considerable number of regulatory safeguards in place to ensure that groundwater contamination does not occur. These include, but are not limited to, the NPDES permit system, treated wastewater-discharge requirements, separation-distance requirements between wastewater-storage ponds and groundwater, and hazardous-materials handling requirements. Therefore, it is anticipated that less-than-significant cumulative impacts would occur, and if such impacts were to occur, the 1215 O Street Office Building Project would not provide a substantial contribution to them.

**SURFACE-WATER QUALITY**

There is the potential for implementation of the 1215 O Street Office Building Project to result in the release contaminants during construction that could enter the City’s stormwater drainage system and to contribute to long-term discharges of urban contaminants (e.g., oil and grease, fuel, trash, pesticides, fertilizer) into the stormwater drainage system. Stormwater entering the City’s combined storm sewer (CSS) system would be treated at the Sacramento Regional Wastewater Treatment Plant (SRWTP) before entering the Sacramento River and would not contribute to surface-water-quality effects. In addition, the location for the proposed project is currently developed and project implementation would result in little change to the type or volume of urban contaminants that might be released. In addition, implementation of the NPDES stormwater general permit, which would include BMPs as described in Section 4.10, “Hydrology and Water Quality,” would reduce construction- and operation-related water quality effects to less-than-significant levels. The City’s municipal NPDES stormwater permit and associated City Stormwater Quality Improvement
Plan/Stormwater Management Program require new development and redevelopment projects to implement postconstruction stormwater-contaminant-source control and treatment controls. Consequently, the SWPPP and approval plans for the 1215 O Street Office Building Project would include site-specific postconstruction stormwater-runoff-control plans and measures to demonstrate how the project would reduce the potential for contaminants to enter receiving waters.

While there are no assurances that the related projects would incorporate the same degree or methods of treatment as the 1215 O Street Office Building Project, each related project that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the Central Valley Regional Water Quality Control Board. Related projects in the city of Sacramento would be required to comply with the City’s municipal NPDES stormwater permit and associated City Stormwater Quality Improvement Plan/Stormwater Management Program. Therefore, impacts of related projects on surface water-quality would be expected to be less than significant. The 1215 O Street Office Building Project would not provide a cumulatively considerable incremental contribution to any significant cumulative surface-water-quality impact if one were to occur.

5.3.10 Hazardous Materials and Public Health

The 1215 O Street Office Building Project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts related to these activities are considered less than significant under the O Street Office Building Project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies, and because it is assumed that those involved with the projects would implement and comply with these existing hazardous materials regulations. Therefore, significant hazards to the public would not occur. Because these laws and regulations would also apply to each related project, this impact would be considered less than significant on both an individual project and cumulative basis.

5.3.11 Cultural Resources and Tribal Cultural Resources

Cultural resources in the project region generally consist of prehistoric sites, historic sites, historic structures, and isolated artifacts. During the 19th and 20th centuries, localized urbanization and intensive agricultural use in the region resulted in the destruction or disturbance of numerous prehistoric sites while many structures now considered to be historic were erected. From the latter half of the 20th century to the present, prehistoric and historic structures have been disturbed and destroyed. During this period, the creation and enforcement of various regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts; however, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds.

ARCHAEOLOGICAL RESOURCES

As-yet-undiscovered subsurface historic and pre-historic archeological resources might underlie the site considered for the project. Mitigation measures are identified under Impacts 4.12-1, 4.12-2, and 4.12-3 of this DEIR to reduce potential impacts to significant historic and pre-historic archeological resources, tribal cultural resources, and human burials to a less-than-significant levels. Implementing these mitigation measures would minimize the potential of the proposed project to incrementally contribute to any significant cumulative impacts on important cultural resources in the project region.

Mitigation measures applied to the project comply with State CEQA Guidelines Section 15064.5 and related provisions of the PRC. It is assumed that similar measures would be applied to other development projects in the region, as appropriate. Where federal-agency approvals are required to implement projects, additional protection would be required under the NHPA.
Because significant historic and pre-historic archaeological resource sites in the project study area are protected, significant cumulative impacts are not anticipated, and implementing the projects would not incrementally contribute to a significant cumulative effect on cultural resources.

**HISTORIC STRUCTURES**

Although there are various laws and regulations directed at the protection of historic structures, significant historic structures have been, and will continue to be damaged or removed over time. Even with implementation of mitigation measures and compliance with existing policies and regulations, the proposed project, and presumably some reasonably foreseeable future projects, would contribute to an ongoing significant cumulative loss and degradation of historic structures. Because implementation of the 1215 O Street Office Building Project results in the demolition of an existing historic structure, the project makes a significant incremental contribution to the significant cumulative impact of the loss and degradation of historic structures.

**5.3.12 Biological Resources**

Sensitive habitats for biological resources in the vicinity of the project site and in the region have been modified over time, as land has been developed and converted to urban uses. Future projects in the region could continue to result in losses of sensitive habitats and sensitive species; however, the related plans and projects consist of infill development in the Central City consist with the State’s CAP and the City’s 2035 General Plan for development in this urbanized area. Although individual projects would be required to mitigate for significant impacts on a project-by-project basis, they may result in residual impacts that combine with the existing adverse condition to create a significant cumulative condition related to special-status species and sensitive habitats.

The project site and vicinity are located in highly-urbanized downtown Sacramento. No special-status plants occur on the project site. In addition, all of the special-status wildlife species identified in the CNDDDB search (see Appendix K) either do not occur on the project site or have a low potential for occurrence; the project would not adversely affect special-status wildlife species. As discussed in Section 4.13, “Biological Resources,” the project site neither connects nor separates any significant wildlife habitat areas, and implementation of the project would not disrupt wildlife movement or use of migratory corridors. Implementation of the proposed project would result in a potentially significant impact related to removal/disturbance of protected “City street trees.” This impact would be reduced to a less-than-significant level with implementation of Mitigation Measure 4.13-1 identified in Section 4.13, “Biological Resources.” As a result of the project either resulting in no impact, or very limited impact after mitigation, on biological resources, the project would not have a considerable contribution to an adverse cumulative condition with respect to biological resources.

**5.3.13 Public Services**

The proposed 1215 O Street Office Building Project would generate a less-than-significant increase in demand for fire, police, solid waste disposal, parks and recreation, and school facilities. In terms of cumulative impacts, public services for related projects in Sacramento, including the future addition of 1,000 new State employees that could occur with backfilling the Bateson building, would be provided by the City and the appropriate service providers. The following analysis focuses on public services provided in Sacramento because, other than mutual aid agreements for fire protection, there is little interaction with the neighboring jurisdictions in terms of demand for and provision of public services. The City and the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries.
Buildout of the Sacramento 2035 General Plan, including the future addition of 1,000 new State employees that could occur with backfilling the Bateson building, would generate an increase in demand for public services. With respect to fire and police protection services, the Sacramento 2035 General Plan identified that additional fire and police protection staff would be needed to accommodate growth contemplated in the General Plan, and that SPD and SFD would need to both remodel existing facilities, and to construct new facilities to maintain appropriate service levels (Sacramento 2014:4.10-3 – 4.10-4; 4.10-7). Cumulative demand for CHP services by State facilities would be planned for through the CPS unit of the CHP participating in the Capitol Area Committee. The CPS unit’s participation in this committee helps them determine when additional staff, equipment, or facilities are needed as additional State facilities are planned. The 2035 General Plan includes measures to accommodate growth and increased service demands, including specific policies to ensure service goals are met and the identification of several new fire and police stations and associated facilities that would accommodate the additional staff (Policies PHS 1.1.2 through PHS 1.1.4, PHS 1.1.7, PHS 1.1.12, and PHS 2.1.2 through PHS 2.1.5). Impacts on the environment resulting from the expansion or construction of these facilities were already contemplated and would generally be consistent with the environmental impacts associated with the urban development evaluated in the 2035 General Plan Master EIR (MEIR). For these reasons, the project would not result in a considerable contribution to a cumulative impact on fire, emergency, and police services.

With respect to schools, the 2035 General Plan identified remaining capacity at schools within the Sacramento Unified School District, but identified that new elementary, middle, and high schools may need to be constructed to meet the growth demands of the General Plan (City of Sacramento 2014:4.10-10 – 4.10-11). Policies in the General Plan include measures to ensure that adequate school facilities are provided to serve the anticipated student growth in the city (Policies ERC 1.1.1 and ERC 1.1.3). Those policies, coupled with the payment of statutory fees by developers would serve as complete CEQA mitigation to satisfy the impact of development on school facilities. For these reasons, the project would not result in a considerable contribution to a cumulative impact on schools.

The 2035 General Plan plans for increases in density and associated population increases in the city, including within the central city where the 1215 O Street Office Building Project is located. There are many recreational amenities in the vicinity of the project site and central city, such as neighborhood parks, State parks, and the American River. However, the 2035 General Plan MEIR identifies that with the increased population and densities there would be a reduction in park service levels and an increase in usage of parks in the central city (City of Sacramento 2014:4.9-7). Policies in the General Plan and the City’s Parks and Recreation Master Plan include measures to provide resources to protect and enhance the existing park facilities and to provide a well-rounded recreational experience for downtown residents (General Plan Policies ERC 2.2.2 through 2.2.4, ERC 2.2.18 and Master Plan Policies 3.5, 12.1, 12.9, and 12.10). Those policies, coupled with the payment of fees by developers would serve as complete CEQA mitigation to satisfy the impact of development on school facilities. Because daytime use of nearby parks by employees associated with the proposed project would not substantially increase above the current level of use, the City has policies that provide for protecting and enhancing the existing park facilities, and other future development in the city would be required to pay fees to offset their impact on parks and recreation facilities, the project would not contribute to a cumulative impact on parks and recreation facilities.

Implementation of the project and the future addition of 1,000 new State employees that could occur with backfilling the Bateson building, along with buildout of Sacramento would increase demand for solid waste disposal services. Future development is required to meet State and local minimum standards for recycling and diversion of solid waste from landfills. State operations and new development are required to recycle a minimum of 50 percent of their operational waste in accordance with AB 75 and AB 939. Construction activities are required to recycle and/or salvage a minimum of 65 percent of their waste in accordance with Section 5.408 of the CALGreen Code. Additionally, the City has a policy to achieve zero waste by 2040 development in the city is required to meet General Plan policy requirements to reduce waste by 75 percent over 2005 levels by 2020 and by 90 percent over 2005 levels by 2030 (Policy U 5.1.1). With respect to demand for solid waste disposal services, the 2035 General Plan MEIR identified sufficient capacity in regional landfills to serve buildout of the city and the region (City of Sacramento 2014:4.11-20). Because
there would be sufficient capacity in landfills that serve the City of Sacramento and the 1215 O Street Office Building Project would adhere to C&D and operational waste reduction requirements, the project would not result in a considerable incremental contribution to a cumulative impact on solid waste services.

5.3.14 Aesthetics, Light, and Glare

Past development in the region along I-5, U.S. 50, and Sacramento River viewsheds has increasingly changed the visual character from undeveloped land to developed urban uses, thus altering and limiting the views available to residents, recreationists, and motorists. This trend is anticipated to continue as future projects are implemented in the region, continuing to alter visual conditions as open viewsheds are replaced by urban development. Downtown Sacramento is an urban environment with a mix of low-rise, mid-rise, and high-rise buildings and a large amount of widespread, ambient light. Building materials and cars generate some glare; however, mature trees in downtown help minimize glare. Existing urban development in downtown Sacramento also results in shadows throughout the day. Increased urban development in downtown Sacramento and nearby West Sacramento would lead to alterations in the skyline, shading of ground-level areas, disruption of existing views, increased nighttime light and glare in the region, and more limited views of the night sky.

