

Yamaneer

Mixed-Use Project

Draft Sustainable Communities
Environmental Assessment

Project No. P15-047

Prepared for:

City of
SACRAMENTO

Community Development Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

Prepared by:

AECOM

2020 L Street, Suite 400
Sacramento, CA 95811

April 2016



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April 2016

60447237

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ACRONYMS AND OTHER ABBREVIATIONS

in/sec	inches per second
µin/sec	microinches per second
AB	Assembly Bill
ACM	asbestos containing material
ADT	average daily traffic
AEI	AEI Consultants
afy	acre-feet per year
ANSI	American National Standards Institute
ARB	Air Resources Board
ASA	Acoustical Society of America
AWSC	all-way stop controlled
B.P.	Before Present
BAAQMD	Bay Area Air Quality Management District
BERC	Business Environmental Resource Center
bgs	below the ground surface
BMP	best management practice
CAAQS	California ambient air quality standards
Cal/OSHA	California Occupational Health and Safety Administration
CalEEMod	California Emissions Estimator Model
CAP	climate action plan
CDFW	California Department of Fish and Wildlife
CECO	Commercial Energy Conservation Ordinance
Central Basin	Central Groundwater Basin
CEQA	California Environmental Quality Act
CFMP	Comprehensive Flood Management Plan
cfs	cubic feet per second
CH ₄	Methane
CHRIS	California Historical Resources Information System
CMUTCD	<i>California Manual on Uniform Traffic Control Devices</i>
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	carbon dioxide equivalents
Community Noise Equivalent Level	CNEL
CSCGF	Central Sacramento County Groundwater Forum
CSS	combined sewer system
CWTP	Combined Wastewater Treatment Plant
dB	decibels
dBA	A-weighted decibel
DDT	dichlorodiphenyltrichloroethane
Delta	Sacramento–San Joaquin Delta
DOF	Department of Finance
DPR	Department of Parks and Recreation
DWR	Department of Water Resources

EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency's
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
FWTP	Fairbairn Water Treatment Plant
General Plan	<i>2035 Sacramento General Plan</i>
GHG	greenhouse gas
GWP	Global warming potential
HTS	Household Travel Survey
I-5	Interstate 5
ITE	Institute of Transportation Engineers'
kWh	kilowatt-hours
L _{dn}	Day-night average level
L _{eq}	Equivalent noise level
LID	Low Impact Development
L _{max}	Maximum noise level
L _n	sound level exceeded "n" percent of the time
LOS	Levels of Service
MBTA	Migratory Bird Treaty Act
MEIR	Master Environmental Impact Report
mgd	million gallons per day
MOU	Memorandum of Understanding
mph	miles per hour
MT	metric tons
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N ₂ O	Nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCHRP	National Cooperative Highway Research Program
NCIC	North Central Information Center
NOA	Naturally occurring asbestos
NPDES	National Pollution Discharge Elimination System
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OAP	Ozone Attainment Plan
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Health and Safety Administration
PCBs	polychlorinated biphenyls
PCE	tetrachloroethylene
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PPV	peak particle velocity
RMS	root-mean-square
RT	Regional Transit

RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SCEA	Sustainable Communities Environmental Assessment
SCEMD	Sacramento Environmental Management Department
SFD	Sacramento Fire Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
Sound Exposure Level	SEL
SPD	Sacramento Police Department
SQIP	Stormwater Quality Improvement Plan
SRCSD's	Sacramento Regional County Sanitation District's
SRWTP	Sacramento River Water Treatment Plant
SRWWTP	Sacramento Regional Wastewater Treatment Plant
SVAB	Sacramento Valley Air Basin
SWRCB	State Water Resources Control Board
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TDM	Travel Demand Model
TPA	Transit Priority Area
TPHss	total petroleum hydrocarbons as Stoddard solvent
TPPs	transit priority projects
TRB	Transportation Research Board of the National Academies
USFWS	United States Fish and Wildlife Service
USTs	underground storage tanks
VdB	vibration decibels
VEC	vapor encroachment condition
VMT	vehicle miles traveled
VMT	vehicle miles traveled
VOC	volatile organic compound
µg/L	micrograms per liter
µg/m ³	micrograms per cubic meter

1 INTRODUCTION

This Sustainable Communities Environmental Assessment (SCEA) has been prepared pursuant to Section 21155.2 of the California Public Resources Code.

PROJECT TITLE: Yamanee (P15-047).

PROJECT SUMMARY: The proposed project is a new multi-story, mixed-use building southeast of the intersection of 25th and J Streets. The project site, comprised of two parcels, is currently developed with 12,687 square feet of retail, office, and fitness studio uses, an approximately 1,500 square foot residential use, along with 27 surface parking spaces on ±0.44 acre of land.

The project proposes demolition of the existing buildings on-site, and construction of a new multi-story, mixed-use building southeast of the intersection of 25th and J Streets that would accommodate approximately 10,889 square feet of ground-floor retail and restaurant space and up to 134 for-sale residential units. Another 3,605 square feet of building space is proposed on a mezzanine level for retail, storage, office, and/or restaurant seating space. The dwelling units will range in size from approximately 650 square-foot studios to 2,100 square-foot, two-bedroom suites. Each dwelling unit would have private outdoor living areas, as well as access to a rooftop amenities deck. The project proposes 101 bicycle parking spaces to serve the residential and retail uses and 124 vehicular parking spaces to serve the residents.

The project site is directly adjacent to a high-quality transit corridor, as defined by Section 21155 [b][3] of the Public Resource Code. Sacramento RT bus route 30 provides 15-minute headways during peak commute hours in the morning and afternoon. The project is a transit priority project, as defined by Section 21155[a][b] of the Public Resources Code. Due to the importance of transit priority projects for meeting the State's greenhouse gas mandate, the project is eligible for review and environmental documentation that is intended to help enhance certainty and streamline the review process. Please see Section 2.8 of this SCEA for more details on transit priority criteria and the relationship of these projects with the State's greenhouse gas emissions reduction mandate.

The following approvals would be required from the City of Sacramento before the start of construction:

- ▶ Environmental assessment and, if mitigation is required, a Mitigation Monitoring and Reporting Plan;
- ▶ Demolition of existing buildings;
- ▶ Site plan and design review and approval by the Planning and Design Commission of the physical characteristics and design features of the proposed development (Code Section 17.808.130);
- ▶ Approval of a tentative map and a condominium map to create 134 residential condominiums and 10 remainder lots comprised of common and commercial spaces;
- ▶ Deviation from maximum height to allow for a total building height of 170 feet and 4 inches (Code Section 17.808.120) and to waive the City's requirement for an off-street loading space.

Other public agencies whose approval may be required include, but are not limited to:

- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD)—issues the Authority to Construct/Permit to Operate pursuant to SMAQMD Regulation 2 (Rule 201 et seq.)
- ▶ State Water Resources Control Board/Central Valley Regional Water Quality Control Board—issues Construction Storm Water Discharge Permits

PROJECT LOCATION: The proposed project site is located in Midtown Sacramento, southeast of the intersection of 25th and J Streets.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of Sacramento.

CONTACT PERSON/INFORMATION: Scott Johnson, Associate Planner, (916) 808-5842, SRJohnson@cityofsacramento.org

REQUIRED FINDINGS: The City of Sacramento has determined that:

1. the project is consistent with the general use designations, density, building intensity, and applicable policies specified for the project area in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) prepared by the Sacramento Area Council of Governments for the Sacramento Region;
2. the project qualifies as a transit priority project pursuant to Public Resources Code Section 21155(b);
3. the project is a residential or mixed-use project as defined by Public Resources Code Section 21159.28(d);
4. the project as mitigated incorporates all relevant and feasible mitigation measures, performance standards, or criteria set forth in both the MTP/SCS Program Environmental Impact Report (EIR) and the 2035 General Plan Master EIR;
5. all potentially significant or significant effects required to be identified and analyzed pursuant to the California Environmental Quality Act (CEQA) have been identified and analyzed in an initial study; and
6. the project, as mitigated, either avoids or mitigates to a level of insignificance all potentially significant or significant effects of the project required to be analyzed pursuant to CEQA.

Therefore, the City of Sacramento finds that the proposed project complies with the requirements of CEQA for using an SCEA as authorized pursuant to Public Resources Code Section 21155.2(b).

The attached Environmental Checklist (Chapter 3) has been prepared by the City of Sacramento in support of this SCEA. Further information including the project file and supporting reports and studies may be reviewed at the City of Sacramento, Community Development Department, Environmental Planning Services, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811.

Scott Johnson

3-31-16

Scott Johnson, Associate Planner

Date

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2 PROJECT DESCRIPTION

Project Title:	Yamane Mixed-Use Project
Lead Agency:	City of Sacramento, Community Development Department 300 Richards Boulevard, Third Floor Sacramento, CA 95811
Lead Agency Contact:	Scott Johnson, Associate Planner SRJohnson@cityofsacramento.org (916) 808-5842
Project Location:	Approximately 0.44 acres south of, and adjacent to J Street, east of and adjacent to 25 th Street, and north of Jazz Alley in Midtown Sacramento.
Project Applicant:	Ryan Heater 2500 J Street Owners, LLC 3619 Winding Creek Road Sacramento, CA 95864
Property Owner:	2500 J Street Owners, LLC

2.1 LAND USE DESIGNATIONS

2.1.1 GENERAL PLAN AND ZONING

The *2035 Sacramento General Plan* (General Plan) designates the project site “Urban Corridor Low,” which is intended to accommodate retail, service, office, residential, other compatible uses, and mixed-use development in multi-story structures, with more-intense uses at intersections and access to transit service throughout. The General Plan encourages pedestrian-oriented uses for street-level frontages.

The project site is zoned “C-2-MC,” General Commercial/Midtown Commercial. The C-2 zoning district is intended to accommodate retail, services, office, dwellings and limited processing and packaging. MC is an overlay designation – development in the Midtown Commercial overlay zone is required to comply with the requirements of the underlying zone (C-2, in this case).

2.2 PROJECT SITE AND SURROUNDING LAND USES

The project site is located in Midtown Sacramento, an area with a mix of single- and multi-family residential development; retail and commercial services; restaurants and bars; medical, dental, and other types of offices; parks, museums, places of worship, and other civic uses; and other complementary uses. All of the properties surrounding the project site are currently non-residential, with the exception of the nine-story senior residential facility, St. Francis Manor, which is located directly across J Street, to the north of the project site (see Exhibit 2-1).

2.2.1 EXISTING USES AND PARKING ON THE PROJECT SITE

The project site encompasses approximately 0.44 acres of land, which is currently developed with 12,687 square feet of retail, office, and fitness studio uses, as well as one residential structure of approximately 1,500 square feet, located behind the storefront at 2508 J Street.