The 1215 O Street Office Building would not make a substantial contribution to the cumulative changes in visual character, light, or glare in the region because the project would replace an existing office building with a new office building and would install a solar array over an existing surface parking lot. Although the new office building would be six stories taller, it would not exceed the maximum height limit established in the Capitol View Protection Act. The office building and the solar panels would not be of sufficient mass to shade shadow-sensitive neighboring residential uses for a substantial portion of the day. The proposed project is located amid a mix of low-rise, mid-rise, and high-rise buildings and it would comply with the CAP design objectives and guidelines, as well as the City’s Central City Urban Design Guidelines to the greatest degree possible. The proposed office building would not be the tallest building in the immediate area. Therefore, the local visual character, as experienced by viewer groups in the area, would not be substantially altered by replacing the existing office building with a new office building. The proposed project would comply with LEED v4 criteria (see Appendix K of this DEIR) and standards contained in the CALGreen Code for reducing light pollution, would avoid the use of highly reflective architectural materials for building design, and would not create a new source of substantial light and glare with implementation of Mitigation Measure 4.15-3 that would adversely affect daytime or nighttime views in the area. Furthermore, the cumulative projects listed in Table 5-2, although located in downtown, are not located within the same viewshed as the 1215 O Street Office Building Project; the O Street Office Building and related projects such as the P Street Office Building or the Sacramento Commons would not both be visible by a viewer. Therefore, the 1215 O Street Office Building Project would not substantially contribute to adverse cumulative changes to the existing visual character or quality of the downtown Sacramento, or to cumulative light, glare, or shadow impacts.
6 OTHER CEQA-MANDATED SECTIONS

6.1 GROWTH INDUCEMENT

California Environmental Quality Act (CEQA) Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an environmental impact report (EIR). Section 15126.2(d) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

6.1.1 Summary of Capitol Area Plan EIR Analysis of Growth-Inducing Impacts

The EIR prepared for the 1997 Capitol Area Plan (CAP) previously addressed growth-inducing impacts associated with development of State facilities within the Capitol Area as envisioned in the plan. The boundary of the Capitol Area encompasses the 1215 O Street Office Building Project Site, which is occupied by the vacant State-owned California Department of Food and Agriculture Annex (CDFA Annex) Building. Redevelopment of the CDFA Annex was not specifically proposed in the CAP (DGS 1997a), although it suggests examination of underutilized State properties, including the project site.
The analysis of growth inducement in the CAP EIR (DGS 1997b) concludes that implementing the plan would have the following growth-inducing effects:

- **Elimination of Obstacles to Growth.** Plan implementation would provide a policy for the State to consolidate its future office development within the Capitol Area instead of spreading the office development throughout the region. This would result in more office development in the downtown Sacramento area, possibly inducing localized growth.

- **Increased Demand on Secondary Markets.** Implementing the CAP would result in a substantial increase in the demand for support businesses and services in the downtown area; therefore, the plan would be a significant economic catalyst for downtown Sacramento.

- **Land Use Intensification.** Full buildout of State facilities consistent with the CAP may result in increased pressure to intensify land uses/development on many of the privately owned parcels within the Capitol Area.

### 6.1.2 Growth-Inducing Impacts of the Project

As of 2015, 1.8 million GSF of State owned facilities have been constructed in the Capitol Area, leaving the need to construct 1.3 million GSF to meet the CAP goal of 2.8 million GSF in the Capitol Area (DGS 2015). Although the CDFA Annex Building was not identified as an opportunity site for office development in the CAP, the CAP suggests examination of underutilized State properties, including the 1215 O Street site. The most recent 2015 CAP Progress Report described a site study prepared for DGS (DGS 2010) that recommended replacing the existing CDFA Annex with a new, larger office building. In addition, replacement of the CDFA Annex was identified as one of the initial projects in Governor Brown’s 2016 Five-Year Infrastructure Plan. The proposed demolition of the CDFA Annex and construction of a new office building would be consistent with the State’s CAP designation as “office,” consistent with the 2015 CAP Progress Report recommendation, and consistent with the Governor’s 2016 Infrastructure Plan (see Impact 4.2-2). The proposed office building would be larger (approximately 300,000 to 350,000 GSF) than the existing CDFA Annex (115,000 GSF), intensifying office space on the underutilized site and allowing for consolidation of State agencies in the Capitol Area, consistent with the principles of the CAP. The surface parking lot on O Street serving California Department of Veteran Affairs (CalVet) employees would remain a surface parking, not “residential” as designated in the CAP and the associated CAP Implementation Plan. However, the proposed addition of solar panels over the surface parking would not alter the existing land use, nor would it preclude future residential development on the surface parking lot; therefore, the proposed addition of solar panels to the site would not conflict with the “residential” designation. Although the project is consistent with the CAP, because replacement of the CDFA Annex was not specifically anticipated in the CAP and associated EIR, and because the EIR for the CAP was prepared in 1997 and substantial changes have occurred in downtown Sacramento since that time, a further analysis of the growth-inducing effects of the proposed 1215 O Street Office Building Project is provided here.

### GROWTH-INDUCING EFFECTS OF CONSTRUCTION

During peak construction activity, the project is estimated to generate between 175 and 225 temporary construction jobs. As identified in Table 4.3-3 of this DEIR, in 2000, 32,400 residents in Sacramento County were employed in the construction industry, construction jobs declined to 23,500 in 2010 and have since started to rise again with 30,700 construction jobs in 2015. Based on the 2015 unemployment rate of 6.0 percent for Sacramento County, approximately 1,800 construction employees could be available in Sacramento County. Construction jobs supporting the proposed project would be temporary and it is the nature of construction work that construction contractors bid and work on projects based on their availability and need for work, and in regions that are accessible to their work force. As existing construction projects near completion, contractors may seek out new construction projects to maintain employment for the same workers. Although it is possible that some construction workers could move to the city or the region as a result
of the proposed project and the cumulative projects, the existing labor force is anticipated to be sufficient to meet construction employment needs for the these projects. Furthermore, the Sacramento 2035 General Plan anticipates continued growth in jobs and includes policies, such as Policy LU 2.8.6, that promote the designation of sufficient land and development potential for housing and employment opportunities for a range of incomes and household types throughout the city, and encourages a balance between job type, workforce, and housing development. For these reasons, substantial population growth or increases in housing demand in the region as a result of these construction jobs is not anticipated. Therefore, the project would not be expected to directly induce population growth by bringing substantial numbers of construction jobs to the area, or to result in associated increases in demand for housing or goods and services.

GROWTH-INDUCING EFFECTS OF OPERATION

The project site is located within downtown Sacramento, which has an established roadway network and utilities infrastructure. The roadways providing access to and through downtown Sacramento in the project vicinity would not be altered, and no new roadways would be constructed. As with the building to be demolished, the new office building would connect to existing City of Sacramento water supply pipelines and the City’s combined sewer system (CSS). As documented in Section, 4.5, “Utilities,” there is sufficient water supply and conveyance, CSS conveyance, and wastewater treatment capacity to serve the project. The project would not require new water entitlements, nor expanded, upgraded, or new water or wastewater infrastructure beyond the new building’s connections. The State’s Central Plant would provide heating and cooling; it also has sufficient capacity and conveyance to serve the new office building. The project would therefore not induce growth through extending roadway or utility infrastructure to new areas or from increasing infrastructure capacity.

The 1215 O Street Office Building would have sufficient office space to accommodate up to approximately 1,200 employees. It is anticipated that the new office building would initially be occupied by employees from the California Health and Human Services Agency (CHHS), the Department of State Hospitals (DSH), and the Department of Development Services (DDS). There are approximately 1,000 existing employees that would be transferred from existing State offices in downtown Sacramento, primarily the Bateson Building (see Exhibit 3-2). This transfer would not increase employment in downtown, but rather would shift the location of existing State employees. Additionally, between now and 2021 (the target year for occupancy of new O Street building), there is a projected increase of approximately 150 employees with CHHS, DSH, and DDS; the new O Street Office Building would be sized to accommodate this growth. In addition, the project’s food court would generate approximately 12 full-time equivalent employees. With a city population of 485,683 (as of January 1, 2016) (California Department of Finance 2016), and additional residents nearby in Sacramento County, the City of West Sacramento, and Yolo County, it is expected that approximately 200 new jobs could be filled by the existing local pool of employable residents. Therefore, the potential growth in State employees with the CHHS, DSH, and DDS as well as the retail component of the project would not be expected to directly induce population growth by bringing substantial numbers of new jobs to the project vicinity, or to result in associated increases in demand for housing or goods and services.

Because the project would primarily consolidate existing State office workers rather than creating new employment opportunities, it would not directly induce growth. However, because the Bateson Building or other vacated State office space may be renovated and repopulated in the future, it could further concentrate State employees in downtown Sacramento and attract commensurate economic growth to the vicinity to satisfy demand for goods and services such as restaurants and retail. As explained in the Chapter 3, “Project Description,” there are no details currently available regarding the timing or nature of renovation or future re-occupation of the Bateson Building and approval is not being sought through this environmental document or process. However, it is considered to be a reasonably foreseeable indirect effect of the project. In this respect, the proposed project would be indirectly growth inducing, which could foster both economic growth and demand for housing. As addressed in Section 4.3, “Population, Employment, and Housing,” the ratio of jobs to housing units in the region is relatively balanced and is projected to remain balanced in future planning periods for the city and region. Although the 1215 O Street Office Building Project could, in the long term, indirectly contribute to the generation of approximately 1,000 new jobs in Sacramento.
through the future renovation or replacement of the Bateson Building, when viewed in conjunction with current and future housing projects (such as Sacramento Commons and Rail Yards, see Chapter 5, “Cumulative Impacts”), overall housing opportunities in Sacramento should increase over time with the increased housing demand (See Tables 4.3-2 and 4.3-3 of this DEIR). Also, the City’s 2035 General Plan designates the project site, and the site of the existing Bateson Building, “Central Business District,” which contemplates relatively high intensity office uses with a floor area ratio (FAR) of up to 15.0. The level of office development for both the project and the re-use of the Bateson Building would be consistent with General Plan assumptions for employment generation and, subsequently, growth projections. Therefore, although the proposed project could indirectly induce growth by vacating and thus allowing the eventual re-use of the Bateson Building, the level of growth is anticipated in both local and regional plans and would not require development of housing or other facilities that is not identified in these plans.

6.2 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 4 (project level impacts) and Chapter 5 (cumulative impacts) of this DEIR, after implementation of the recommended mitigation measures, most of the impacts associated with the proposed 1215 O Street Office Building Project 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.

6.2.1 Noise

Impact 4.8-1: Short-term construction-generated noise levels
Proposed construction areas would be in close proximity to existing noise-sensitive receptors. Most noise-generating construction activity would be performed during daytime hours, when construction noise is exempt from noise standards by the City of Sacramento Noise Control Ordinance. However, it is possible that construction activity may be required during the non-exempt evening and nighttime hours (6 p.m. to 7 a.m., Monday through Saturday, and between 6 p.m. and 9 a.m. on Sunday) for activities such as large continuous concrete pours. Thus, potential nighttime construction activities could expose nearby noise-sensitive receptors to noise levels that exceed City of Sacramento Noise Control Ordinance nighttime noise standards.

Implementation of Mitigation Measures 4.8-1a, Implement construction-noise reduction measures, and 4.8-1b, Implement additional measures to reduce exposure to construction noise reduction during noise-sensitive time periods, would provide substantial reductions in levels of construction noise exposure at noise-sensitive receptors by ensuring proper equipment use; locating noise-generating equipment away from sensitive land uses; requiring a temporary solid barrier around the project site and staging area; and requiring the use of enclosures, shields, and noise curtains (noise curtains typically can reduce noise by up to 10 dBA [EPA 1971]). Although, noise reduction would be achieved with implementation of these measures, reductions of up to 17 dBA would be required during more intensive nighttime construction (if necessary), to comply with the City of Sacramento’s nighttime interior standard of 45 Leq. Reductions of this magnitude are not expected to be achieved under all circumstances with implementation of Mitigation Measures 4.8-1a and 4.8-1b. Because it cannot be assured that nighttime construction will not be needed, and if needed that applicable noise standards can be met, this impact would not be reduced to a less-than-significant level.

Chapter 7, “Alternatives,” includes a discussion of alternatives to the project. Various alternatives considered in Chapter 7 would reduce or eliminate construction-generated noise, including alternatives related to renovating the existing building, the No Project Alternative, and implementing the project in another location. However, as described in Chapter 7, these alternatives may be infeasible, may not meet the basic project objectives, or may result in other environmental consequences.
Consequently, mitigation is available to only partially mitigate the impacts of the project on related to construction-generated noise. Therefore, this impact would be **significant and unavoidable** after application of all feasible mitigation measures.

### 6.2.2 Cultural and Tribal Cultural Resources

**Impact 4.12-4: Potential for Impacts on Historic Architectural Resources**

Although the proposed project would not result in a substantial adverse effect to the five structures listed above, the demolition of the CDFA Annex Building would cause a substantial adverse change in the significance of this building and its contribution to the California State Government Building Complex. Therefore, the project would cause a significant impact on the environment as described in State CEQA Guideline 15064.5(b)(1), as discussed below.

- **CDFA Annex Building - 1215 O Street.** The CDFA Annex Building is proposed to be demolished and replaced by an 11-story office building. The building was identified as eligible for the NRHP as a contributor to the California State Government Building Complex historic district in the 1997 Capitol Area Plan Final EIR and is therefore considered a historical resource under CEQA Guidelines 15064.5(a)(3). The demolition of this historical resource would result in a substantial adverse change per CEQA Guideline 15064.5(b)(2)(C) which states that a resource is materially impaired when project work demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

- **California State Government Building Complex.** The demolition of the CDFA Annex Building (1215 O Street) would result in the loss of the building, a contributing resource to the NRHP-eligible California State Government Building Complex district and the introduction of a new state office building within the district boundary. The California State Government Building Complex historic district was identified as eligible for inclusion in the NRHP in the 1997 Capitol Area Plan Final EIR and is therefore considered a historical resource under CEQA Guidelines 15064.5(a)(3). Contributing features, such as the CDFA Annex Building, convey the significance of a historic district. The demolition of this contributing feature of the historic district would result in a substantial adverse change per CEQA Guideline 15064.5(b)(2)(C) which states that a resource is materially impaired when project work demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Mitigation Measure 4.12-4, Preparation of a salvage report and documenting the historical resource, would minimize the impact caused by the demolition of the CDFA Annex Building on the subject building and on the California State Government Building Complex historic district, but would not reduce it to a level less than significant. The CDFA Annex building would still be removed and an adverse change to the California State Government Building Complex historic district would still occur. Therefore, this impact would not be reduced to a less-than-significant level.

Chapter 7, “Alternatives,” includes a discussion of alternatives to the project. Various alternatives considered in Chapter 7 would likely result in the retention of the existing CDFA Annex Building, including alternatives related to renovating the existing building, the No Project Alternative, and implementing the project in another location. However, as described in Chapter 7, these alternatives may be infeasible, may not meet the basic project objectives, or may result in other environmental consequences.

Consequently, mitigation is available to only partially mitigate the impacts of the project on this historic building and historic district. Therefore, this impact would be **significant and unavoidable** after application of all feasible mitigation measures.
6.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, the State CEQA Guidelines section 15126.2(c) states:

- Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, and steel;
- water supply for project construction and operation; and
- energy expended in the form of electricity, natural gas, diesel fuel, gasoline, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

These nonrenewable resources would represent only a modest portion of the resources available in the region and would not affect the availability of these resources for other needs within the region.

Demolition and construction activities would not result in inefficient use of energy or natural resources. During demolition of the CDFA Annex, materials such as concrete and steel would be separated, sorted, and recycled. During construction, contractors would use best available engineering techniques, construction and design practices, and equipment operating procedures.

Project operation would not result in substantial long-term consumption of energy and natural resources. The project’s goal is to achieve Zero Net Energy, that is, the total amount of energy used by the building on an annual basis would be approximately equal to the amount of renewable energy created on the site. The project would exceed the 2016 Building Energy Efficiency Standards and would meet or exceed Leadership in Energy and Environmental Design (LEED) version 4 (v4) Silver certification (see Section 4.5, “Utilities and Infrastructure,” Impact 4.5-7). Energy Star office equipment, energy efficient computer monitors, and LED (light-emitting diode) lighting would be used throughout the building. Electrical metering and control systems would be installed to control systems and monitor electrical loads on a per system basis (e.g., lighting, mechanical) and on a per floor basis. The project would include approximately 70,000 square feet of solar photovoltaic (PV) panels mounted on the roof, south building face, and over the CalVet parking lot to provide energy to building. The solar power system would be connected to the SMUD system and any additional energy from SMUD to serve the building (e.g., at night) would be from 100 percent renewable resources. In addition, the office building would include water conservation and reuse measures that exceed 2016 Title 24 water efficiency requirements. All plumbing fixtures in the building would be low-flow/high-efficiency fixtures, and greywater from the building (non-food-service sinks, drinking fountain drains, shower drains, air conditioning condensate, and rainwater) would be collected, treated, stored, and reused in the building for flushing toilets and urinals. Public transit would be available for use by employees because project site is located within 500 feet of Sacramento Regional Transit’s Archives Plaza light rail station and there are several different bus routes and transit providers (e.g., Sacramento Regional Transit, El Dorado Transit) within four blocks of the site. Finally, employee bicycle parking and showers and lockers would be provided in the office building.
7 PROJECT ALTERNATIVES

7.1 INTRODUCTION

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe “... a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider.

Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6(d)).

The State CEQA Guidelines further require that the “no project” alternative be considered (CCR Section 15126.6(e)). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR “...shall also identify an environmentally superior alternative among the other alternatives.” (CCR Section 15126[e][2]).

In defining “feasibility” (e.g., “... feasibly attain most of the basic objectives of the project ...”), CCR Section 15126.6(f) (1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of “potentially feasible” alternatives, the ultimate determination as to
whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body, here the California Department of General Services (DGS). (See PRC Sections 21081.5, 21081[a] [3].)

7.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

7.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 3, “Project Description,” articulates the following project objectives:

- consolidate State office space and address State office space deficiencies in downtown Sacramento, prioritizing building on underutilized state property;
- restore functional office space at the vacant California Department of Food and Agriculture Annex at 1215 O Street, while conforming with the Capitol View Protection Act;
- accommodate staff from State-owned office buildings targeted for renovation or replacement (such as the Bateson Building at 1600 9th Street) to vacate such building(s) and allow for their eventual renovation and re-occupation while minimizing the number of disruptive moves for state agencies;
- provide a modern, efficient, and safe environment for State employees and the public they serve;
- integrate the new State development with the existing neighborhood;
- develop a sustainable and energy-efficient building;
- encourage and support the use of alternative commute modes by designing the project to have easy access to multiple transit modes (e.g., bus, light-rail); and
- maximize the effectiveness of the design-build project delivery method by maintaining sufficient flexibility in the performance criteria to support innovation in the design competition.

7.2.2 Environmental Impacts of the 1215 O Street Office Building Project

Sections 4.2 through 4.15 of this DEIR address the environmental impacts of implementation of the proposed 1215 O Street Office Building Project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the project, as identified in Chapter 4 of this DEIR and summarized below. If an environmental issue area analyzed in this DEIR is not addressed below, it is because no significant impacts were identified for that issue area. Two significant and unavoidable environmental impacts resulting from the project were identified. Because it cannot be assured at this time that nighttime construction will not be needed, and if needed that applicable noise standards can be met, construction noise impacts are considered significant and unavoidable. Demolition of the California Department of Food and Agriculture (CDFA) Annex (the existing 1215 O Street office building), which is assumed in this DEIR to qualify as a historic resource under CEQA, is considered a significant and unavoidable impact on cultural resources.

- **Transportation and Circulation:** The project would add a small number of new trips to the roadway network in the vicinity, but would not cause degradation of levels of service (LOS). The project would result in small increases in freeway off-ramp queues, and transit, bicycle, and pedestrian trips. The project would not result in a substantial increase in vehicle miles traveled (VMT) per service population.
Ascent Environmental Project Alternatives

(total residents and employees) within the Sacramento Core Area (i.e., Central City Community Plan Area). Existing facilities are more than adequate to accommodate the small increases. Construction of the project would temporarily disrupt traffic in the vicinity of the project site, potentially through lane closures, lane narrowing, and detours. These localized and temporary impacts would be minimized through implementation of a Construction Traffic Management Plan in accordance with City of Sacramento Code. All transportation and circulation impacts would be less than significant.

**Utilities and Infrastructure:** The existing water delivery infrastructure at the project site includes one water main that could be insufficient to supply water to the 1215 O Street Office Building Project. Mitigation Measure 4.5-2 requires a water study to identify the best location for new service connections for water and fire flow as well as necessary improvements to the water supply system to adequately serve the project and meet applicable requirements. With preparation of the water study and implementation of any identified infrastructure improvements in accordance with Mitigation Measure 4.5-2, the impact on water supply infrastructure capacity would be reduced to a less-than-significant level.

**Air Quality:** During project construction, emissions of criteria pollutants would not exceed applicable thresholds except for oxides of nitrogen (NOx). Mitigation Measure 4.6-1 requires implementation of various actions to reduce emissions from construction equipment, resulting in a sufficient limitation of NOx emissions to reduce this impact to a less-than-significant level.

**Noise:** During project construction, sufficient noise and groundborne vibration would be generated to exceed applicable thresholds. Mitigation Measures 4.8-1a and 4.8-1b would minimize construction noise at nearby sensitive noise receptors; however, because it cannot be assured at this time that nighttime construction will not be needed, and if needed that applicable noise standards can be met, this impact would be significant and unavoidable. Mitigation Measures 4.8-2a and 4.8-2b require study, monitoring, and adjustments to construction methods to ensure that construction generated groundborne vibration would not damage nearby buildings or result in substantial human disturbance. Implementation of these measures would reduce this impact to a less-than-significant level. Operation of the proposed loading dock at the new building could generate noise levels at nearby sensitive noise receptors that exceed applicable thresholds. Mitigation Measure 4.8-4 requires that noise generated by the loading dock does not exceed applicable thresholds through adjustments to the loading dock location and design and noise modeling to verify the effectiveness of these measures. Implementation of this measure would reduce this impact to a less-than-significant level.