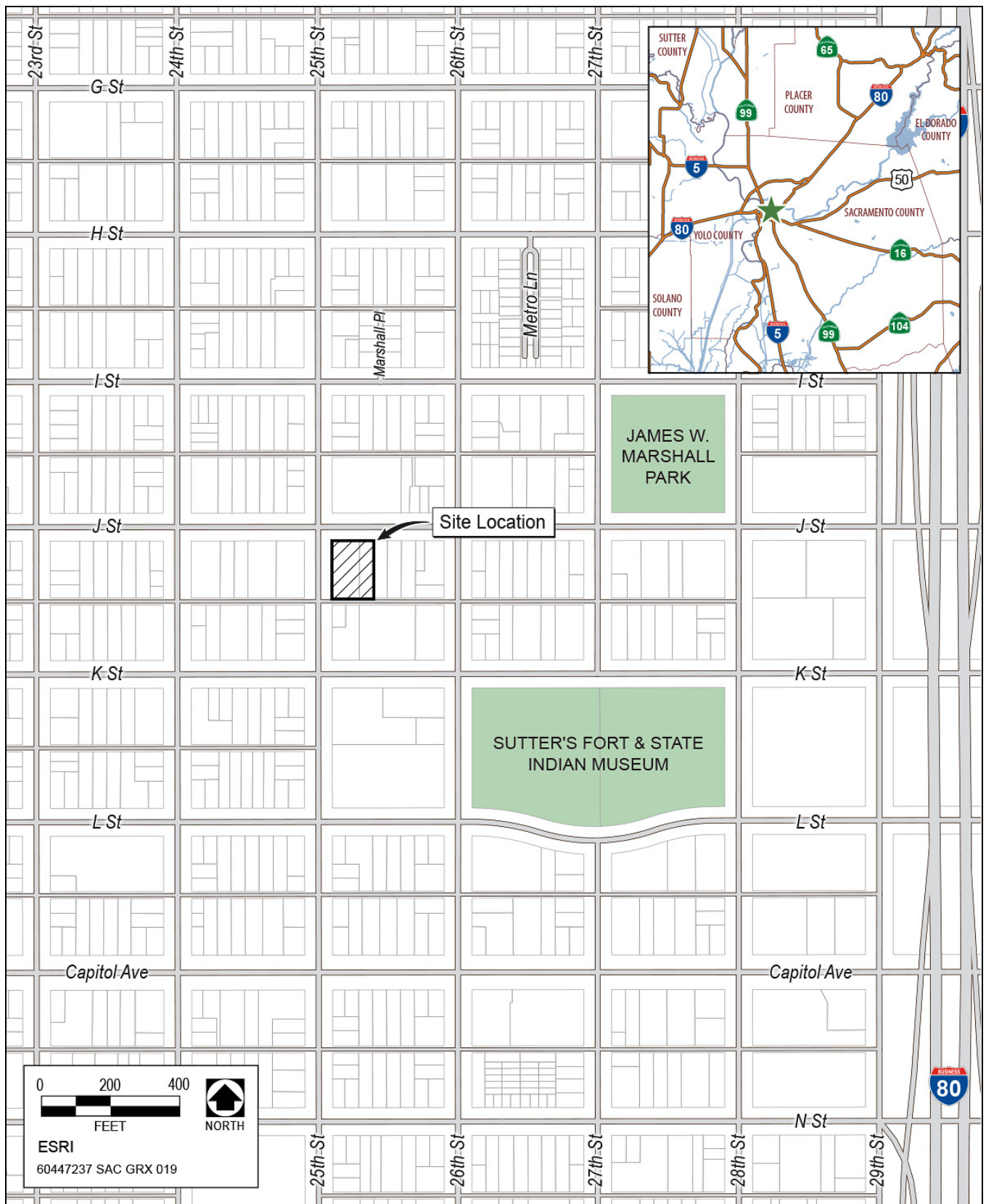


Exhibit 2-1. Project Site Location

There are a total of 27 parking spaces on the site currently. Thirteen of the spaces are leased to current tenants, and the remaining 14 spaces are leased to various off-site individuals on a month-to-month basis.

2.3 PROJECT OBJECTIVES:

The primary objectives of the proposed project are to:

1. Utilize an infill location within the urban core for the construction of a residential mixed-use development, thereby helping to develop 10,000 new residential units in the Central City consistent with the Downtown Housing Initiative Plan;
2. Build in a manner consistent with SACOG's Blueprint and Sustainable Communities Strategy to improve the jobs/housing balance downtown, reduce vehicle miles travelled within the City of Sacramento and help to achieve the goals of AB 32 and SB 375;
3. Provide a for-sale residential condominium opportunity in Midtown proximate to a growing medical jobs center, including the Alhambra Corridor and the Sutter Medical Center;
4. Facilitate the reuse of the Site adding residential uses with densities sufficient to justify the increased construction costs associated with the type of condominium development proposed and provide a residential population sufficient to support the economic vitality of the J Street commercial corridor and surrounding Midtown businesses;
5. Develop a site that is screened from nearby neighborhoods in order to preserve the existing visual character of the area; and
6. Create a pedestrian-friendly building that includes pedestrian-scale design, alley activation, ample parking, tree canopy preservation, and the expansion of commercial opportunities on all four sides.

2.4 DESCRIPTION OF PROJECT

The project proposes a new multi-story, mixed-use building southeast of the intersection of 25th and J Streets that would accommodate approximately 10,889 square feet of ground-floor retail and restaurant space and up to 134 for-sale residential units (see Table 2-1). The commercial spaces fronting onto 25th and J Streets would feature three-story glass entryways and windows oriented to the sidewalk and outdoor patios. Another 3,605 square feet of building space is proposed on a mezzanine level for retail, storage, office, and/or restaurant seating space. The dwelling units would range in size from approximately 650 square-foot studios to 2,100 square-foot, two-bedroom suites. Each dwelling unit would have private outdoor living areas, as well as access to a rooftop amenities deck.

The project proposes a pedestrian walkway connecting J Street to Jazz Alley along the project site's eastern boundary. Accessible from this covered walkway is a proposed café that would include shaded outdoor seating located within the building's internal courtyard and vertical garden. The pedestrian walkway terminates at Jazz Alley, where a retail/restaurant space is proposed to front onto the alley,

Table 2-1. Existing and Proposed Uses	
Existing Uses	Square Footage/Dwelling Units
Retail (Birkenstock)	1,887 square feet
Retail (salon, shoe store, vape shop)	4,200 square feet
Restaurant (Coconut)	1,200 square feet
Fitness studio	2,700 square feet
Office, 2nd floor	1,500 square feet
Law office, 2nd floor	1,200 square feet
Residential structure, behind 2508 J Street	1,500 square feet (1 dwelling unit)
Total	12,687 square feet (14,187 including residential)
Proposed Uses	Square Footage/Dwelling Units
1 st floor retail/restaurant	10,889 square feet
Mezzanine retail, storage, office, and/or restaurant	3,245 square feet
Residential	Up to 134 dwelling units/156,090 square feet
Note: Birkenstock is anticipated at this time to occupy the new project, once constructed.	
Source: 2500 J Street Owners, LLC	

including an alley-facing, mezzanine level balcony. The project proposes an open air courtyard with a vertical garden component in both the residential and commercial portions of the building.

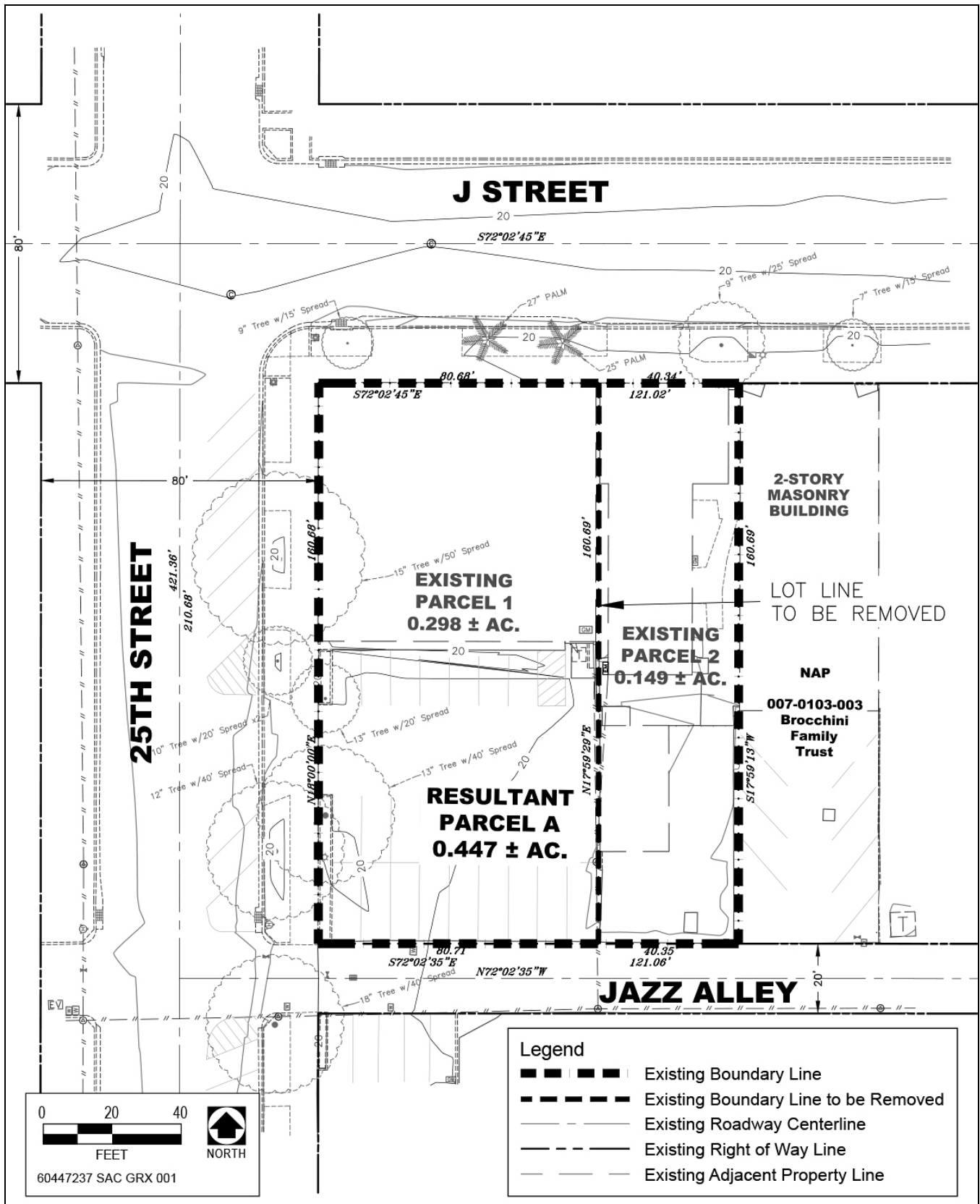
Exhibit 2-2 shows the project’s proposed tentative map. Exhibit 2-3 shows the proposed building elevation, as viewed from J Street. Exhibit 2-4 shows the proposed building elevation, as viewed from 25th Street. Exhibit 2-5 shows the proposed building elevation, as viewed from Jazz Alley. Exhibits 2-6 through 2-15 show the floor plans.

2.4.1 ACCESS AND CIRCULATION

The proposed project site is located in Midtown Sacramento, southeast of the intersection of 25th and J Streets. On J Street adjacent to the project site and on L Street, two blocks south of the project site, Sacramento Regional Transit (RT) provides bus service between California State University, Sacramento and the Sacramento Valley multi-modal station downtown. During both the morning and afternoon weekday peak periods, the 30 bus provides 15-minute headways.

Currently, the bus stop has a bench and signage. The project proposes to coordinate with RT to design and install a covered bench structure following construction of the project. The project applicant team has met with RT representatives to discuss temporarily moving the bus stop located southeast of the intersection of 25th and J Streets to a location southwest of this intersection during construction of the project.

The project site is adjacent to, and south of J Street, which is classified as an Arterial by the City’s General Plan, with three lanes now and three lanes planned for the future, according to the City’s 2035 General Plan, Figure M4A, from the Mobility Element (City of Sacramento 2015). J Street is one way, providing eastbound access. L Street, which is two blocks south of the project site, is also an Arterial with two lanes in the vicinity of the project site and eventually three lanes in the downtown area.



Source: RSC Engineering, adapted by AECOM 2015

Exhibit 2-2. Proposed Tentative Map

L Street is one way, providing westbound access. One block west of the project site is 24th Street, which is a two-way, two-lane Major Collector that provides north-south access in Midtown and neighborhoods to the south. The project site is approximately 1/3rd of mile west of Business 80, otherwise known as the Capital City Freeway.

Vehicular access to the proposed 124 on-site parking stalls for building residents will be from Jazz Alley, which is east-west alley between J and K Streets.

2.4.2 WATER

The City of Sacramento Department of Utilities provides water to the city. The City uses water from the American River and the Sacramento River, supplemented by groundwater supplies. Intakes supply raw water from the rivers to treatment facilities first, then to end users.

There is an existing 6-inch water main in Jazz Alley, a 12-inch line in 26th Street, a 12-inch line in 23rd Street, a 12-inch line in I Street, and a 30-inch line in H Street. The 6-inch line in Jazz Alley is not large enough to provide fire flows for a building of the proposed size. Based on fire flow tests, the existing water line in Jazz Alley will be adequate for domestic service, but an off-site connection is needed for fire flow. In order to achieve adequate fire flows, the project proposes to install a 12-inch loop water main in 25th Street and J Street from the 6-inch line in Jazz Alley to the existing 12-inch main in 26th Street. The City requires the water systems to be looped. Flows are so strong that this 12-inch loop connection to the existing 12-inch main in 26th Street will likely be more than adequate. If this loop connection is not robust enough, the project would propose to extend a 12-inch main in 25th Street from this proposed 12-inch loop connection to the existing 12-inch main in I Street (Chavez, pers. comm. 2016).

2.4.3 WASTEWATER AND DRAINAGE

The City of Sacramento Department of Utilities provides wastewater collection services for the City. The City operates a combined sewer system (CSS) that provided sewage and drainage services to more than 24,000 parcels in downtown Sacramento, Midtown, Land Park, and East Sacramento. The system, originally established in the 1800s, collects sewage and stormwater in the same pipe. The combined wastewater is pumped to the Sacramento Regional County Sanitation District's Sacramento Regional Wastewater Treatment Plant in Elk Grove, where it is treated and released back to local rivers. During heavy-rain events, excess stormwater is also treated at several City facilities before being released back to the river.

The City of Sacramento Department of Utilities maintains the City's storm drainage facilities.



Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-3. J Street Elevation

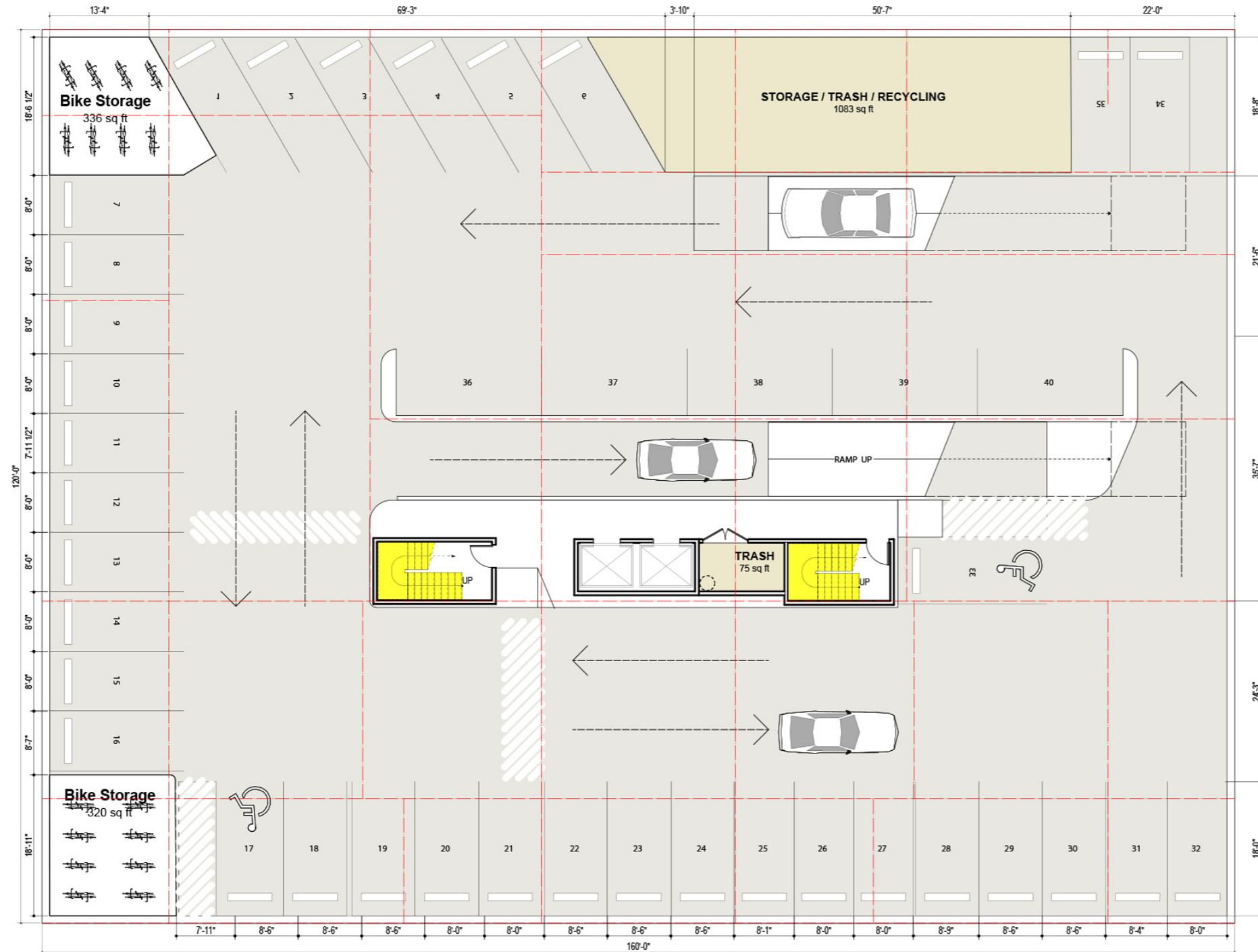


60447237 SAC GRX 004

Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-4. 25th Street Elevation

J STREET



YAMANEE		PARKING CALCULATIONS	
"URBAN DISTRICT"			
PARKING TOTAL REQUIRED		65 Spaces	
BIKE PARKING REQUIRED		86 Spaces	

YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	

YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz.	954 SF
RETAIL / REST. NE	3,294 SF	mezz.	971 SF
RETAIL SW	2,724 SF	mezz.	774 SF
RETAIL / REST. SE	807 SF	mezz.	546 SF
WATERFALL CAFE	798 SF		
MEZZ. TOTAL [not included in Total Retail SF]		mezz.	3,245 SF
RETAIL TOTAL			10,889 SF
LOBBY, ETC.			1,697 SF
SERVICE / EGRESS			382 SF
BIKE STORAGE			159 SF
1st FLOOR TOTAL			13,127 SF
2nd FLOOR APARTMENTS	14 Units		15,076 SF
3rd FLOOR APARTMENTS	14 Units		16,003 SF
4th FLOOR APARTMENTS	14 Units		16,003 SF
5th FLOOR APARTMENTS	14 Units		16,003 SF
6th FLOOR APARTMENTS	14 Units		16,003 SF
7th FLOOR APARTMENTS	14 Units		16,003 SF
8th FLOOR APARTMENTS	14 Units		16,003 SF
9th FLOOR APARTMENTS	14 Units		16,003 SF
10th FLOOR APARTMENTS	14 Units		15,823 SF
11th FLOOR APARTMENTS	8 Units		13,170 SF
APARTMENTS TOTAL	134 Units		156,090 SF
PH FLOOR EVENT SPACE / GYM			7,815 SF
TOTAL FLOOR AREA			177,032 SF

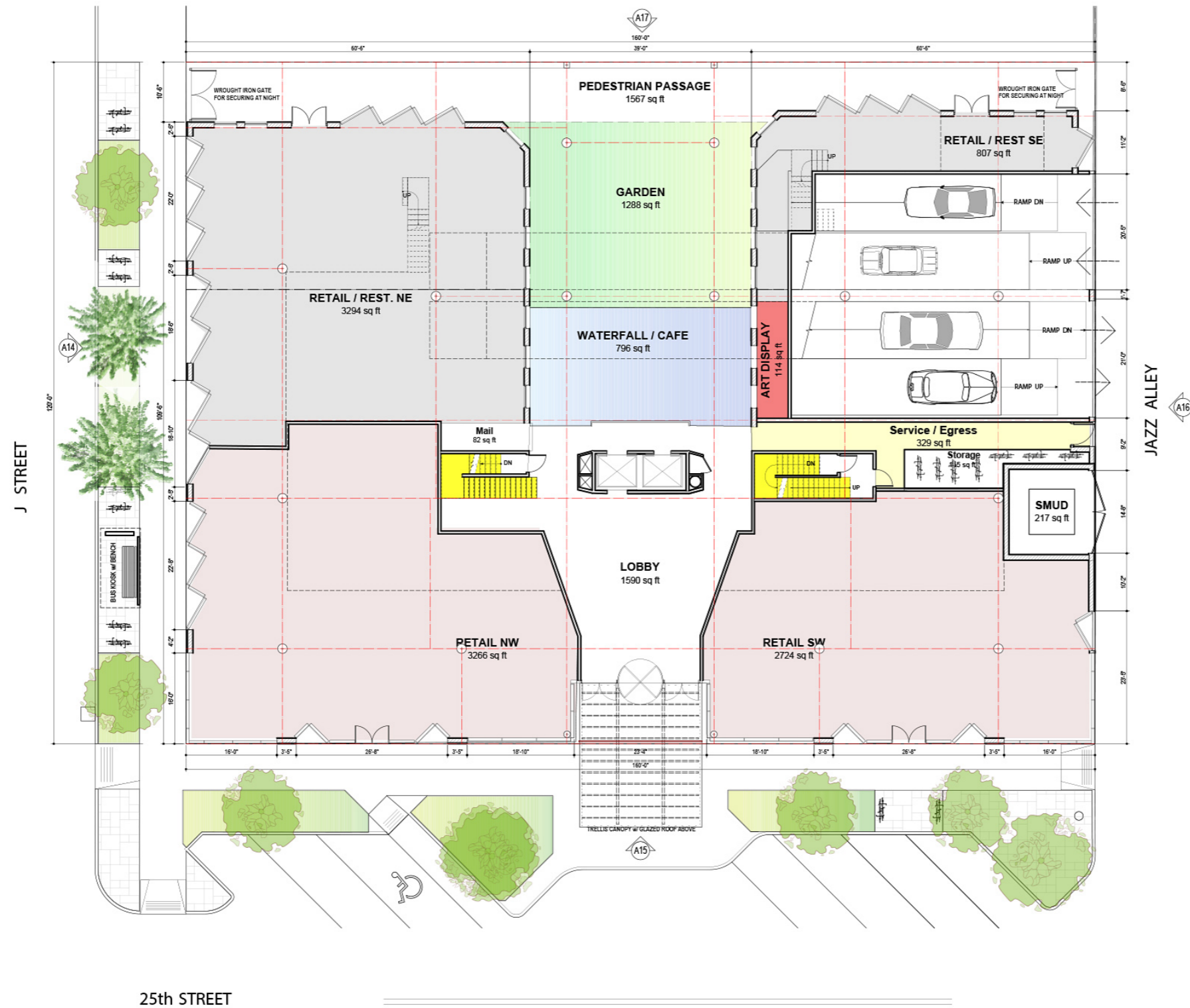
CELLAR PARKING PLAN



60447237 SAC GRX 007

Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-6. Cellar Plan

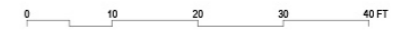


YAMANEE		PARKING CALCULATIONS	
"URBAN DISTRICT"			
PARKING TOTAL REQUIRED	65 Spaces		
BIKE PARKING REQUIRED	86 Spaces		

YAMANEE		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,567 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,855 SF	
TOTAL OPEN SPACE		29,812 SF	

YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR	40 Spaces		
PARKING: level+1	40 Spaces		
PARKING: level+2	44 Spaces		
PARKING TOTAL		124 Spaces	
BIKES: CELLAR	60 Bikes		
BIKES: SIDEWALK	20 Bikes		
BIKES: 1st FLOOR	11 Bikes		
BIKES: MEZZANINE	10 Bikes		
BIKES TOTAL		101 Bikes	

YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz. 954 SF	
RETAIL / REST. NE	3,294 SF	mezz. 971 SF	
RETAIL SW	2,724 SF	mezz. 774 SF	
RETAIL / REST. SE	807 SF	mezz. 346 SF	
WATERFALL CAFE	796 SF		
MEZZ. TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC.	1,897 SF		
SERVICE / EGRESS	382 SF		
BIKE STORAGE	159 SF		
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,923 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL		134 Units	156,090 SF
PH FLOOR EVENT SPACE / GYM			7,815 SF
TOTAL FLOOR AREA			177,032 SF