**Cultural and Tribal Cultural Resources:** Much of the project site has been disturbed during past development, reducing the potential for sub-surface cultural resources to be present. However, contact with previously undisturbed native soils during construction could result in damage or destruction of currently unrecorded subsurface historic and pre-historic archeological resources, tribal cultural resources, and human remains. Such contact would be most likely during excavation of the basement for the proposed office building. Mitigation Measures 4.12-1, 4.12-2, and 4.12-3 collectively require the presence of archeological and Native American monitors where undisturbed, or minimally disturbed native soils are encountered; stopping work in the vicinity of any area where evidence of historic or pre-historic archeological resources, tribal cultural resources, or human remains are encountered; properly evaluating, documenting, and protecting any finds; and transferring any archeological material or remains removed from the site to an appropriate organization or individual. Implementation of these measures would reduce this impact to a less-than-significant level.

With regard to historic architectural resources, the CDFA Annex has been previously identified as eligible for the National Register of Historic Places (NRHP) as a contributor to the California State Government Building Complex historic district (District). The District has also previously been identified as eligible for the NRHP. Based on these past assessments, it is assumed in this DEIR that the CDFA Annex and District both qualify as a historic resource under CEQA. Demolition of the CDFA Annex and replacement with a new office building would result in substantial adverse changes to these historic resources, resulting in a significant impact. Mitigation Measure 4.12-4 would reduce this impact by requiring preparation and
implementation of a salvage report identifying architectural features of the CDFA Annex that could be salvaged and reused in the immediate area and preparing historical resource documentation to collect and preserve key information about the CDFA Annex. These actions would reduce to the degree feasible the impact caused by the demolition of the CDFA Annex Building on the subject building and on the California State Government Building Complex historic district, but would not reduce it to a level that is less than significant. The CDFA Annex building would still be removed and an adverse change to the California State Government Building Complex historic district would still occur. This impact would be significant and unavoidable.

- **Biological Resources:** The project could result in the direct loss or temporary disturbance of trees protected under the City of Sacramento Tree Preservation Ordinance. Implementation of Mitigation Measure 4.13-1 would reduce impacts associated with tree removal to a less-than-significant level by providing replacement trees and complying with the City’s Tree Preservation Ordinance.

- **Aesthetics, Light, and Glare:** The proposed solar array above the surface parking lot would likely not be high enough to reflect on buildings to the south, but could shine into north facing windows on the apartment buildings immediately south of the surface parking lot. Therefore, the project could introduce new sources of light and glare that would adversely affect daytime views of adjacent residents. As required by Mitigation Measure 4.15-3, DGS shall ensure that adjacent residents will not be exposed to daytime glare by designing and constructing the solar array above the CalVet surface parking lot in such a manner that the panels do not reflect sunlight into north facing windows of the apartments immediately south of the parking lot. This will reduce the significant glare impact to a less-than-significant level.

### 7.3 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. ([In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165-1167.](#))

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of “potentially feasible” alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). ([See Pub. Resources Code, § 21081(a)(3).](#)) At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. ([City of Del Mar v. City of San Diego (1982) 133 Cal.App.3d 401, 417; California Native Plant Society v. City of Santa Cruz (2009) 177 Cal.App.4th 957, 998.](#))

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency’s determination.

The following alternatives were considered by DGS but are not evaluated further in this DEIR.
7.3.1 Renovate the Existing Building

This alternative considers renovation and reuse of the existing building at 1215 O Street in lieu of demolition and construction of a new building. The building, which was vacated by order of the State Fire Marshal in November 2011, would require major interior renovation to address shortcomings relative to fire and life safety systems, energy efficiency, electrical and plumbing systems, and other deficiencies.

If the existing CDFA Annex was renovated, impacts associated with total demolition of the structure would be avoided, including noise impacts, air emissions, generation and disposal/recycling of construction debris, temporary loss of parking at the CalVet surface parking lot, and potential impacts to soil and groundwater from exposure or contamination. However, renovation of the existing building would be costly, and would not meet several important objectives of the project. First, because the existing building is a four-story structure of approximately 115,000 square feet, it would not provide the additional office space needed to better address State office space deficiencies. The existing building does not have sufficient space to accept all of the Bateson Building employees, requiring current Bateson Building staff to be split among different locations for this building to be fully vacated for eventual renovation. Second, renovation of the existing CDFA Annex would require a reduction in available office space in the building to accommodate desired amenities, such as food service, interpretive center, bicycle parking, and employee fitness center. Third, renovation of the existing building would limit, or make more difficult and expensive, implementation of several proposed sustainability features such as promoting better entry of daylight into the building and utilizing gray water.

As described in Chapter 3, “Project Description,” a study of State office infrastructure in Sacramento (required by Chapter 451, Statutes of 2014 [AB 1656]) documented serious deficiencies with existing downtown buildings that require replacement or renovation. To address office infrastructure needs, the Governor proposed a budget and identified initial projects to better use State-owned land; replacement of the CDFA Annex was identified as one of the initial projects. Also, DGS completed a site study of the CDFA Annex in 2010 to determine the highest and best use of the property and evaluate the cost to renovate the existing building. The site study concluded that it is not cost-effective to renovate the building and recommended replacing the existing structure with a new 11-story office building to maximize State office space on the site while maintaining compliance with the Capitol View Protection Act (DGS 2010).

Because the existing office building is aged, uninhabitable, and would require extensive reconstruction to meet State codes and standards, DGS concluded that renovation would not be a cost-effective approach. In addition, reuse of the existing building would not as effectively achieve the State’s objectives to address office space deficiencies; provide a modern, efficient, and safe workplace for State employees; and develop a sustainable and energy-efficient building. For these reasons, this alternative is not evaluated in detail in this EIR.

7.3.2 Alternative Location

This alternative considers construction of a new building on an alternative site in the downtown area. While this alternative could avoid impacts of building demolition, assuming an alternative site is unoccupied, a fundamental goal of the project as proposed is to achieve the highest and best use of State-owned property, including the CDFA Annex site. Construction of a new office building in an alternative location would not address use of the now vacant, underutilized CDFA Annex, which would still need to be renovated or demolished and repurposed. Importantly, an alternative location may not be near transit, as is the CDFA Annex. As such, an alternative location may not allow the State to achieve the objective of encouraging and supporting the use of alternative transportation through easy access to multiple transit modes (e.g., bus, light rail). For these reasons, this alternative is not evaluated in detail in this EIR.
7.3.3 Multiple Basement Levels

The proposed project includes a single below-grade basement level. This alternative would provide one or more additional basement levels. This approach would increase the total interior square footage for the building, or allow for a smaller above-ground building while maintaining the total square footage assumed for the proposed project. However, as identified in Section 4.9, “Geology and Soils,” depth to groundwater in the downtown Sacramento area varies seasonally and groundwater can be less than 10 feet below the ground surface. Data collected as part of geotechnical studies at the project site showed groundwater being encountered at a depth of approximately 17 feet below the ground surface at the time data was collected. A second or third basement level would encounter groundwater, requiring dewatering during construction, special-engineering techniques to minimize groundwater intrusion into the lower basement levels, and continuous collection and pumping of groundwater away from the basement levels. Additional basement levels would substantially increase construction costs and require ongoing monitoring, maintenance, and costs to pump groundwater away from the lower basement levels as part of ongoing building operations. Project objectives can be achieved without the complexities associated with additional basement levels. Additional basement levels would not result in the avoidance of any significant impacts, and could result in greater environmental effects, such as a higher potential of encountering previously undisturbed native soils that could contain historic or pre-historic archeological resources.

For these reasons, this alternative is not evaluated in detail in this EIR.

7.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

The following alternatives evaluated in this DEIR.

► Alternative 1: No Project–No Development Alternative assumes no demolition of the existing structure nor construction of a new building. The project site would remain in its current condition.

► Alternative 2: Reduced Building Size/No Basement Excavation Alternative assumes project elements and features that are the generally the same as the proposed project, albeit reduced in size because there would be no below-grade level. With no below-grade (basement) level, it is less likely that earth moving or excavations during construction would encounter native soils that could contain cultural resources.

► Alternative 3: Capitol Area Plan Housing Alternative assumes project elements and features that are the same as the proposed project, with the exception that after the office building is constructed and operational, the CalVet surface parking lot would be developed with approximately 100 housing units. Housing development at this site would be consistent with the CAP Implementation Program, which proposes construction of a high-density residential development (approximately 100 housing units) on the site of the current CalVet surface parking lot (identified in the CAP Implementation Program as “Block 222, along O Street”).

Further details on these alternatives, and an evaluation of environmental effects relative to the proposed project, are provided below.

7.4.1 Alternative 1: No Project–No Development Alternative

Under Alternative 1, the No Project–No Development Alternative, no actions would be taken by DGS and the project site would remain unchanged from current conditions. The CDFA Annex building would remain vacant and in its current condition. The current program of ongoing building inspections and maintenance would continue. No solar panels would be installed over the CalVet parking lot. The segment of O Street in front of
the CDFA Annex and the alley behind the CDFA Annex would not be changed. Although the State’s CAP identifies the CDFA Annex site for office and the surface parking lot for housing, this alternative assumes that no development would occur and the project site would remain in its current state. If the Bateson Building were to be vacated to support some future renovation, the existing Bateson Building staff would be relocated to some currently unidentified building or buildings. The No Project – No Development Alternative would not meet the project objectives. However, as required by CEQA, the No Project – No Development Alternative is evaluated in this DEIR.

Although it is acknowledged that with the No Project–No Development Alternative, there would be no discretionary action by the State, and thus no impact, for purposes of comparison with the other action alternatives, conclusions for each technical area are characterized as “impacts” that are greater, similar, or less, to describe conditions that are worse than, similar to, or better than those of the proposed project.

**LAND USE**

The No Project–No Development Alternative would not be consistent with the objectives of the CAP because it would not meet the State offices objective to provide office space and related services to meet present and future space requirements for the State of California near the State Capitol. In addition, the No Project-No Development Alternative would not support the Sacramento Region Blueprint, 2016 MTS/SCS, City of Sacramento 2035 General Plan, and Central City Community Plan, which like the State’s CAP, call for infill development in downtown Sacramento, intensifying uses on underutilized sites near transit, increased opportunities for pedestrian and bicycle use, prioritizing energy and water-efficient buildings and reduction of carbon emissions, and locating jobs closer to housing. This alternative would not restore functional office space at the vacant CDFA Annex site, consolidate and address State office space deficiencies in downtown Sacramento, increase use of underutilized state property, develop an energy-efficient office building near transit lines, or allow for relocation of State employees from other downtown buildings that are in need of renovation or replacement (such as the Bateson Building at 1600 9th Street). In comparison, the proposed project would be consistent with the objectives and purposes of the CAP, the 2015 CAP Progress Report, Governor Brown’s 2016 Five-Year Infrastructure Plan, and with local land use plans. Replacement of the vacant CDFA Annex with a new, larger State office building would not result in any conflicts with environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts of the No Project–No Development Alternative would be greater than those of the proposed project with respect to land use.

**POPULATION, EMPLOYMENT, AND HOUSING**

The No Project–No Development Alternative would not generate any new residents, jobs, or homes in the City of Sacramento. In comparison, the proposed project would support 200 new State employees and up to 225 temporary construction jobs during peak construction periods; however, new employment would not induce population growth such that there would be an additional demand for housing that could not be met by existing or planned housing in the region. The proposed project would not result in any significant population, employment, or housing impacts, and the No Project–No Development Alternative would generate no new residents, jobs, or homes in Sacramento. Impacts relative to population, employment, and housing would be similar to the proposed project.

**TRANSPORATION AND CIRCULATION**

The No Project–No Development Alternative would not include any new development and would not generate any new traffic-related impacts. In comparison, the proposed project would add a small number of new trips to the roadway network in the vicinity, but would not cause degradation of LOS. The project would result in small increases in freeway off-ramp queues, and transit, bicycle, and pedestrian trips, but existing facilities are more than adequate to accommodate the small increases. Construction of the project would temporarily disrupt traffic in the vicinity of the project site, potentially through lane closures, lane narrowing, and detours, and these localized and temporary impacts would be minimized through implementation of a
Construction Traffic Management Plan in accordance with City of Sacramento Code. All transportation and circulation impacts would be less than significant. Because the project would not result in significant transportation impacts, the No Project–No Development Alternative would not avoid any such impacts. Because it would result in no impact, however, it would result in transportation and circulation impacts that are less than the proposed project.

**UTILITIES AND INFRASTRUCTURE**

The No Project–No Development Alternative would not result in additional demand for water, wastewater treatment, stormwater conveyance, electricity, or natural gas; nor would it result in the need for new facilities and infrastructure to support additional demand. By comparison, the proposed project would result in significant impacts associated with wastewater conveyance and treatment. However, these impacts would be reduced to less-than-significant levels with mitigation. Because the proposed project would not result in significant utilities impacts after mitigation, the No Project–No Development Alternative would not avoid any significant impacts. However, because the No Project–No Development Alternative would have no new demand for potable water, stormwater/surface-runoff management, wastewater treatment, and wastewater-conveyance infrastructure, it would result in less of an impact than the proposed project. However, the No Project–No Development Alternative also precludes payment by the State of the City’s Combined Sewer Development Fee, which would assist in funding wastewater conveyance improvements in the project area.

**AIR QUALITY**

Because the No Project–No Development Alternative would involve no construction disturbances, new facilities, or new vehicular trip generation, this alternative would not generate new construction- or operations-related air emissions. By comparison, the proposed project would result in a significant impact related to construction emissions of NOx. After mitigation, this impact would be reduced to less-than-significant levels. Implementation of the No Project–No Development Alternative would not result in this air-quality impact; therefore, this alternative would result in less of an impact than the proposed project.

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

Because the No Project–No Development Alternative would involve no construction disturbances, new facilities, or new vehicular trip generation, this alternative would not generate new construction- or operations-related greenhouse gas (GHG) emissions. By comparison, the project would result in construction and operational GHG emissions; however, these emissions would be less than significant because both construction and operation of the proposed office building would include GHG efficiency measures (e.g., proximity to transit, solar power generation, Zero Net Energy) consistent with State and local polices and regulations for the purpose of reducing GHG emissions and enabling achievement of the statewide reduction targets. However, because the No Project–No Development Alternative would not result any new GHG emissions, this alternative would result in less of an impact than the proposed project with regard to climate change. However, the No Project–No Development Alternative also precludes the benefits of consolidating State employees in a new highly energy and GHG emissions efficient building and supporting renovation of the Bateson Building, which would be expected to increase the energy and GHG emissions efficiency of that building.

**NOISE**

Under the No Project–No Development Alternative no new construction activities would occur, no new noise-generating land uses would be developed, and no additional traffic would be generated. Therefore, there would be no increase in the potential noise conflicts under the No Project-No Development Alternative. By comparison, the proposed project would result in significant and unavoidable construction noise impacts and significant but mitigable construction-generated vibration levels and operation-related long term noise. Implementation of the No Project–No Development Alternative would avoid these noise impacts; therefore, this alternative would result in less of an impact than the proposed project with regard to noise.
GEOLOGY AND SOILS
The No Project–No Development Alternative would leave the existing CDFA Annex and CalVet surface parking lot in their current state. There would be no potential for increased erosion or increased risk from seismic or soils hazards. Although the proposed project would demolish the existing building and construct a new office building, it would not generate the potential for substantial soil erosion and would result in less-than-significant impacts related to seismic hazards, liquefaction, and expansive soils. Because of developed site conditions and required building standards, neither the proposed project nor the No Project – No Development Alternative would result in significant impacts related to geology and soils. Therefore, the No Project–No Development Alternative would result in impacts that are similar to the proposed project with regard to geology and soils.

HYDROLOGY AND WATER QUALITY
Under the No Project–No Development Alternative, there would be no potential for construction-related releases of sediment and contaminants into surface waters or groundwater, and no changes in water demand, stormwater generation, drainage patterns, or flood risk. In comparison, the project site is already developed with an office building and surface parking lot, and placing the proposed development on these sites would result in no impact, or a less-than-significant impact related to hydrology and water quality issues. Various stormwater pollution prevention devices and best management practices (BMPs) would be implemented, and the project would be required to comply with existing State and local regulations regarding the City’s combined storm sewer (CSS) and NPDES permits. Implementation of BMPs and compliance with State and local requirements would result in similar runoff and water quality during storm events as under existing conditions. Furthermore, rainwater would be collected, treated, stored, and used in the new office building, reducing stormwater runoff from the project site. Because neither the project nor the No Project-No Development Alternative would result in any significant impacts related to hydrology and water quality, this alternative would result in impacts that are similar to the proposed project with regard to hydrology and water quality.

HAZARDS AND HAZARDOUS MATERIALS
Under the No Project–No Development Alternative, no new facilities that use hazardous materials would be located on the project site and no new workers or visitors would have the potential to be exposed to new or existing sources of hazardous materials. The existing CDFA Annex building has identified hazardous materials such as petroleum hydrocarbons, asbestos, and lead-based paint that would be left in place in the building. In contrast, demolition, excavation and construction activities associated with the project could result in the exposure of construction workers and the public to hazardous materials, including petroleum hydrocarbons, asbestos and lead-based paint identified in the existing building. Contractors and the State would be required to comply with federal, State, and local regulations intended to protect workers and the public from exposure to hazardous or contaminated materials and to ensure the appropriate remediation and disposal of these materials. Compliance with these regulations would prevent the project from resulting in a significant risk to construction workers or the public. Construction and operation of the project would also involve the storage, use, and transport of hazardous materials; however, such use would be done in compliance with federal, State, and local regulations. Although the proposed project would not result in any significant impacts related to hazardous materials and public health, the No Project- No Development Alternative results no disturbance of existing hazardous materials or use of hazardous materials. Therefore, the No Project-No Development Alternative would result in less of an impact than the proposed project with regard to hazards and hazardous materials. However, the No Project–No Development Alternative would also foreclose the opportunity to appropriately remediate and dispose of hazardous materials in the existing building.
CULTURAL AND TRIBAL CULTURAL RESOURCES

The No Project–No Development Alternative would not require any building demolition or construction activities, thereby avoiding impacts related to the disturbance, destruction, or alteration of any known or as-yet undiscovered/unrecorded pre-historic or historic archeological resources, tribal cultural resources, human remains, or historic architectural resources. In comparison, the proposed project would result in ground disturbance and development of new structures that could cause potentially significant impacts related to disturbance of undiscovered/unrecorded subsurface archaeological resources, tribal cultural resources, and human remains. However, these impacts would be reduced to less-than-significant levels after mitigation. The proposed project would result in the demolition of the CDFA Annex, which is considered in this DEIR to qualify as a historic resource under CEQA, and a contributor to the California State Government Building Complex District, which is also assumed to be a CEQA historic resource. Mitigation Measure 4.12-4 would reduce to the degree feasible the impact caused by the demolition of the CDFA Annex on the subject building and on the California State Government Building Complex historic district, but would not reduce it to a less-than-significant level. The CDFA Annex building would still be removed and an adverse change to the California State Government Building Complex historic district would still occur. This impact would be significant and unavoidable. Because the No Project–No Development Alternative does not include any new development, ground disturbance, or building demolition, it has a lesser potential to result in the disturbance of as-yet undiscovered subsurface archaeological resources and/or human remains and would not adversely affect historic structures. However, under the No Project-No Development Alternative, there is the potential for an ongoing degradation of the CDFA Annex’s quality as a cultural resource and a historic Office Complex contributor through “demolition by neglect” as the unoccupied building ages. The existing building monitoring and maintenance program would need to continue to preserve the building, although some level of degradation would likely occur over time due to age and exposure to the elements. Overall, cultural resources impacts under the No Project–No Development Alternative would be less than the proposed project.

BIOLOGICAL RESOURCES

The No Project–No Development Alternative would not include any development and would thus not disturb any existing on-site biological resources. However, the project site is currently developed with urban uses and lacks sensitive species or their habitat. The only potential project impact would be removal or disturbance of street trees, which would be replaced, resulting in a less-than-significant impact. Because the project site is a developed urban location and the proposed project would not result in any significant biological resources impacts after mitigation, the No Project- No Development Alternative would result in impacts that are similar to the proposed project with regard to biological resources.

PUBLIC SERVICES

The No Project–No Development Alternative would not generate increased demands for fire, police, solid waste disposal, or parks and recreation or school facilities. By contrast, the proposed project would create minor increases in demand for fire, police, solid waste disposal, and parks and recreation facilities, primarily by increasing the net number of employees in the downtown area. However, increased demands for public services would be less than significant. Because the project would result in less-than-significant impacts on public services, the No Project–No Development Alternative would not reduce or avoid any significant impacts related to this environmental issue area. However, implementation of the proposed project would create an incremental increase in service demand that would not occur under the No Project–No Development Alternative. Therefore, the No Project- No Development Alternative would result in less of an impact than the proposed project with regard to public services.

ASTHETICS, LIGHT, AND GLARE

Under the No Project–No Development Alternative, no new development would occur. There would be no alteration of the visual character of the project site; views of the area from surrounding vantage points would
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not change; and no new sources of light and glare would be created. In comparison, the proposed project would replace the existing four-story CDFA Annex with a new office building and install solar panels over the CalVet surface parking lot. Because the proposed project is located on a site with an existing office building and surface parking lot surrounded by a mix of low-rise, mid-rise, and high-rise buildings, the local visual character, as experienced by viewer groups in the area, would not be substantially altered. Potential glare from the solar panels would be mitigated to less than significant through design and direction of the panels. Because the proposed project would not result in any significant impacts related to aesthetics, light, and glare, the No Project-No Development Alternative would not avoid any significant impacts. However, the No Project–No Development Alternative would make no changes to the visual character of the site and would avoid any potential glare impacts; therefore, the No Project–No Development Alternative would result in less of an impact than the proposed project with regard to visual impacts.

7.4.2 Alternative 2: Reduced Building Size/No Basement Excavation Alternative

Alternative 2, the Reduced Building Size/No Basement Excavation Alternative is the same as the proposed project in several respects. The Reduced Building Size/No Basement Excavation Alternative includes demolition of the CDFA Annex, construction of a new office building, rooftop solar on the new office building, implementation of the same energy efficiency programs, use of the CalVet parking lot for construction staging and a solar array, and relocation of employees from the Bateson Building and other locations consistent with the proposed project. Where the Reduced Building Size/No Basement Excavation Alternative differs from the proposed project is that the office building would not include a below-grade level. This alternative was selected for analysis because with no below-grade (basement) level, it is less likely that earth moving or excavation during construction would encounter native soils that could contain cultural resources or human remains. Therefore, this alternative could have a reduced construction timeframe and minimize or avoid significant impacts on cultural resources identified for the proposed project.