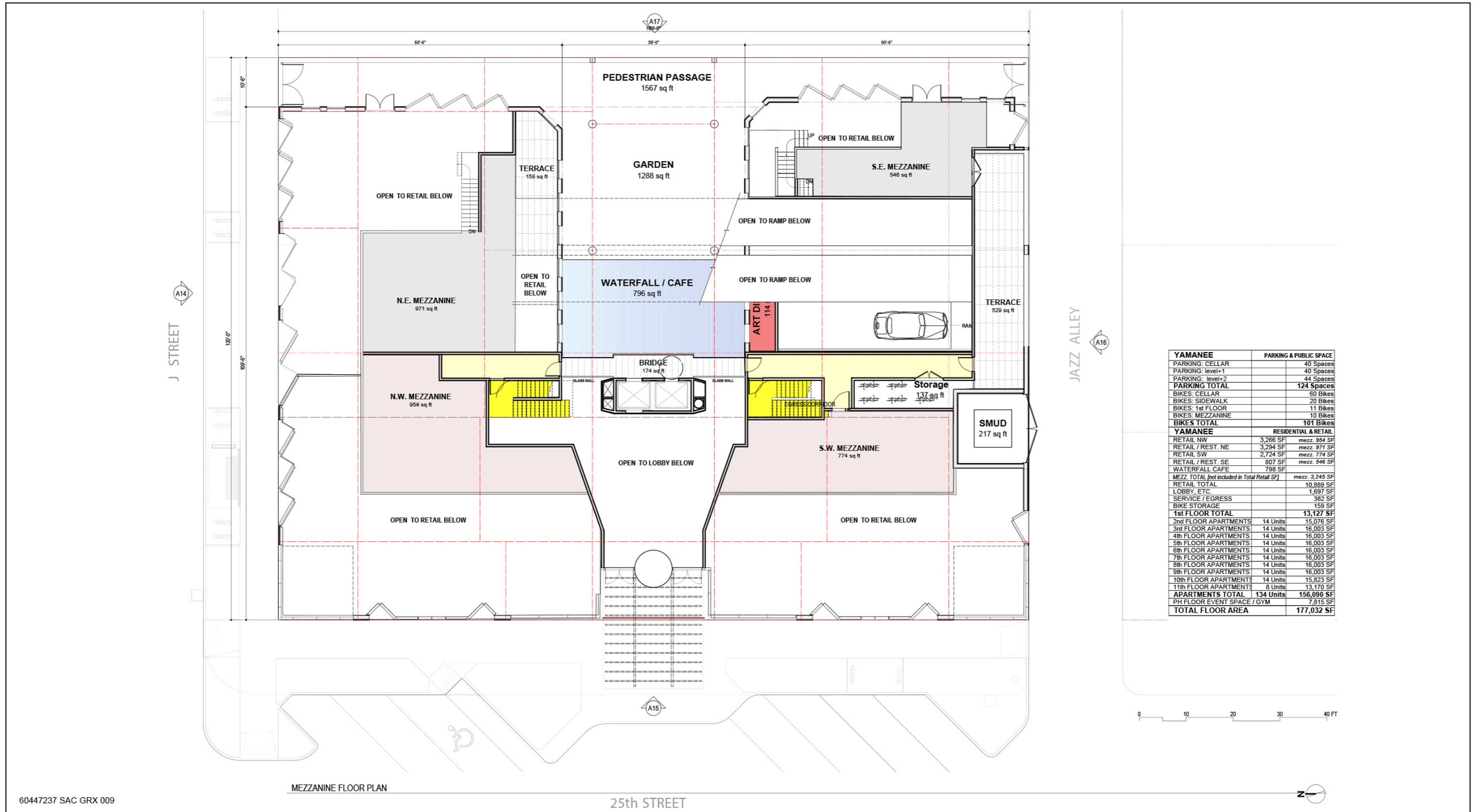
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25th STREET
1st FLOOR PLAN



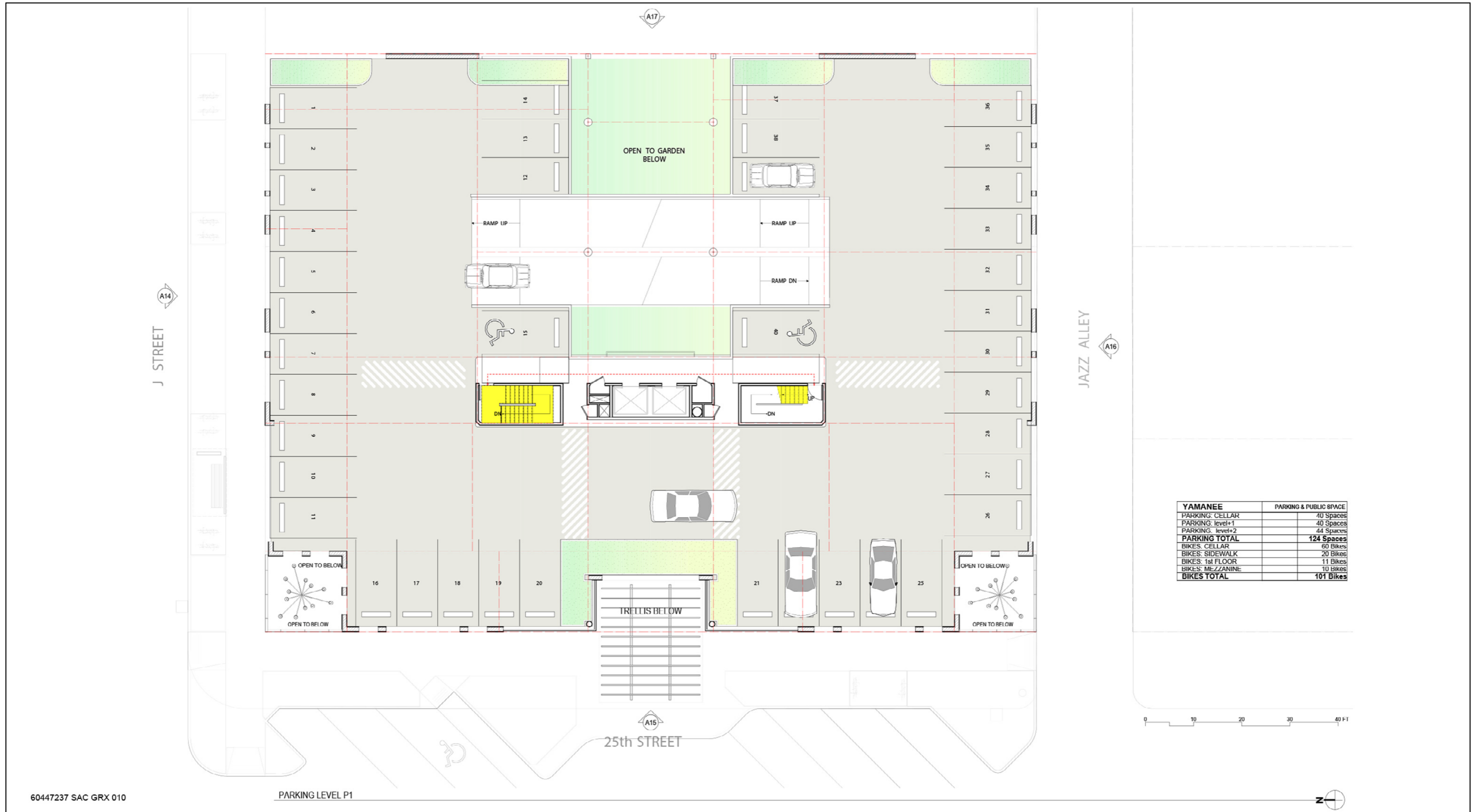
Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-7. 1st Floor



Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-8. Mezzanine Plan

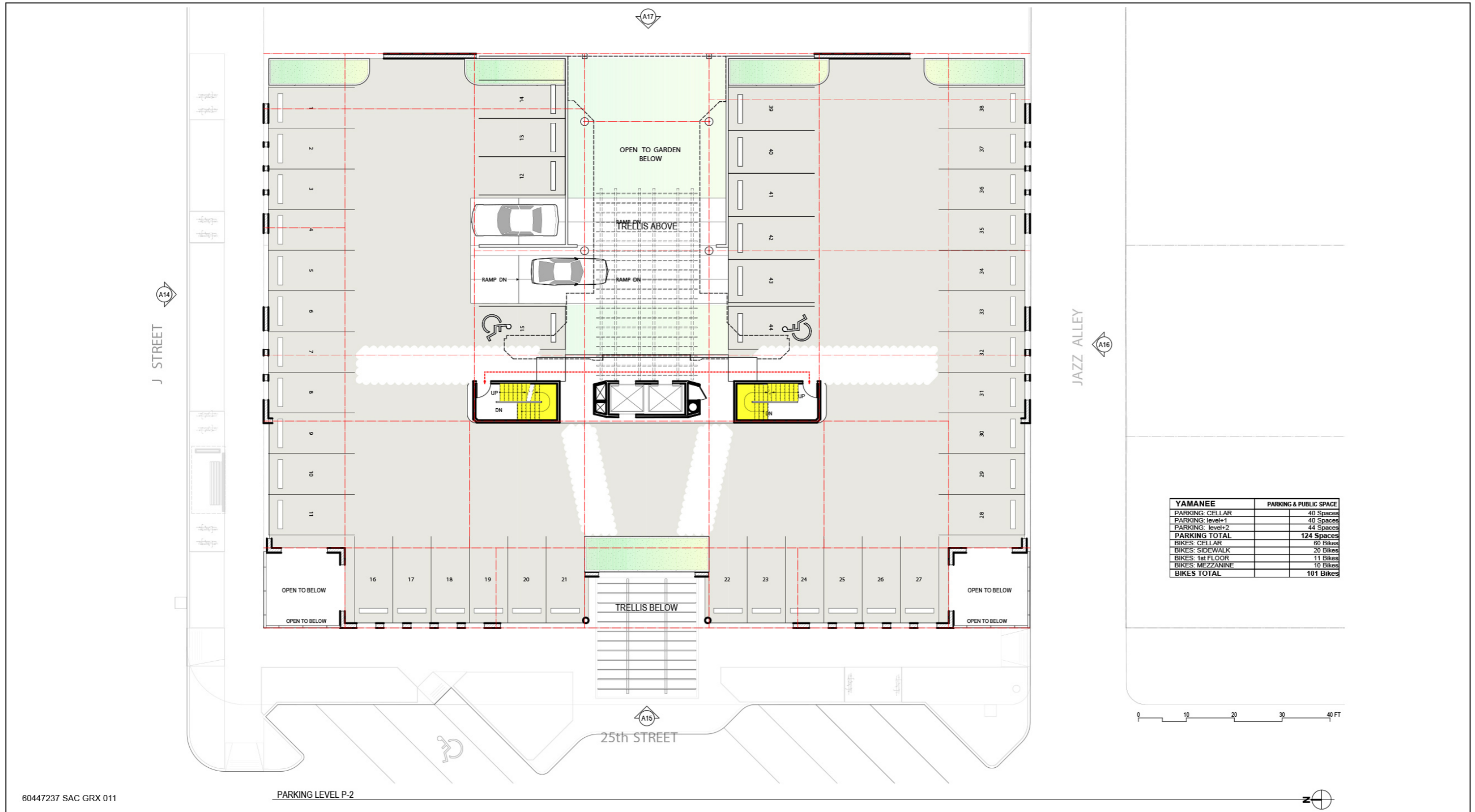


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PARKING LEVEL P1

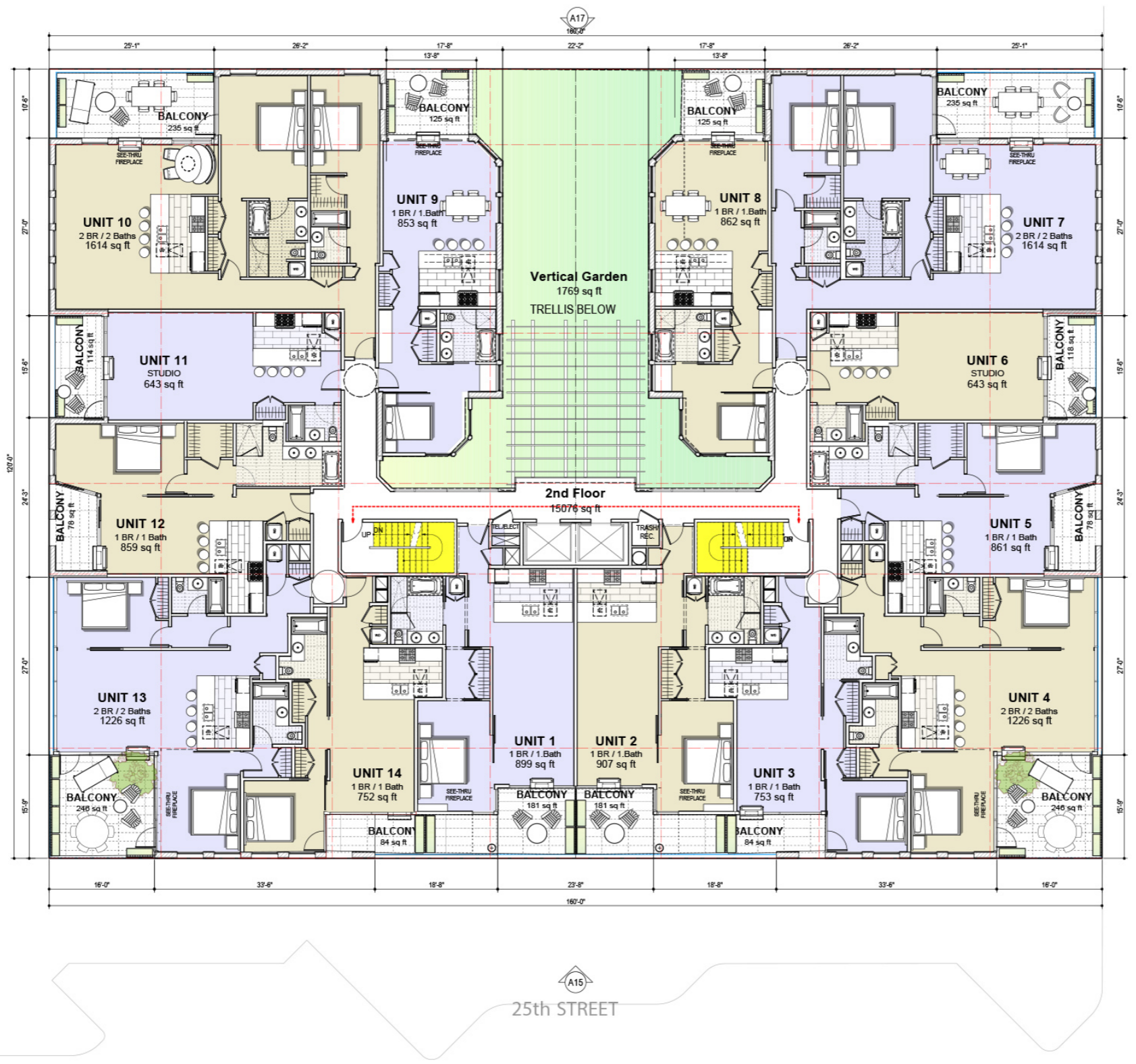
Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-9. Parking Level +1 Plan



Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-10. Parking Level +2 Plan



YAMANEE		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,587 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,655 SF	
TOTAL OPEN SPACE		29,812 SF	

YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	
YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW		3,266 SF	mezz. 954 SF
RETAIL / REST. NE		3,294 SF	mezz. 971 SF
RETAIL SW		2,724 SF	mezz. 774 SF
RETAIL / REST. SE		807 SF	mezz. 546 SF
WATERFALL CAFE		798 SF	
MEZZ. TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC.		1,697 SF	
SERVICE / EGRESS		382 SF	
BIKE STORAGE		159 SF	
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,823 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL		134 Units	156,090 SF
PH FLOOR EVENT SPACE / GYM			7,815 SF
TOTAL FLOOR AREA			177,032 SF



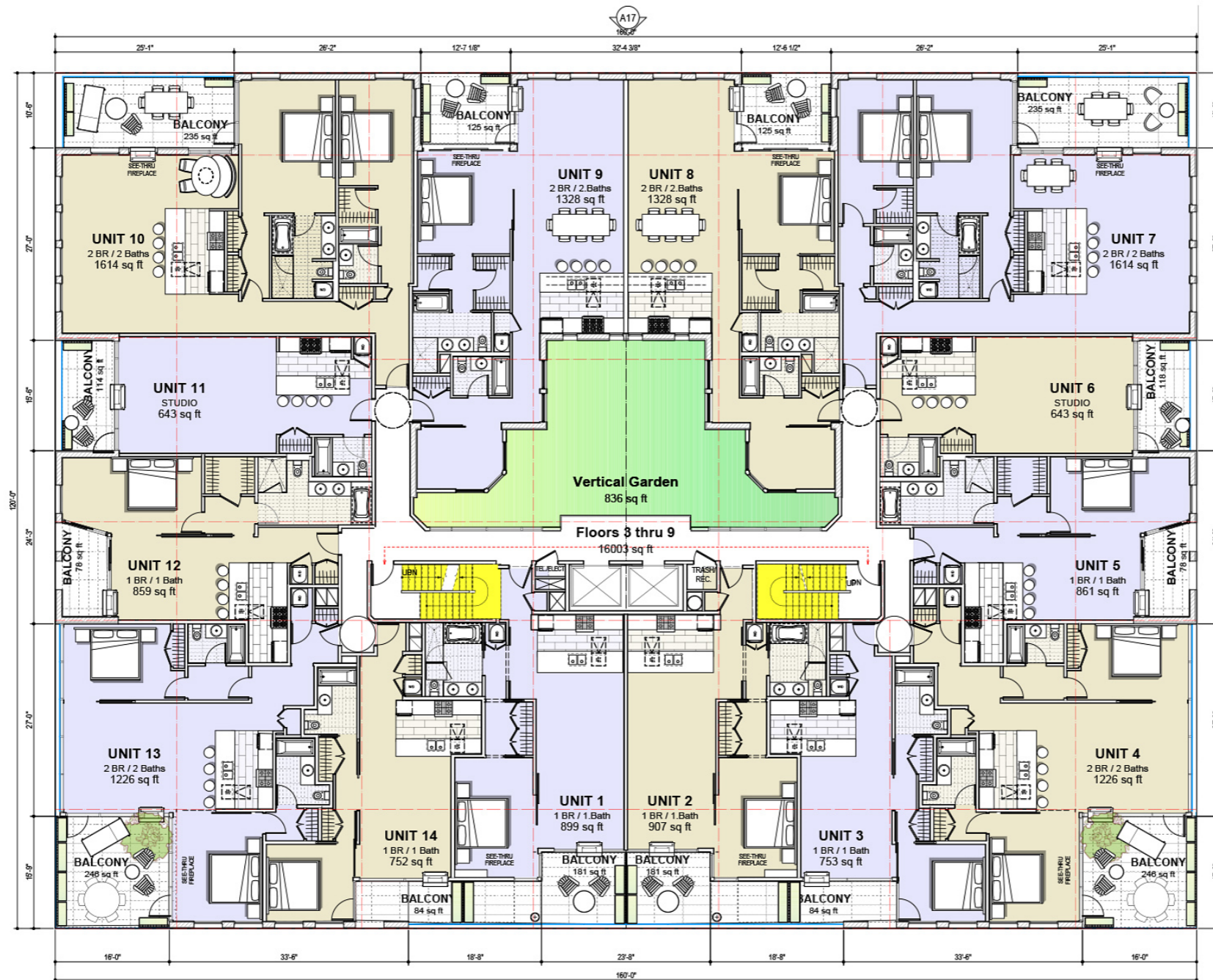
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2nd FLOOR PLAN

Source: CMS Architecture & Design, adapted by AECOM 2015

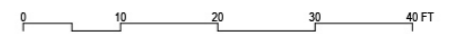
Exhibit 2-11. 2nd Floor Plan

J STREET



YAMANEE		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,587 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,655 SF	
TOTAL OPEN SPACE		29,812 SF	

YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	
YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz. 954 SF	
RETAIL / REST. NE	3,294 SF	mezz. 971 SF	
RETAIL SW	2,724 SF	mezz. 774 SF	
RETAIL / REST. SE	807 SF	mezz. 546 SF	
WATERFALL CAFE	798 SF		
MEZZ. TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC.		1,697 SF	
SERVICE / EGRESS		382 SF	
BIKE STORAGE		159 SF	
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,823 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL	134 Units	156,090 SF	
PH FLOOR EVENT SPACE / GYM		7,815 SF	
TOTAL FLOOR AREA		177,032 SF	



60447237 SAC GRX 013

3rd thru 9th TYPICAL FLOOR PLANS

Source: CMS Architecture & Design, adapted by AECOM 2015

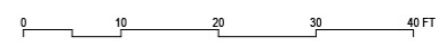
Exhibit 2-12. Typical Plan – Floors 3 through 9



YAMANEЕ		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,587 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,655 SF	
TOTAL OPEN SPACE		29,812 SF	

YAMANEЕ		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	

YAMANEЕ		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz. 954 SF	
RETAIL / REST. NE	3,294 SF	mezz. 971 SF	
RETAIL SW	2,724 SF	mezz. 774 SF	
RETAIL / REST. SE	807 SF	mezz. 546 SF	
WATERFALL CAFE	798 SF		
MEZZ TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC.		1,697 SF	
SERVICE / EGRESS		382 SF	
BIKE STORAGE		159 SF	
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,823 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL	134 Units	156,090 SF	
PH FLOOR EVENT SPACE / GYM		7,815 SF	
TOTAL FLOOR AREA		177,032 SF	

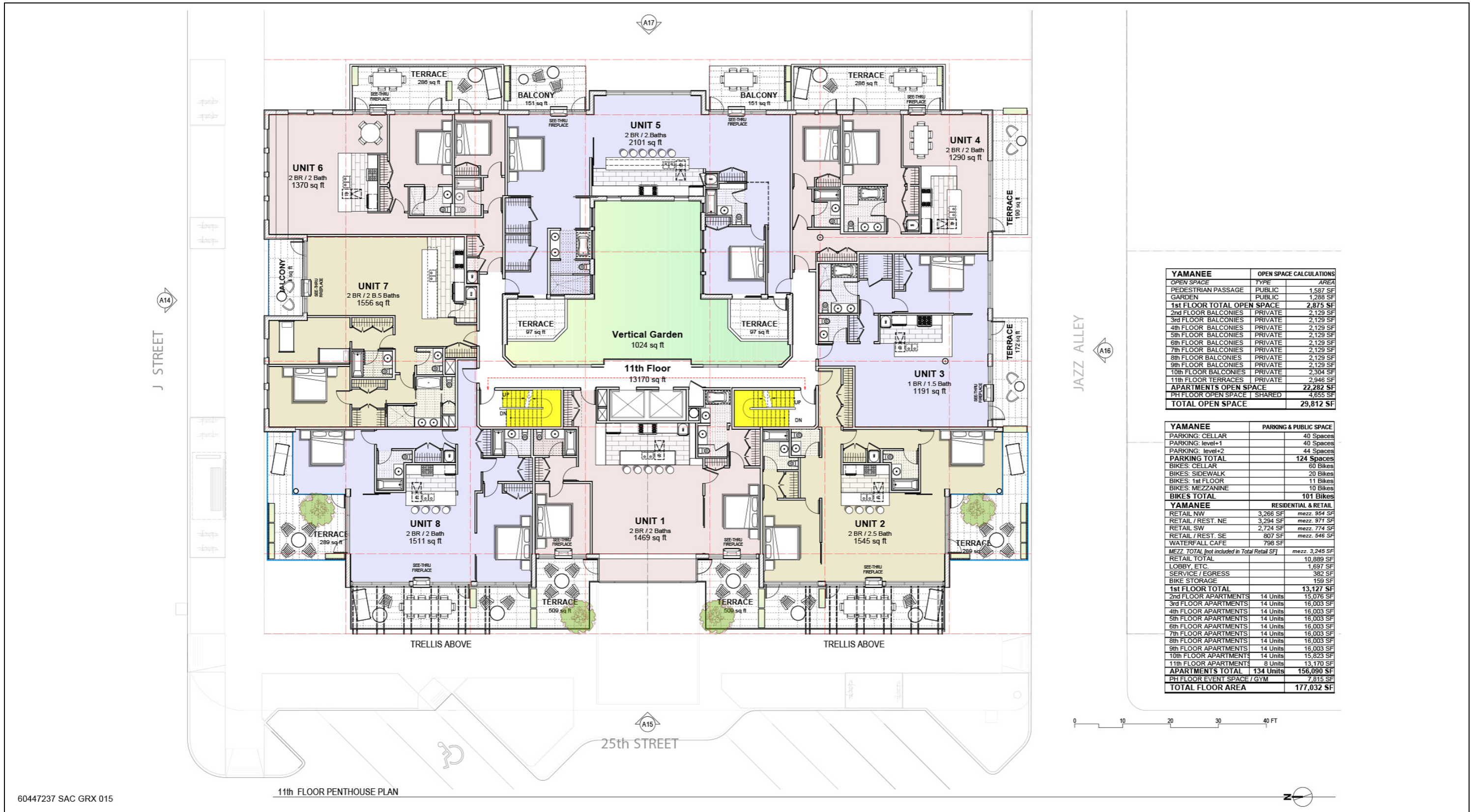


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10th FLOOR PLAN

Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-13. 10th Floor Plan



YAMANEE		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,587 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,655 SF	
TOTAL OPEN SPACE		29,812 SF	

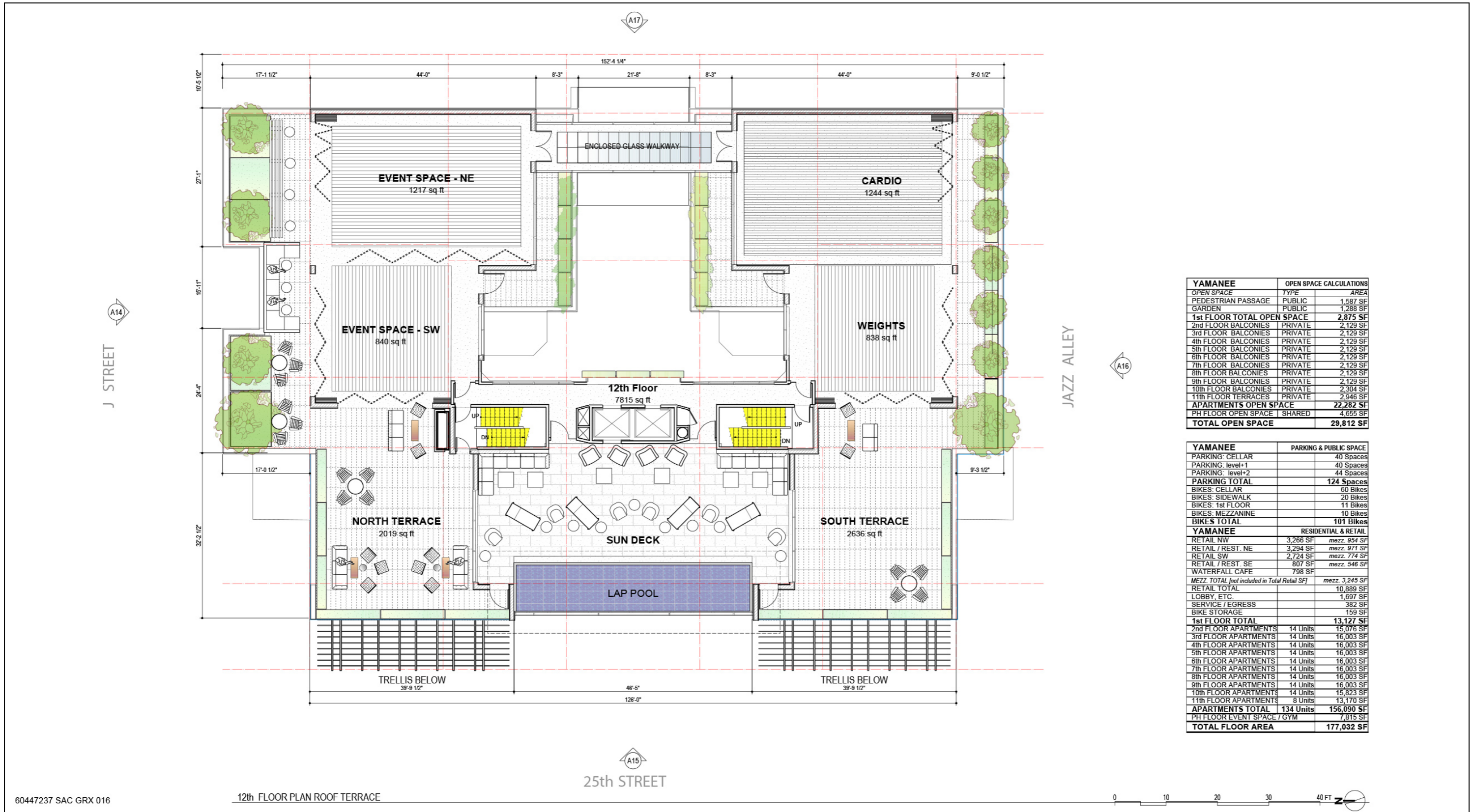
YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	
YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz. 954 SF	
RETAIL / REST. NE	3,294 SF	mezz. 971 SF	
RETAIL SW	2,724 SF	mezz. 774 SF	
RETAIL / REST. SE	807 SF	mezz. 546 SF	
WATERFALL CAFE	798 SF		
MEZZ. TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC		1,697 SF	
SERVICE / EGRESS		382 SF	
BIKE STORAGE		159 SF	
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,823 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL		134 Units	156,090 SF
PH FLOOR EVENT SPACE / GYM			7,815 SF
TOTAL FLOOR AREA			177,032 SF

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11th FLOOR PENTHOUSE PLAN

Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-14. 11th Floor Plan



YAMANEE		OPEN SPACE CALCULATIONS	
OPEN SPACE	TYPE	AREA	
PEDESTRIAN PASSAGE	PUBLIC	1,587 SF	
GARDEN	PUBLIC	1,288 SF	
1st FLOOR TOTAL OPEN SPACE		2,875 SF	
2nd FLOOR BALCONIES	PRIVATE	2,129 SF	
3rd FLOOR BALCONIES	PRIVATE	2,129 SF	
4th FLOOR BALCONIES	PRIVATE	2,129 SF	
5th FLOOR BALCONIES	PRIVATE	2,129 SF	
6th FLOOR BALCONIES	PRIVATE	2,129 SF	
7th FLOOR BALCONIES	PRIVATE	2,129 SF	
8th FLOOR BALCONIES	PRIVATE	2,129 SF	
9th FLOOR BALCONIES	PRIVATE	2,129 SF	
10th FLOOR BALCONIES	PRIVATE	2,304 SF	
11th FLOOR TERRACES	PRIVATE	2,946 SF	
APARTMENTS OPEN SPACE		22,282 SF	
PH FLOOR OPEN SPACE	SHARED	4,655 SF	
TOTAL OPEN SPACE		29,812 SF	

YAMANEE		PARKING & PUBLIC SPACE	
PARKING: CELLAR		40 Spaces	
PARKING: level+1		40 Spaces	
PARKING: level+2		44 Spaces	
PARKING TOTAL		124 Spaces	
BIKES: CELLAR		60 Bikes	
BIKES: SIDEWALK		20 Bikes	
BIKES: 1st FLOOR		11 Bikes	
BIKES: MEZZANINE		10 Bikes	
BIKES TOTAL		101 Bikes	

YAMANEE		RESIDENTIAL & RETAIL	
RETAIL NW	3,266 SF	mezz. 954 SF	
RETAIL / REST. NE	3,294 SF	mezz. 971 SF	
RETAIL SW	2,724 SF	mezz. 774 SF	
RETAIL / REST. SE	807 SF	mezz. 546 SF	
WATERFALL CAFE	798 SF		
MEZZ. TOTAL (not included in Total Retail SF)		mezz. 3,245 SF	
RETAIL TOTAL		10,889 SF	
LOBBY, ETC.		1,697 SF	
SERVICE / EGRESS		382 SF	
BIKE STORAGE		159 SF	
1st FLOOR TOTAL		13,127 SF	
2nd FLOOR APARTMENTS	14 Units	15,076 SF	
3rd FLOOR APARTMENTS	14 Units	16,003 SF	
4th FLOOR APARTMENTS	14 Units	16,003 SF	
5th FLOOR APARTMENTS	14 Units	16,003 SF	
6th FLOOR APARTMENTS	14 Units	16,003 SF	
7th FLOOR APARTMENTS	14 Units	16,003 SF	
8th FLOOR APARTMENTS	14 Units	16,003 SF	
9th FLOOR APARTMENTS	14 Units	16,003 SF	
10th FLOOR APARTMENTS	14 Units	15,823 SF	
11th FLOOR APARTMENTS	8 Units	13,170 SF	
APARTMENTS TOTAL	134 Units	156,090 SF	
PH FLOOR EVENT SPACE / GYM		7,815 SF	
TOTAL FLOOR AREA		177,032 SF	

60447237 SAC GRX 016

12th FLOOR PLAN ROOF TERRACE

25th STREET



Source: CMS Architecture & Design, adapted by AECOM 2015

Exhibit 2-15. Roof Floor Plan

The existing drainage and sewer system is combined in this area. An 18-inch trunk sewer main borders the site in Jazz Alley and a 42-inch line lies in 25th Street. City of Sacramento policy for sewer service in the combined sewer system area is that projects are allowed to connect to the combined sewer main provided that there is enough capacity in the existing sewer lines that are smaller than 18 inches in diameter and they pay their combined sewer impact fee for the net sewer increase for the proposed project. City policy for connection to trunk sewer mains 18 inches and larger in diameter along property frontages is to pay the sewer impact fee for the net increase attributable to the subject project. For drainage, no net increase in impervious area is proposed. Proposed rooftop planter boxes are approximately 350 square feet in area and that when the individual planters on each deck are added in, the total will exceed 1,000 square feet of new pervious area compared to existing conditions. The project proposes to retain four existing planter areas for the street trees – one on 25th Street and three on J Street, and to increase the size of at least one of these. The exact increase is not known as of the writing of this document. The project proposes to remove three planters located on 25th Street – two that frame the parking lot access point and one along the southwestern edge of the existing building. The combined area of the pervious surfaces proposed to be removed is 260 square feet. So, the project proposes to decrease the amount of pervious surface by approximately 260 square feet and increase the amount of pervious surface by approximately 1,000 square feet, for a net increase of approximately 740 square feet (Keasling, pers. comm. 2016).

2.4.4 ELECTRICITY AND NATURAL GAS

SACRAMENTO MUNICIPAL UTILITY DISTRICT

The Sacramento Municipal Utility District (SMUD) supplies electrical service to the project site and the surrounding area. This existing system consists of multiple circuits and interconnects with several substations located nearby. The project has been designed in coordination with SMUD, including accommodating installation and ongoing access to a new transformer on the project site.

NATURAL GAS—PACIFIC GAS AND ELECTRIC COMPANY

Pacific Gas and Electric Company (PG&E) supplies natural gas service to the project site and surrounding area. Existing on-site gas lines would be realigned, as necessary, to serve the new building.

2.4.5 ENERGY CONSERVATION

The proposed project would include energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards.¹ This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of “cool roofing” materials, high efficiency lighting, advanced building efficiency

¹ For more information, please see the California 2013 Green Buildings Standards Code. California Code of Regulations, Title 24, Part 11. Available: <http://www.documents.dgs.ca.gov/bsc/CALGreen/2013-California-Green-Building-Standards-Code.PDF>.

performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards.

2.5 CONSTRUCTION

A two-story masonry building southeast of the intersection of 25th and J Streets would be demolished, along with one-story masonry building that was added onto the front of an older two-story wooden residence in order to accommodate the proposed project. Demolition materials would be collected on-site and routed to the appropriate recycling facility for the City of Sacramento. Site demolition would initiate in approximately December of 2016. Site work and foundation work would begin in approximately February of 2017 and exterior framing would begin in approximately September of 2017. The project would be occupied by approximately late May of 2018.

The project will not install any piles that may be required for the building foundation by hammering. In addition, the project will reduce construction noise, including feasible strategies from the list below or those that are determined to be equally effective:

- ▶ Construction shall be limited to the hours between 7:00 AM to 6:00 PM Monday through Saturday and between the hours of 9:00 AM and 6:00 PM on Sunday and holidays.
- ▶ Construction equipment should be well maintained and used judiciously to be as quiet as practical.
- ▶ Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
- ▶ Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
- ▶ Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites.
- ▶ Construct temporary noise barriers or partial enclosures to acoustically shield equipment where feasible. Construct walled enclosures around especially noisy activities or clusters of noisy equipment. For example, shields can be used around pavement breakers and loaded vinyl curtains can be draped under elevated structures.
- ▶ Prohibit unnecessary idling of internal combustion engines.
- ▶ Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where a barrier would be effective at reducing noise.
- ▶ Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.

- ▶ Route construction related traffic along major roadways and away from sensitive receptors where feasible.
- ▶ The project applicant or designee shall designate a disturbance coordinator and conspicuously post this person's number around the project site and in construction notifications. The disturbance coordinator shall receive complaints about construction disturbances and, in coordination with the City, determine the cause of the complaint and implementation of feasible measures to alleviate the problem.

2.6 MECHANICAL EQUIPMENT

The project proposes that noise-generating mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units) shall be either located or selected and designed with noise control features (e.g., acoustical louvers, silencers, or barriers) as required, such that the noise levels generated by the mechanical equipment at the adjacent sensitive receptors will comply with Sections 8.68.060 and 110 of the City's Noise Ordinance.

2.7 APPROVALS

The following approvals would be required from the City of Sacramento before the start of construction:

- ▶ Environmental Assessment and Mitigation Monitoring Plan;
- ▶ Demolition of existing buildings;
- ▶ Site plan and design review and approval, Commission-level to review the physical characteristics and design features of the proposed development (Code Section 17.808.130);
- ▶ Approval of a tentative map and a condominium map to create 134 residential condominiums and 10 remainder lots comprised of common and commercial spaces; and
- ▶ Deviation from maximum height to allow for a total building height of 170 feet and 4 inches (Code Section 17.808.120) and to waive the City's requirement for an off-street loading space.

Other public agencies whose approval would be required include:

- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD)—issues the Authority to Construct/Permit to Operate pursuant to SMAQMD Regulation 2 (Rule 201 et seq.)
- ▶ State Water Resources Control Board/Central Valley Regional Water Quality Control Board—issues Construction Storm Water Discharge Permits

2.8 TRANSIT PRIORITY PROJECTS AND THE SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT

2.8.1 SB 375

In 2008, California adopted SB 375, The Sustainable Communities and Climate Protection Act of 2008, which integrates land use and transportation planning and funding to help meet the state's greenhouse gas reduction mandates. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires regional transportation plans developed by the state's 18 metropolitan planning organizations, including the Sacramento Area Council of Governments (SACOG), to incorporate a "sustainable communities strategy" that would achieve GHG emission reduction targets set by ARB.

SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035 (the MTP/SCS) was adopted on April 19, 2012. SACOG's MTP/SCS calls for meeting and exceeding ARB's GHG reduction goals for passenger vehicles and light-duty trucks of 7 percent by 2020 and 16 percent by 2035, where 2005 is the baseline year for comparison (SACOG 2012). This SCEA was prepared prior to the adoption of SACOG's 2016 MTP/SCS on February 18th, 2016, but the same Community Type applies to the project site and the project is consistent with both versions of the MTP/SCS.

2.8.2 TRANSIT PRIORITY PROJECT CRITERIA

SB 375 provides CEQA streamlining benefits to transit priority projects (TPPs). As relevant to the proposed project, a TPP is a project that meets the following four criteria (see Public Resources Code, Section 21155 [a] and [b]):

1. Contains at least 50 percent residential use, based on total building square footage (and has a floor area ratio of 0.75 if between 26 and 50 percent of total building square footage is dedicated to non-residential uses);
2. Includes a minimum density of at least 20 units per acre;
3. Is located within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan; and
4. Is consistent with the use designation, density, building intensity, and applicable policies specified for the project area in a sustainable communities strategy for which the ARB has accepted the metropolitan planning organization's determination that the sustainable communities strategy would, if implemented, achieve the greenhouse gas emission reduction targets established by ARB.

The proposed project qualifies as a TPP under each of the four criteria listed above. Following is a more detailed description.

AT LEAST 50 PERCENT RESIDENTIAL USE

The applicant estimates the project would include a total floor area of 177,032 square feet for new construction and a total of 156,090 square feet (88% of the total square footage) devoted to residential use.

MINIMUM DENSITY OF AT LEAST 20 UNITS PER ACRE

The project proposes up to 134 dwelling units (and non-residential uses) on approximately 0.44 acres, which is a density of approximately 305 units per acre.

LOCATED WITHIN ½ MILE OF A MAJOR TRANSIT STOP OR HIGH-QUALITY TRANSIT CORRIDOR

A “high-quality transit corridor” is defined to include “a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours” (Public Resources Code, Section 21155 [b][3]). The project site is directly adjacent to a high-quality transit corridor. Sacramento RT bus route 30 provides 15-minute headways during peak commute hours in the morning and afternoon.

CONSISTENT WITH THE MTP/SCS

The MTP/SCS designates the region using five “community types” (Center and Corridor Community, Developing Community, Established Community, Rural Residential Community, and Lands Not Identified for Development in the MTP/SCS Planning Period). The project site is in a Center and Corridor Community.

Center and Corridor Communities are typically higher in development density and have a greater mix of uses compared to other community types. Centers and Corridors include historic downtowns, main streets, commercial corridors, transit-rich areas, central business districts, town centers, and areas that have been developed at higher densities and development intensities. Some of the Center and Corridor Communities have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more relatively supportive of walking and bicycling compared to other community types.

The Center and Corridor Communities consist of areas that are typically higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region (SACOG 2012, Chapter 3, page 32).

The MTP/SCS also identifies “Transit Priority Areas” (TPAs). Transit Priority Areas are within ½ mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS (SACOG 2012, Chapter 3, page 46). According to SACOG, there is substantial overlap between Transit Priority Areas and Center and Corridor Communities, but Transit Priority Areas “provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period” (SACOG 2012, Chapter 3, page 46). The MTP/SCS discusses benefits of development within Transit Priority Areas, including,

- ▶ increasing housing choices located near high quality transit, while bringing high-quality transit service to an additional 152,216 existing housing units and 240,013 existing employees;
- ▶ increasing ridership to support existing and new rail and bus services and reduce vehicle miles traveled and GHG emissions; and
- ▶ increasing farebox recovery rates, or the ability for rider fares to cover a larger share of the costs of transit service.

SACOG has prepared a worksheet that can be used to help determine consistency with the MTP/SCS. The worksheet includes space to report on several aspects of a proposed project in relation to MTP/SCS contents, including the location of the project site relative to rail or a high-quality transit corridor and project density and intensity, as evaluated above.

The worksheet also asks whether 25 percent of a project site is farther than ½ mile from the transit stop/transit corridor. The project site is adjacent to a high-quality transit corridor. No part of the site approaches ½ mile from the J or L Street transit corridors.

According to SACOG’s worksheet, for the purposes of determining SCS consistency, the policies of the MTP/SCS are embedded in the metrics and growth forecast assumptions of the MTP/SCS. Projects consistent with the growth forecast assumptions of the MTP/SCS are consistent with its policies.

According to Appendix E-3 of the MTP/SCS, the forecast includes 69,208 new housing units and 77,098 new employees by 2035 in the City of Sacramento, with approximately 52 percent of the employment growth (39,753) and 62 percent of the housing (43,099) in Center and Corridor Communities (Table 2-2) (SACOG 2012, Appendix E-3, page 54). Development from the project when added to other entitled projects will not exceed the MTP/SCS build out assumptions for the City or the Center and Corridor Communities in the City.

The project is consistent with the uses and densities described for the Center and Corridor Communities in the MTP/SCS. The project is consistent with the allowable land uses from the City’s General Plan and is at least 80 percent of the allowed density or intensity of the allowed uses. Therefore, the project is consistent with the MTP/SCS.

	Existing Conditions, 2008		MTP/SCS 2020 Total		MTP/SCS 2035 Total		MTP/SCS 2020 Growth		MTP/SCS 2035 Growth	
	Employees	Housing Units	Employees	Housing Units	Employees	Housing Units	Employees	Housing Units	Employees	Housing Units
City of Sacramento										
Corridor/Center Communities	170,884	59,202	182,501	73,508	210,637	102,301	11,617	14,306	39,753	43,099
Total City of Sacramento	285,977	191,499	309,603	219,117	363,075	260,707	23,626	27,618	77,098	69,208

2.8.3 SB 375 STREAMLINING BENEFITS

As a TPP, SB 375 provides that, if the proposed project incorporates all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports, the proposed project qualifies for the following streamlining benefits:

1. Cumulative effects that have been adequately addressed and mitigated in prior applicable certified environmental impact reports shall not be treated as cumulatively considerable for the proposed project (Public Resources Code Section 21155.2 [c][1]);
2. Growth-inducing impacts are not required to be referenced, described, or discussed (Public Resources Code Section 21159.28 [a][1]);
3. Project-specific or cumulative impacts from cars and light-duty truck trips generated by the proposed project on global warming are not required to be referenced, described, or discussed (Public Resources Code Section 21159.28, subd. [a][2]);
4. Project-specific or cumulative impacts from cars and light-duty truck (passenger vehicle) trips generated by the proposed project on the regional transportation network are not required to be referenced, described, or discussed (Public Resources Code Section 21159.28 [a][2]);
5. Off-site alternatives are not required to be analyzed (Public Resources Code Section 21155.2 [c][2]); and
6. Reduced density alternatives are not required to be referenced, described, or discussed to address the effects of car and light-duty truck trips generated by the proposed project (Public Resources Code Section 21159.28 [b]).

The City will incorporate all applicable streamlining benefits in the environmental review of this project. The SCEA describes applicable and feasible mitigation measures, performance standards, and criteria from prior applicable environmental impact reports and how this guidance is incorporated into the project.

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3 EVALUATION OF ENVIRONMENTAL IMPACTS

3.0.1 SCOPE OF ANALYSIS

The environmental factors listed below are the subject of evaluation in this SCEA:

- ▶ Air Quality
- ▶ Biological Resources
- ▶ Cultural Resources
- ▶ Energy
- ▶ Geology and Soils
- ▶ Greenhouse Gas Emissions
- ▶ Hazards and Hazardous Materials
- ▶ Hydrology and Water Quality
- ▶ Noise and Vibration
- ▶ Public Services
- ▶ Recreation
- ▶ Transportation and Traffic
- ▶ Utilities and Service Systems

3.0.2 IMPACT ASSESSMENT TERMINOLOGY

For this checklist, the following designations are used:

- ▶ **Potentially Significant:** An impact that could be significant, and for which mitigation has not been identified. If any potentially significant impacts are identified, an EIR must be prepared. An SCEA cannot be used in the case of a project for which this conclusion is reached in any impact category.
- ▶ **Less than Significant with Mitigation:** This designation applies where mitigation is needed to reduce an impact to a less-than-significant level. Mitigation could include applicable and feasible mitigation measures identified in prior applicable EIRs (the City's General Plan Master EIR or the MTP/SCS EIR) that are incorporated into the SCEA (pursuant to Public Resources Code Section 21155.2). Since the prior applicable EIRs address impacts at a citywide or regional scale, it is normally necessary to revise mitigation measures included in these EIRs in order for them to apply to individual development projects. This designation also applies where the incorporation of new project mitigation measures not previously identified in prior applicable EIRs or in the MTP/SCS EIR has reduced an effect from potentially significant to less than significant.
- ▶ **Less Than Significant:** Any impact that would not be considered significant under CEQA, relative to existing standards. This type of impact does not require mitigation, although mitigation may be imposed to further reduce already less-than-significant impacts. If the impact is less than significant, the SCEA does not specifically incorporate mitigating policies from the General Plan Master EIR or mitigation measures from the MTP/SCS EIR, since this is not necessary to address potentially significant impacts.
- ▶ **No Impact:** The project would not have any impact.

3.0.3 DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

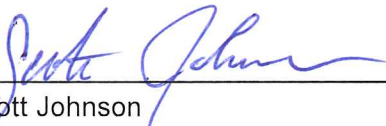
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

I find that the Project is a qualified "transit priority project" that satisfies the requirements of Sections 21155 and 21155.2 of the Public Resources Code, and/or a qualified "residential or mixed use residential project" that satisfies the requirements of Section 21159.28(d) of the Public Resources Code, and although the Project could have a potentially significant effect on the environment, there will not be a significant effect in this case, because this Sustainable Communities Environmental Assessment (SCEA) Initial Study identifies measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project.



Scott Johnson

City of Sacramento Community Development Department

3-31-16

Date

3.0.4 ISSUES NOT SUBJECT TO IMPACT ANALYSIS IN THIS SCEA

Certain topics that are included on the CEQA Guidelines Appendix G checklist are not relevant for impact analysis for this project:

- ▶ Aesthetics
- ▶ Agricultural and Forestry Resources
- ▶ Land Use
- ▶ Mineral Resources
- ▶ Population and Housing

A brief discussion of the project in relation to each of these topics follows.

AESTHETICS

The proposed project qualifies as an infill mixed-use residential project and is located within a Transit Priority Area. The urban infill designation applies because the project site is “located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses” (California Public Resources Code Sections 21099[a] and 21099[d]). The Transit Priority Area designation also applies, as defined by the Sacramento Area Council of Governments (SACOG) in its Metropolitan Transportation Plan / Sustainable Communities Strategy (MTP/SCS). Aesthetic impacts of infill projects within Transit Priority Areas are not considered significant effects on the physical environment (California Public Resources Code Section 21099[d]).

AGRICULTURAL RESOURCES

The project site is in Midtown Sacramento, where there are no agricultural lands or forestry resources.

LAND USE

Existing Land Use

The project site encompasses approximately ±0.44 acres on a portion of one city block, in Midtown Sacramento, southeast of the intersection of 25th and J Streets. The project site is developed with retail uses, office space, a restaurant, and a fitness studio.

The project site vicinity consists of a mix of single- and multi-family residential development; retail and commercial services; restaurants and bars; medical, dental, and other types of offices; parks, museums, places of worship, and other civic uses; and other complementary uses. Properties surrounding the project site are currently non-residential, with the exception of the nine-story senior residential facility, St. Francis Manor, which is located directly across J Street, to the north of the project site. The proposed project is compatible with the mix of surrounding land uses. The project does not propose new roads or any other type of infrastructure or improvements that would physically divide any existing community.

2035 General Plan

According to the City 2035 General Plan, the project site is designated as Urban Corridor Low and surrounding properties have the same designation (Exhibit 3-1). Allowable uses, design characteristics, and development standards are summarized in the General Plan Land Use and Urban Design Element (City of Sacramento 2014a, page 2-78 and 2-79):

Urban Corridor Low includes street corridors that have multistory structures and more-intense uses at major intersections, lower-intensity uses adjacent to neighborhoods, and access to transit service throughout. At major intersections, nodes of intense mixed-use development are bordered by lower-intensity single-use residential, retail, service, and office uses. Street-level frontage of mixed-use project is developed with pedestrian-oriented uses. The streetscape is appointed with landscaping, lighting, public art, and other pedestrian amenities.