This alternative also serves as a reduced building size alternative. Under the Reduced Building Size/No Basement Excavation Alternative, it is assumed that the new office building would not exceed 150-feet in height, in compliance with the Capitol View Protection Act. It is also assumed that the new office building would cover roughly the same footprint as the proposed project. Therefore, the above-ground floors would have approximately the same square footage as those of the proposed project. Facilities and uses that may have been placed in the approximately 34,000 gross square foot (GSF) basement under the proposed project would either need to be moved to the above-ground floors, or not included in the building under the Reduced Building Size/No Basement Excavation Alternative. With a fixed amount of above-ground square footage and former basement uses needing to be moved to above-ground floors, The Reduced Building Size/No Basement Excavation Alternative would result in some reduction in the available office space compared to the proposed project. It would be speculative to attempt to determine what adjustments would be made to the types, locations, and sizes of building uses. However, for the purposes of this analysis, it is assumed that there would be a reduction in available office space under the Reduced Building Size/No Basement Excavation Alternative compared to the proposed project, which would result in a maximum employee capacity of approximately 1,100 seats compared to the 1,200 seats evaluated for the proposed project.

LAND USE

The lack of a basement or below-grade level under the Reduced Building Size/No Basement Excavation Alternative does not affect consistency with land use plans, policies, or regulations. The office building and solar array that would be constructed under the Reduced Building Size/No Basement Excavation Alternative, although smaller than the proposed project, would be consistent with the objectives and purposes of the CAP, the 2015 CAP Progress Report, Governor Brown’s 2016 Five-Year Infrastructure Plan, and with local land use plans. Like the proposed project, the Reduced Building Size/No Basement Excavation Alternative would replace the vacant CDFA Annex with a new, larger State office building and would not result in any conflicts with environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an
environmental effect. Therefore, land use impacts under the Reduced Building Size/No Basement Excavation Alternative would be similar to those of the proposed project.

**POPULATION, EMPLOYMENT, AND HOUSING**

Like the proposed project, the Reduced Building Size/No Basement Excavation Alternative would not result in development of any new homes or generation of new residents. The proposed project would support up to 225 temporary construction jobs during peak construction periods and approximately 200 new State employees on a permanent basis. Without the excavation and below-ground construction required for the basement level, the overall construction effort would be reduced, and this alternative could require fewer construction jobs than the proposed project. Similarly, the reduction in office space and employee capacity in the building under the Reduced Building Size/No Basement Excavation Alternative would result in supporting roughly 100 fewer permanent State employees than the proposed project. Although the proposed project would not generate new employment that would induce population growth such that there would be an additional demand for housing that could not be met by existing or planned housing in the region, the Reduced Building Size/No Basement Excavation Alternative would have an incrementally reduced impact due to less construction and less employee office space. The Reduced Building Size/No Basement Excavation Alternative would have less of an impact on population, employment, and housing compared to the proposed project.

**TRANSPORTATION AND CIRCULATION**

Because the Reduced Building Size/No Basement Excavation Alternative would not include excavation of a basement level, it would reduce the construction effort and would generate less short-term construction traffic. Because the Reduced Building Size/No Basement Excavation Alternative would accommodate 100 fewer State employees than the proposed project, local traffic impacts would be slightly reduced. It is unknown where these employees would otherwise work; they could remain in, or be transferred to existing State buildings in the downtown Sacramento area, resulting in a continued contribution to traffic impacts on local downtown intersections. If these employees are located in buildings either inside or outside the downtown area that are not as well served by transit as the project site, more employees may drive rather than using transit, resulting in more vehicle trips and more vehicle miles travelled (VMT) than the proposed project. Ultimately, the vehicle trips generated by 100 State employees is only a small percentage of the overall traffic volumes in the downtown area and the region. It is likely that any differences in traffic impacts between the Reduced Building Size/No Basement Excavation Alternative and the proposed project would be minor, and overall impacts under the Reduced Building Size/No Basement Excavation Alternative would be similar to those for the proposed project.

**UTILITIES AND INFRASTRUCTURE**

The Reduced Building Size/No Basement Excavation Alternative includes an office building with fewer square feet and supporting approximately 100 fewer employees than the proposed project. Therefore, this alternative would result in an incrementally lower demand for water, wastewater treatment, electricity, and natural gas. Because above-ground exterior building and site features would be the same as the proposed project, stormwater runoff and demand for stormwater conveyance capacity would be the same. Although the office building under the Reduced Building Size/No Basement Excavation Alternative would support fewer employees, it is likely that any State employees not working at the 1215 O Street office building would work somewhere in the service area of the Sacramento Regional Wastewater Treatment Plant. Therefore, both alternatives would generate the same demand for wastewater treatment services, even if the wastewater is generated at different locations. The proposed project would result in significant impacts associated with wastewater conveyance and treatment. However, these impacts would be reduced to less-than-significant levels with mitigation. A similar impact and need for mitigation would occur under the Reduced Building Size/No Basement Excavation Alternative, although the volume of wastewater generated and need for local conveyance infrastructure would be somewhat less. The proposed project would not result
in significant utilities impacts after mitigation; although the Reduced Building Size/No Basement Excavation Alternative would reduce utility demands, it would result in similar impacts to those of the proposed project.

**AIR QUALITY**

Similar to the proposed project, the Reduced Building Size/No Basement Excavation Alternative would include demolition of the CDFA Annex, construction of a new office building, and installation of solar panels on the new office building and over the CalVet parking lot, which would generate significant but mitigable construction-related air emissions. After mitigation, this impact would be reduced to less-than-significant levels under both the proposed project and the Reduced Building Size/No Basement Excavation Alternative. Implementation of the Reduced Building Size/No Basement Excavation Alternative would reduce excavation associated with construction, which would incrementally reduce construction-related emissions. In addition, the reduction of approximately 100 State employees in the building would reduce operations-related air emissions. However, transportation-related emissions may not be reduced under the Reduced Building Size/No Basement Excavation Alternative because the 100 employees not transferred to the new office building could be located in buildings either inside or outside the downtown area that are not as well served by transit as 1215 O Street. Therefore, more employees may drive rather than using transit, resulting in more vehicle trips, more VMT, and more associated air emissions. The proposed project would not result in significant impacts after mitigation, and therefore, the Reduced Building Size/No Basement Excavation Alternative would not avoid any significant impacts. However, the Reduced Building Size/No Basement Excavation Alternative would reduce construction- and operational-air emissions relative to the proposed project, resulting in less severe air-quality impacts than the proposed project.

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

Similar to the proposed project, the Reduced Building Size/No Basement Excavation Alternative would include demolition of the CDFA Annex, construction of a new office building, and installation of solar panels on the new office building and over the CalVet parking lot, which would generate less-than-significant construction- and operations-related GHG emissions. Implementation of the Reduced Building Size/No Basement Excavation Alternative would reduce excavation associated with construction, which would reduce construction-related emissions. In addition, the reduction of approximately 100 State employees in the building would reduce operations-related GHG emissions. However, transportation-related emissions may not be reduced in the Reduced Building Size/No Basement Excavation Alternative because the 100 employees not transferred to the new office building could be located in buildings either inside or outside the downtown area that are not as well served by transit as 1215 O Street. Therefore, more employees may drive rather than using transit, resulting in more vehicle trips, more VMT, and more associated GHG emissions. The proposed project would result in less-than-significant GHG impacts; therefore, the Reduced Building Size/No Basement Excavation Alternative would not avoid any significant impacts. However, the Reduced Building Size/No Basement Excavation Alternative would reduce construction-GHG emissions and likely would also have reduced operational-GHG emissions relative to the proposed project, resulting in impacts that are somewhat less than the proposed project relative to GHG emissions and climate change.

**NOISE**

Similar to the proposed project, the Reduced Building Size/No Basement Excavation Alternative would include demolition of the CDFA Annex, construction of a new office building, and use of the CalVet parking lot for construction staging. The Reduced Building Size/No Basement Excavation Alternative would reduce construction excavation activities, reducing construction-related noise. However, the Reduced Building Size/No Basement Excavation Alternative would result in similar significant and unavoidable construction noise impacts and significant but mitigable construction-generated vibration impacts and noise impacts from building operation. Implementation of the Reduced Building Size/No Basement Excavation Alternative would result in a limited reduction in construction noise by reducing excavation. However, the overall construction and operational noise impacts of the Reduced Building Size/No Basement Excavation Alternative would be similar to the noise impacts of the proposed project.
GEOLOGY AND SOILS
Although the Reduced Building Size/No Basement Excavation Alternative would reduce excavation of soils by not including a basement level to the building, it would build a similar office building and solar panels as the proposed project. The Reduced Building Size/No Basement Excavation Alternative would reduce the less-than-significant construction-related erosion impacts, but the potential increase in the risk of exposure to injury or property damage because of a seismic event would be the same for the Reduced Building Size/No Basement Excavation Alternative as the proposed project. Because of the same existing site conditions for both alternatives and required compliance with building standards, neither the proposed project nor the Reduced Building Size/No Basement Excavation Alternative would result in significant impacts related to geology and soils. Therefore, the Reduced Building Size/No Basement Excavation Alternative and the proposed project would have similar impacts related to geology and soils.

HYDROLOGY AND WATER QUALITY
The Reduced Building Size/No Basement Excavation Alternative would require less excavation of soils during construction, which would reduce the potential for construction-related releases of sediment and contaminants into surface waters or groundwater in comparison to the proposed project. The Reduced Building Size/No Basement Excavation Alternative would result in a new office building and related features similar to the proposed project. Because the project site is already developed with an office building and surface parking lot, long-term changes to runoff and water quality resulting from the project are considered less than significant and would be less than significant under the Reduced Building Size/No Basement Excavation Alternative as well. Similarly, various stormwater pollution prevention devices and BMPs would be implemented, and like the project, the Reduced Building Size/No Basement Excavation Alternative would be required to comply with existing State and local regulations regarding the City’s CSS and NPDES permits. Implementation of BMPs and compliance with State and local requirements would result in similar runoff and water quality during storm events as under existing conditions. Furthermore, rainwater would be collected, treated, stored, and used in the new office building, reducing stormwater runoff from the project site. The Reduced Building Size/No Basement Excavation Alternative, like the proposed project, would not result in any significant impacts related to hydrology and water quality. Therefore, the Reduced Building Size/No Basement Excavation Alternative would result in similar impacts to the proposed project with regard to hydrology and water quality.

HAZARDS AND HAZARDOUS MATERIALS
Like the proposed project, demolition, excavation and construction activities associated with the Reduced Building Size/No Basement Excavation Alternative could result in the exposure of construction workers and the public to hazardous materials, including petroleum hydrocarbons, asbestos, and lead-based paint identified in the existing CDFA Annex. Contractors and the State would be required to comply with federal, State, and local regulations intended to protect workers and the public from exposure to hazardous or contaminated materials and to ensure the appropriate remediation and disposal of these materials. Compliance with these regulations would prevent a significant risk to construction workers or the public under either the project or the Reduced Building Size/No Basement Excavation Alternative. Construction and operation of either the proposed project or the Reduced Building Size/No Basement Excavation Alternative would also involve the storage, use, and transport of hazardous materials; however, such use would be done in compliance with federal, State, and local regulations. Because neither the project nor the Reduced Building Size/No Basement Excavation Alternative would result in any significant impacts related to hazardous materials and public health, the Reduced Building Size/No Basement Excavation Alternative would have similar impacts as the proposed project with regard to hazardous materials and public health.

CULTURAL AND TRIBAL CULTURAL RESOURCES
The Reduced Building Size/No Basement Excavation Alternative would require less excavation of soils during construction, which would reduce the ground disturbance associated with the project and reduce the...
potential to disturb undiscovered/unrecorded subsurface archaeological resources, tribal cultural resources, and human remains. Like the proposed project, the Reduced Building Size/No Basement Excavation Alternative would result in the demolition of the CDFA Annex and would implement Mitigation Measure 4.12-4 to minimize the impact caused by the demolition of the CDFA Annex Building on the subject building and on the California State Government Building Complex historic district. However, like under the proposed project, the demolition of the CDFA Annex would be a significant and unavoidable impact to historic resources. Although the Reduced Building Size/No Basement Excavation Alternative would not avoid the significant and unavoidable historic resource impact related to the project, it would reduce ground disturbance, which would result in less potential to disturb as-yet undiscovered subsurface archaeological resources and/or human remains.

**BIOLOGICAL RESOURCES**

The Reduced Building Size/No Basement Excavation Alternative would develop the same project site with the same above-ground structures as the proposed project. The project site is currently developed with urban uses and lacks sensitive species or their habitat. As with the proposed project, the only potential biological resources impact would be removal or disturbance of street trees, which would be replaced if needed, resulting in a less-than-significant impact. The Reduced Building Size/No Basement Excavation Alternative would have similar biological resource impacts as the proposed project.

**PUBLIC SERVICES**

Similar to the proposed project, the Reduced Building Size/No Basement Excavation Alternative would develop a new office building with a net increase of employees in the downtown area. The increased number of employees would result in a minor increase in demand for fire, police, solid waste disposal, and parks and recreation facilities. Under both the proposed project and the Reduced Building Size/No Basement Excavation Alternative, increased demands for public services would be less than significant. Because the office building in the Reduced Building Size/No Basement Excavation Alternative would support approximately 100 fewer employees, this alternative would reduce the incremental increase in service demand that would occur under the project. However, the 100 employees not transferred to the new office building could be located in buildings either inside or outside the downtown area, potentially resulting in the same demand for public services as the proposed project, but in different locations. Therefore, impacts of this alternative on public services are considered to be similar to those of the project.

**ASTHETICS, LIGHT, AND GLARE**

Both the Reduced Building Size/No Basement Excavation Alternative and the proposed project would replace the existing four-story CDFA Annex with a new office building up to 150-feet tall and install solar panels over the CalVet surface parking lot. Because the project site is developed with an existing office building and surface parking lot and surrounded by a mix of low-rise, mid-rise, and high-rise buildings, the local visual character, as experienced by viewer groups in the area, would not be substantially altered under either the proposed project or the Reduced Building Size/No Basement Excavation Alternative. Potential glare from the solar panels would be mitigated to less than significant through design and direction of the panels. Neither the project nor the Reduced Building Size/No Basement Excavation Alternative would result in any significant impacts related to aesthetics, light, and glare; therefore, the Reduced Building Size/No Basement Excavation Alternative would have similar impacts as the project.

**7.4.3 Alternative 3: Capitol Area Plan Housing Alternative**

Alternative 3, the Capitol Area Plan Housing Alternative, includes the same office building at 1215 O Street as the proposed project. All aspects of building construction, operation, staffing, and other factors would be the same as the proposed project. Where the Capitol Area Plan Housing Alternative differs from the
Project Alternatives

The proposed project is in the treatment of the CalVet parking lot. After construction of the 1215 O Street Office Building is complete and the CalVet parking lot is no longer needed as a construction staging area, the parking lot would be removed and developed with approximately 100 housing units. This housing development would be consistent with the CAP Implementation Program, which proposes construction of a high-density residential development (approximately 100 housing units) on the site of the current CalVet surface parking lot (identified in the CAP Implementation Program as “Block 222, along O Street”).

The solar panels that would be placed on the solar array in the parking lot as part of the proposed project would instead be placed on the roofs of the housing units. These solar panels would supply electricity to the 1215 O Street Office Building to support the Zero Net Energy (ZNE) objective. Therefore, it is assumed that there would not be space for rooftop solar to serve the housing units under this alternative.

**LAND USE**

The office building and solar array that would be constructed under the Capitol Area Plan Housing Alternative and the proposed project would both be consistent with the objectives and purposes of the CAP, the 2015 CAP Progress Report, Governor Brown’s 2016 Five-Year Infrastructure Plan, and with local land use plans. Like the proposed project, replacement of the vacant CDFA Annex with a new, larger State office building would not conflict with environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The addition of housing units in the Capitol Area Plan Housing Alternative would also be consistent with the CAP and CAP Implementation Program, which identify the CalVet surface parking lot site for housing and propose approximately 100 housing units for the site. Furthermore, the housing units would support local land use plans for the City that promote locating housing near employment and intensifying use of sites in downtown Sacramento. Therefore, land use impacts under the Capitol Area Plan Housing Alternative would be similar to impacts under the proposed project.

**POPULATION, EMPLOYMENT, AND HOUSING**

The Capitol Area Plan Housing Alternative would construct approximately 100 new housing units in addition to the new office building. In contrast, the proposed project would not provide any new housing units. The housing units constructed under the Capitol Area Plan Housing Alternative would result in an associated increase in population in Sacramento. However, the housing would be located adjacent to employment in downtown and would contribute to improving the jobs/housing index (which was estimated 1.11 in 2015, indicating that employment growth was slightly outpacing housing growth). Like the proposed project, the Capitol Area Plan Housing Alternative would support up to 225 temporary construction jobs during peak construction periods and approximately 200 new State employees. In addition, the Capitol Area Plan Housing Alternative would provide for additional temporary construction work during the construction of the housing units. However, neither the Capitol Area Plan Housing Alternative nor the proposed project would generate sufficient new employment that would induce population growth such that there would be an additional demand for housing that could not be met by existing or planned housing in the region. Because the Capitol Area Plan Housing Alternative would include the construction of housing units not included in the proposed project, and improve the jobs housing balance, the Capitol Area Plan Housing Alternative would result in less impact related to population, employment, and housing.

**TRANSPORATION AND CIRCULATION**

The Capitol Area Plan Housing Alternative would result in the same office building as the proposed project and, therefore, the same less-than-significant impacts on the roadway network LOS; freeway off-ramp queues; VMT; transit, bicycle, and pedestrian trips; and construction traffic. Because the Capitol Area Plan Housing Alternative also includes the housing units, temporary traffic impacts from the additional construction would be greater, and long-term trip generation by new residents would also increase. However, because the housing would be located near employment opportunities in downtown and near transit lines, VMT could be lower than housing developed elsewhere in the city. However, because of the longer construction period combined increase in both employees and residents under the Capitol Area Plan.
Housing Alternative, overall transportation and circulation impacts under this alternative would be greater than the proposed project.

**UTILITIES AND INFRASTRUCTURE**

The Capitol Area Plan Housing Alternative would result in the same office building as the proposed project and, therefore, the same office-related demand for water, wastewater treatment, electricity, and natural gas. The Capitol Area Plan Housing Alternative would increase demand for all utilities because of the addition of approximately 100 housing units on the CalVet parking lot site. Because the existing project site is developed with urban uses, the replacement of the CDFA Annex and the addition of housing units in the Capitol Area Plan Housing Alternative would not substantially change the extent of impervious surfaces, and consequently, the need for stormwater conveyance capacity. Both the proposed project and the Capitol Area Plan Housing Alternative would result in significant impacts associated with wastewater conveyance and treatment; however, these impacts would be reduced to less-than-significant levels with mitigation. Although impacts would be less than significant, or mitigable to less-than-significant levels, the housing units in the Capitol Area Plan Housing Alternative would increase demand for utilities and therefore result in greater impacts to utility service and infrastructure than those of the proposed project.

**AIR QUALITY**

Similar to the proposed project, the Capitol Area Plan Housing Alternative would include demolition of the CDFA Annex, construction of a new office building, and installation of solar panels, which would generate significant but mitigable construction-related air emissions. However, implementation of the Capitol Area Plan Housing Alternative would increase construction emissions due to construction of approximately 100 housing units. Those units would also result in an increase in operations-related air emissions and transportation-related emissions. Although the housing would be located near employment and transit, potentially resulting in reduced VMT and associated emissions compared to other housing locations in the city, the housing-related vehicle trips and associated emissions would be an increase over the proposed project. Therefore, the Capitol Area Plan Housing Alternative would result in greater construction- and operational-air emissions relative to the proposed project.

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

Similar to the proposed project, the Capitol Area Plan Housing Alternative would include demolition of the CDFA Annex, construction of a new office building, and installation of solar panels, which would generate less-than-significant construction- and operations-related GHG emissions. However, implementation of the Capitol Area Plan Housing Alternative would increase GHG emissions due to construction and operation of approximately 100 housing units. The housing units would not have the opportunity to obtain electricity from rooftop solar because rooftop solar panels placed on the housing would serve the 1215 O Street Office Building. Although the housing would be located near employment and transit, potentially resulting in reduced VMT and an associated reduction in GHG emissions compared to other housing locations in the city, the housing-related GHG emissions would likely increase the overall project emissions compared to emissions resulting from the proposed project. Therefore, the Capitol Area Plan Housing Alternative would result in greater GHG emissions relative to the proposed project.

**NOISE**

Similar to the proposed project, the Capitol Area Plan Housing Alternative would include demolition of the CDFA Annex, construction of a new office building, and use of the CalVet parking lot for construction staging. All construction noise impacts related to the 1215 O St. office building would be the same under the Capitol Area Plan Housing Alternative. However, after construction of the office building is complete, the Capitol Area Plan Housing Alternative would construct housing on the CalVet parking lot site, thereby extending the timeframe of construction noise. It is highly unlikely that construction of housing would require pile driving or nighttime construction; therefore, construction of the housing would not contribute to the significant
construction noise effects associated with the 1215 O Street Office Building. Although construction of housing would extend the project’s construction period over a longer timeframe, the housing included in the Capitol Area Plan Housing Alternative would not result in significant noise or vibration impacts due to the nature of residential construction. The housing included in the Capitol Area Plan Housing Alternative would provide an additional source of operational noise compared to the proposed project, including increasing vehicle trips and traffic noise. However, given the relatively low traffic volumes in the project vicinity, and the compatibility of existing residential land uses with noise conditions in the project area, providing 100 housing units on the existing CalVet surface parking lot would not result in a significant increase in noise at nearby sensitive receptors. Residential uses on the CalVet parking lot, like other existing residential uses in the project area, would not experience significant adverse effects from existing noise and vibration conditions. The overall construction and operational noise impacts of the Capitol Area Plan Housing Alternative would be similar to the noise impacts of the proposed project.

GEOLOGY AND SOILS

Similar to the proposed project, the Capitol Area Plan Housing Alternative would result in less-than-significant construction-related erosion impacts, because the same project site would be disturbed during construction activities. Although the Capitol Area Plan Housing Alternative would include approximately 100 housing units on the CalVet parking lot site, the existing geological and soils conditions are the same for both the proposed project and the Capitol Area Plan Housing Alternative and both require compliance with building standards. Therefore, neither the proposed project nor the Capitol Area Plan Housing Alternative would result in significant impacts related to geology and soils. The Capitol Area Plan Housing Alternative and the proposed project would have similar impacts related to geology and soils.

HYDROLOGY AND WATER QUALITY

The Capitol Area Plan Housing Alternative would result in a new office building and features similar to the proposed project, but would also result in the construction of approximately 100 housing units. Because the project site is already developed with an office building and surface parking lot, long-term changes to runoff and water quality resulting from the project would be less than significant for the proposed project and would be less than significant for the Capitol Area Plan Housing Alternative as well. Similarly, various stormwater pollution prevention features and BMPs would be implemented. However, the Capitol Area Plan Housing Alternative would increase flows to the City’s CSS relative to the proposed project, due to additional wastewater flows from the housing units. Implementation of BMPs and compliance with State and local requirements would result in similar runoff and water quality during storm events as under existing conditions. Furthermore, rainwater would be collected, treated, stored, and used in the new office building, reducing stormwater runoff from the project site. Like the proposed project, the Capitol Area Plan Housing Alternative would not result in any significant impacts related to hydrology and water quality; however, because of the incremental increase in flows to the CSS, the Capitol Area Plan Housing Alternative would result in greater wastewater flows than the project.

HAZARDS AND HAZARDOUS MATERIALS

Like the proposed project, demolition, excavation and construction activities associated with the Capitol Area Plan Housing Alternative could result in the exposure of construction workers and the public to hazardous materials, including petroleum hydrocarbons, asbestos and lead-based paint identified in the existing CDFA Annex. Contractors and the State would be required to comply with federal, State, and local regulations intended to protect workers and the public from exposure to hazardous or contaminated materials and to ensure the appropriate remediation and disposal of these materials. Compliance with these regulations would prevent a significant risk to construction workers and the public under both the proposed project and the Capitol Area Plan Housing Alternative. As with the proposed project, construction and operation of the Capitol Area Plan Housing Alternative would also involve the storage, use, and transport of hazardous materials; however, such use would be in compliance with federal, State, and local regulations. Although the Capitol Area Plan Housing Alternative would include the additional housing units, neither the project nor the
Capitol Area Plan Housing Alternative would result in any significant impacts related to hazardous materials or public health, the Capitol Area Plan Housing Alternative would have similar hazards and hazardous materials impacts as compared to the project.

CULTURAL AND TRIBAL CULTURAL RESOURCES
The Capitol Area Plan Housing Alternative would require the same excavation of soils during construction of the office building and would potentially disturb additional soils due to construction of housing units on the CalVet parking lot site, which could increase the potential to disturb undiscovered/unrecorded subsurface archaeological resources, tribal cultural resources, and human remains. Like the proposed project, the Capitol Area Plan Housing Alternative would result in the demolition of the CDFA Annex and would implement Mitigation Measure 4.12-4 to reduce to the extent feasible the impact caused by the demolition of the CDFA Annex Building and on the California State Government Building Complex historic district. However, like the proposed project, demolition of the CDFA Annex would be a significant and unavoidable impact to historic resources. Because the Capitol Area Plan Housing Alternative would result in the same significant and unavoidable historic resource impact related to the project and it would increase ground disturbance due to housing construction, it would have a greater potential to disturb as-yet undiscovered subsurface archaeological resources and/or human remains.

BIOLOGICAL RESOURCES
The Capitol Area Plan Housing Alternative would develop the same site as the proposed project, which is currently developed with urban uses and is devoid of sensitive species and habitat. As with the proposed project, the only potential project impact would be removal or disturbance of street trees, which would be replaced, resulting in a less-than-significant impact. Although the Capitol Area Plan Housing Alternative also includes construction of housing units, that site is also devoid of any sensitive biological resources. The Capitol Area Plan Housing Alternative would have similar biological resource impacts to the project.

PUBLIC SERVICES
The Capitol Area Plan Housing Alternative would develop housing in addition to a new office building, resulting in increased demand for fire and police services, solid waste disposal, and parks and recreation and school facilities, as compared to the proposed project. It is anticipated that such increases would be less than significant or mitigable to less-than-significant levels. Generally, however, the Capitol Area Plan Housing Alternative would result in greater impacts on public services than the project.

ASTHETICS, LIGHT, AND GLARE
Both the Capitol Area Plan Housing Alternative and the proposed project would replace the existing four-story CDFA Annex with a new office building, but the Capitol Area Plan Housing Alternative would also construct housing units on the CalVet parking lot site. Because the project site is developed with an existing office building and surface parking lot and surrounded by a mix of low-rise, mid-rise, and high-rise buildings, the local visual character, as experienced by viewer groups in the area, would not be substantially altered under either the project or the Capitol Area Plan Housing Alternative. Potential glare from the solar panels would occur with both the proposed project and the Capitol Area Plan Housing Alternative, but would be mitigated to less-than-significant levels through design and direction of the panels. Although the Capitol Area Plan Housing Alternative would result less-than-significant impacts to aesthetics and light and glare, the additional housing units under this alternative would result in greater visual changes to the project site than the project.
7.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Because the No Project–No Development Alternative (described above in Section 7.4.1) would avoid all adverse impacts resulting from construction and operation of the 1215 O Street Office Building Project analyzed in Chapter 4, it is the environmentally superior alternative. However, the No Project–No Development Alternative would not meet the objectives the project as presented above in Section 7.2.

When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative from among the other action alternatives evaluated. As illustrated in Table 7-1, below, the Reduced Building Size/No Basement Excavation Alternative would be environmentally superior action alternative because although the environmental impacts would be similar to the proposed project, and no significant impacts or significant and unavoidable impacts would be completely avoided, the reduced degree of construction, excavation, and reduced building size would reduce the potential to encounter native soils that could contain cultural resources and reduce the emissions of criteria air pollutants and GHGs generated by the construction and operation of the project.

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8 REFERENCES

Chapter 1 Introduction


DGS. See California Department of General Services.

Chapter 2 Executive Summary


DGS. See California Department of General Services.


Chapter 3 Project Description


Section 4.1  Approach to the Environmental Analysis
None

Section 4.2  Land Use


DGS. See California Department of General Services.

California Governor Edmund G. Brown Jr. 2016. California Five-Year Infrastructure Plan


_______. 2016 (February). 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy, Chapter 3 Summary of Growth and Land Use Forecast.

SACOG. See Sacramento Area Council of Governments

Section 4.3 Population, Employment, and Housing


City of Sacramento. 2013 (December). City of Sacramento 2013-2021 Housing Element.


DGS. See California Department of General Services.


______. 2016 (February). 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy, Chapter 3 Summary of Growth and Land Use Forecast.
Section 4.4 Transportation and Circulation

California Department of Transportation. 2010 (September). Transportation Corridor Concept Report Interstate 5.


Caltrans. See California Department of Transportation.


DGS. See California Department of General Services.

DKS Associates. 2016 (January). Draft Final Nexus Study for the I-5 Freeway Subregional Corridor Mitigation Program. Prepared for the City of West Sacramento, the City of Elk Grove, the City of Sacramento, and Caltrans.


SACOG. See Sacramento Area Council of Governments.


Section 4.5 Utilities and Infrastructure


_____. 2017b (February 28). DGS 1215 O Street Office Building and P Street Office Building, EIR-Related Questions. Responses to Ascent Environmental Questions from DGS and the Master Architect teams, Kitchell and ARUP. Sent from Stephanie Coleman, Senior Environmental Planner. Project Management and Development Branch, Environmental Section, to Ascent Environmental.
California Department of General Services and City of Sacramento. 2017 (March). City of Sacramento SB 610/SB 221 Water Supply Assessment and Certification Form, 1215 O Street Office Building Project.


______. 2016b (November). Water Supply Test – Department of Utilities.


Dalrymple, Richard. Senior Engineer. City of Sacramento Department of Utilities. March 1, 2017a—email to Jessica Mitchell of Ascent Environmental regarding wastewater and stormwater services for the O Street and P Street projects.

______. March 6, 2017b—email to Jessica Mitchell of Ascent Environmental regarding additional questions on wastewater and stormwater services for the O Street and P Street projects.

DGS. See California Department of General Services.

______. March 24, 2017b—telephone conversation with Jessica Mitchell of Ascent Environmental regarding the City’s water supply infrastructure.

Mendoza, Inthira. City of Sacramento. February 17, 2017—email to Jessica Mitchell of Ascent Environmental regarding water, wastewater, and stormwater questions for the O Street and P Street office building projects.


Shimizu, Gary. Principal Distribution System Engineer, Distribution Planning. SMUD. March 28, 2017—email to Jessica Mitchell of Ascent Environmental, Inc. regarding electrical service for the O Street Office Building Project and the P Street Office Building Project.


Section 4.6 Air Quality
ARB. See California Air Resources Board.


EPA. See U.S. Environmental Protection Agency.

OEHHA. See Office of Environmental Health Hazard Assessment.


SMAQMD. See Sacramento Metropolitan Air Quality Management District.


WRCC. See Western Regional Climate Center.

Section 4.7 Greenhouse Gas Emissions and Climate Change

ARB. See California Air Resources Board.


CAPCOA. See California Air Pollution Control Officers Association.

CEC. See California Energy Commission.


CNRA. See California Natural Resources Agency.

DWR. See California Department of Water Resources.


IPCC. See Intergovernmental Panel on Climate Change.


NHTSA. See National Highway Traffic Safety Administration.

**Section 4.8 Noise**


Caltrans. See California Department of Transportation

EPA. See U.S. Environmental Protection Agency.


FHWA. See Federal Highway Administration.

FTA. See Federal Transit Administration.


OPR. See Governor’s Office of Planning and Research.


**Section 4.9  Geology and Soils**


DGS. See California Department of General Services.


SCGA. See Sacramento Central Groundwater Authority.


USDA SCS. See U.S. Department of Agriculture, Soil Conservation Service.


Section 4.10 Hydrology and Water Quality


Central Valley RWQCB. See Central Valley Regional Water Quality Control Board.


DWR. See California Department of Water Resources.

FEMA. See Federal Emergency Management Agency.


SCGA. See Sacramento Central Groundwater Authority.


Section 4.11 Hazardous Materials and Public Health


Section 4.12 Cultural and Tribal Cultural Resources


Lindsay, B. 2012. Murder State: California's Native American Genocide, 1846-1873. Lincoln; London: University of Nebraska Press.


Sanborn. 1895. Certified Sanborn Map Report. EDR. Inquiry Number 4792514.3


Section 4.13 Biological Resources


CNDDB. See California Natural Diversity Database.
Section 4.14 Public Services and Recreation


Tunson, King. Entitlement Plan Review Supervisor. Sacramento Fire Department, City of Sacramento, CA. February 8, 2017a—email to Jessica Mitchell of Ascent Environmental regarding fire and emergency services for the proposed State office building projects.

______. February 14, 2017b—email to Jessica Mitchell of Ascent Environmental regarding fire flow for the proposed State office building projects.


**Section 4.15 Aesthetics, Light, and Glare**


_____. 2005 (November). Capitol West Side Projects Central Plant Renovation and West End Office Complex, Draft EIR. Sacramento, California.


CBSC. See California Building Standards Commission.


DGS. See California Department of General Services.


FHWA. See Federal Highway Administration.

**Chapter 5 Cumulative Impacts**


_____. 2015 (June). Resources Building (018) 1416 Ninth Street, Sacramento, CA 95814 Facility Condition Assessment. Prepared by EMG.
City of Sacramento. 2013 (December). *City of Sacramento 2013-2021 Housing Element.*


DGS. See California Department of General Services.

**Chapter 6  Other CEQA-Mandated Sections**


DGS. See California Department of General Services.

**Chapter 7  Project Alternatives**


DGS. See California Department of General Services.
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