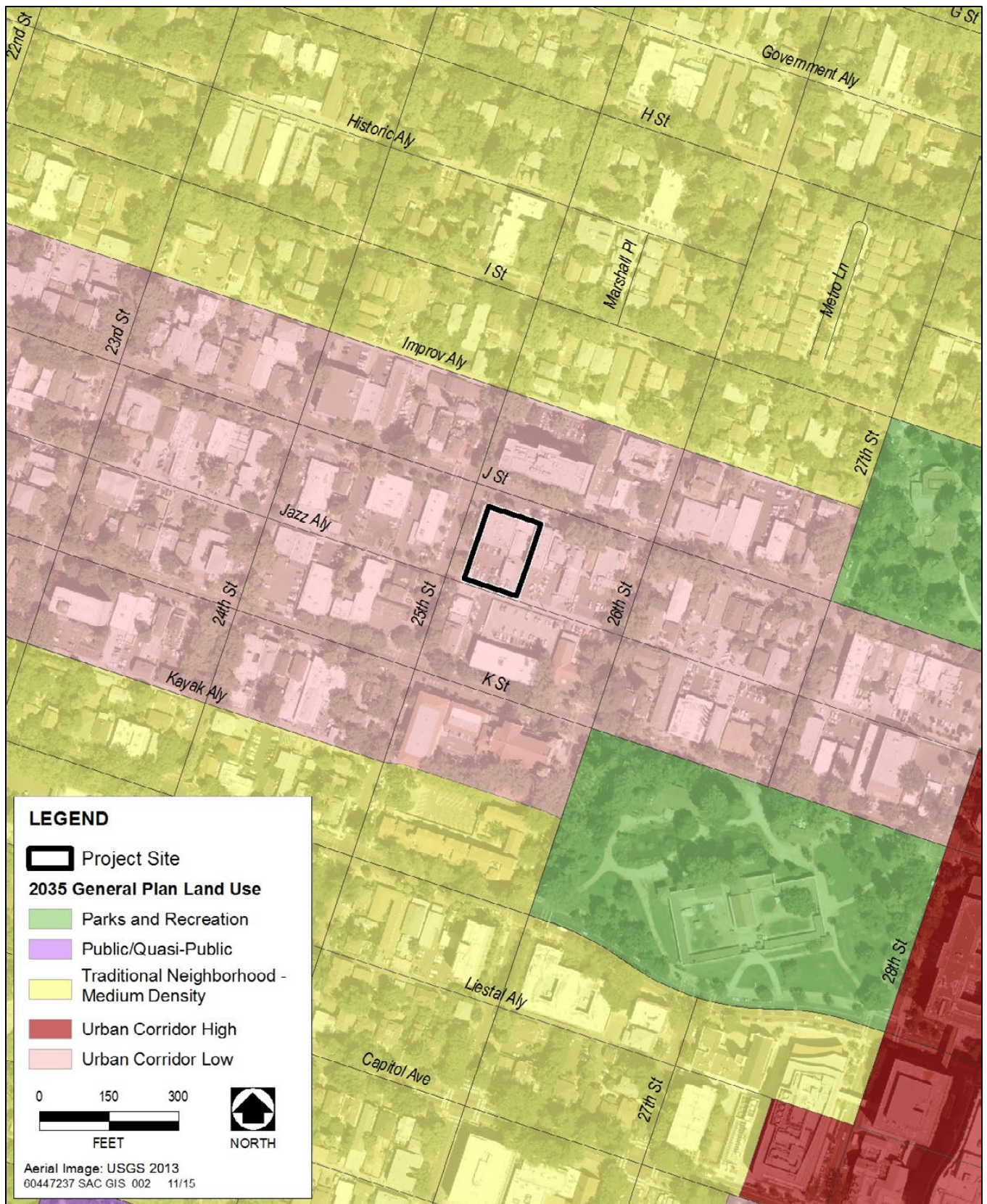
General Plan Consistency

The project is required to be consistent with the City's General Plan. The General Plan is a long-term strategic planning document with guiding principles, goals, policies, objectives, and implementation programs for physical, social, economic, and environmental development and conservation. Development proposals must be generally consistent with the overall land use guidance provided in a general plan. Specific development standards, land use controls, and other regulations are applied through the City's Planning & Development Code, subdivision ordinance, grading ordinance, and other City regulations and ordinances.

As envisioned for the Urban Corridor Low designation in the 2035 General Plan, the project proposes multi-story development, and increases development intensity at the intersection of J Street and 25th Street. J Street is classified as an Arterial in the City's General Plan Mobility Element. Consistent with the intent for the Urban Corridor Low designation, the project proposes mixed-use development. The street level frontage is proposed to be pedestrian oriented.

Mixed-use projects, such as the proposed project, are regulated by the floor area ratio (FAR) standard rather than the density (units per acre) standard. Although the proposed project would exceed the maximum FAR of 3.00 identified in the General Plan as a general limit, General Plan Policy LU 1.1.10 permits new development to exceed the maximum allowed FAR if the project provides a significant community benefit. In addition to allowable density/development intensity, General Plan consistency analysis involves a comparison between the project and the narrative policies of the General Plan. City staff will provide an evaluation of General Plan consistency separate from this SCEA. Some highlights on policy consistency relative to this project follow.

- ▶ **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.



Source: City of Sacramento 2014

Exhibit 3-1. General Plan Land Use Map

The project promotes compact development by increasing the density of development at the project site. The compact, infill, and mixed-use nature of the proposed project in the Midtown area would place residents within close proximity to jobs, retail, entertainment, commercial services, parks, health care, cultural / historic facilities, and other community amenities, which would facilitate walking and biking trips, thereby eliminating some vehicle trips. In addition, the project site's transit-oriented location would make using public transit feasible to reach jobs and other destinations in both the Central City Area and the region. The project site is within ¼ to ½ mile of 4 bus routes (30, 62, 67, and 68) with headways of 15 – 30 minutes. The distances of vehicle trips generated by the proposed project would also be reduced on average and the project site's proximity to amenities and jobs would further reduce vehicle miles traveled (VMT) in the region.

The reduction in VMT associated with the location and urban design environment of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the MTP/SCS. The regional VMT per capita in 2008 was estimated to be 26 miles per day. For the traffic analysis zone that includes the project site, the average per-capita VMT in 2008 was approximately 9 miles per day. In 2035, forecast regional average per-capita VMT is 24 miles per day, whereas the project site and vicinity would have an average of approximately 7 miles per day. Therefore, the project site and vicinity is estimated to have per capita VMT rates of approximately 66 percent less than the regional average in 2008 and 71 percent less than the regional average in 2035 (SACOG 2012).

- ▶ **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.

The project site is directly adjacent to a high- quality transit corridor. Sacramento RT bus route 30 provides 15-minute headways during peak commute hours in the morning and afternoon

- ▶ **Policy LU 2.6.6 Efficiency through Density.** The City shall support an overall increase in average residential densities throughout the city consistent with the adopted General Plan Land Use & Urban Form Diagram, as new housing types shift from lower-density, large lot developments to higher-density, small lot and multifamily developments as a means to increase energy efficiency, conserve water, and reduce waste.

As noted elsewhere, the project proposes densification and new housing types in an area adjacent to transit. The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements required to achieve the equivalent of LEED Platinum certification.

- ▶ **Policy LU 6.1.9 Enhanced Pedestrian Environment.** The City shall require that sidewalks along mixed-use corridors are wide enough to accommodate significant pedestrian traffic and promote the transformation of existing automobile-dominated corridors into boulevards that are attractive, comfortable, and safe for pedestrians by incorporating the following:
 - On-street parking between sidewalk and travel lanes
 - Few curb cuts and driveways
 - Enhanced pedestrian street crossings

- Building entrances oriented to the street
- Transparent ground floor frontages
- Street trees
- Streetscape furnishings
- Pedestrian-scaled lighting and signage

The project includes on-street parking, access to the alley rather than curb cuts, building entrances oriented to the street, transparent ground floor frontages, street trees, and other pedestrian-oriented improvements, consistent with Policy LU 6.1.9.

- ▶ **Policy LU 6.1.3 Efficient Parcel Utilization.** The City shall promote the aggregation of small and irregular shaped parcels along corridors into larger development sites to facilitate their reuse.

The project includes the assembly of two parcels in order to create a more viable development site.

Zoning

The zoning designation for the project site is General Commercial/Midtown Commercial (C-2-MC) (City of Sacramento 2014b) (Exhibit 3-2). The C-2 zoning district is intended to accommodate retail, services, office, dwellings and limited processing and packaging. This designation is described as follows:

Commercial, Office, and Mixed Use (Chapter 17.216)

C-2 General Commercial Zone – The purpose of the C-2 zone is to provide for the sale of goods; the performance of services, including repair facilities; office uses; dwellings; small wholesale stores or distribution; and limited processing and packaging.

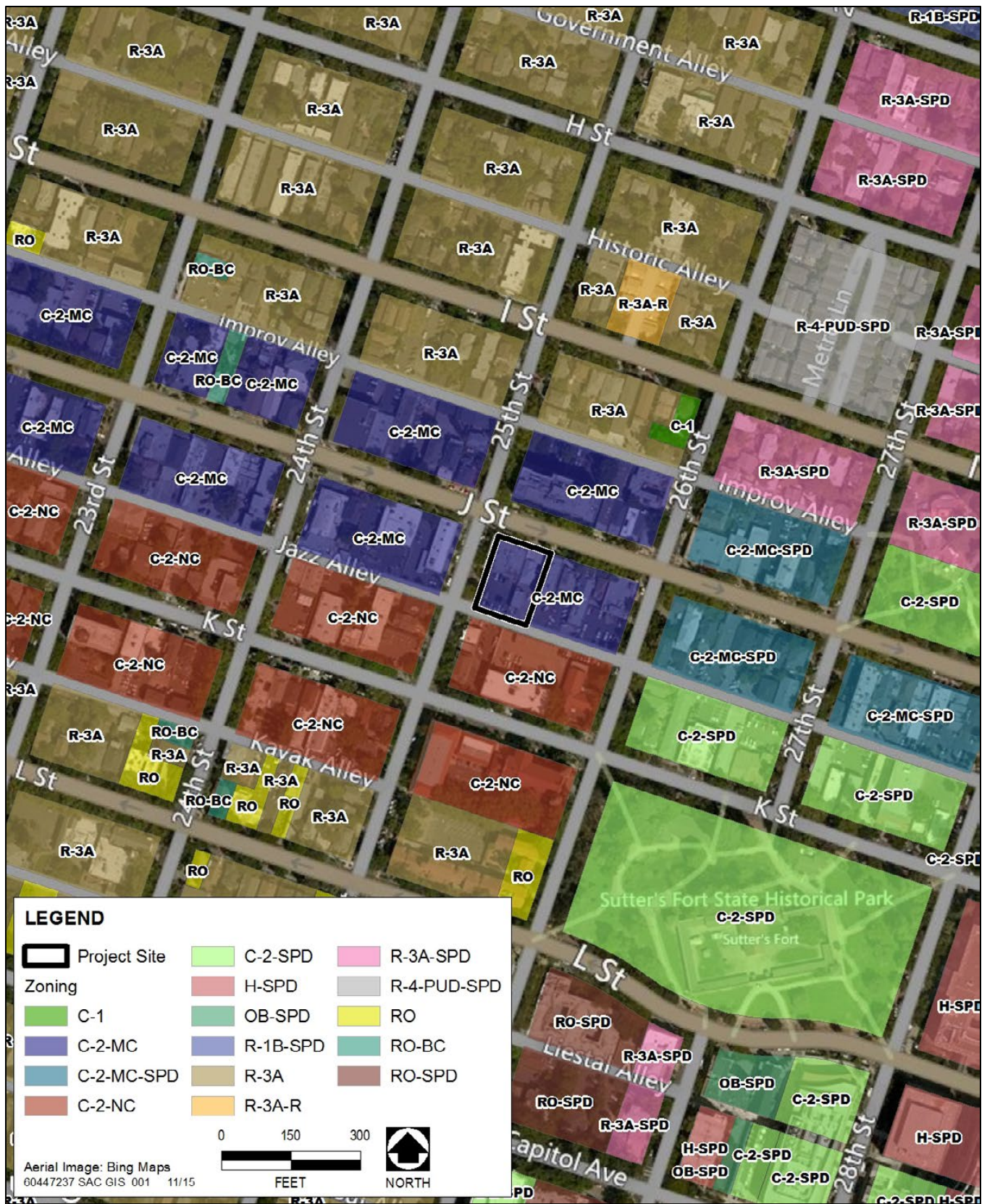
The project is consistent with C-2 designation.

MC is an overlay designation; development in the Midtown Commercial overlay zone is required to comply with the requirements of the underlying zone. No special requirements for the MC overlay are provided in the current version of the Sacramento City Code (City of Sacramento 2015a; 2015b).

Metropolitan Transportation Plan/Sustainable Communities Strategy

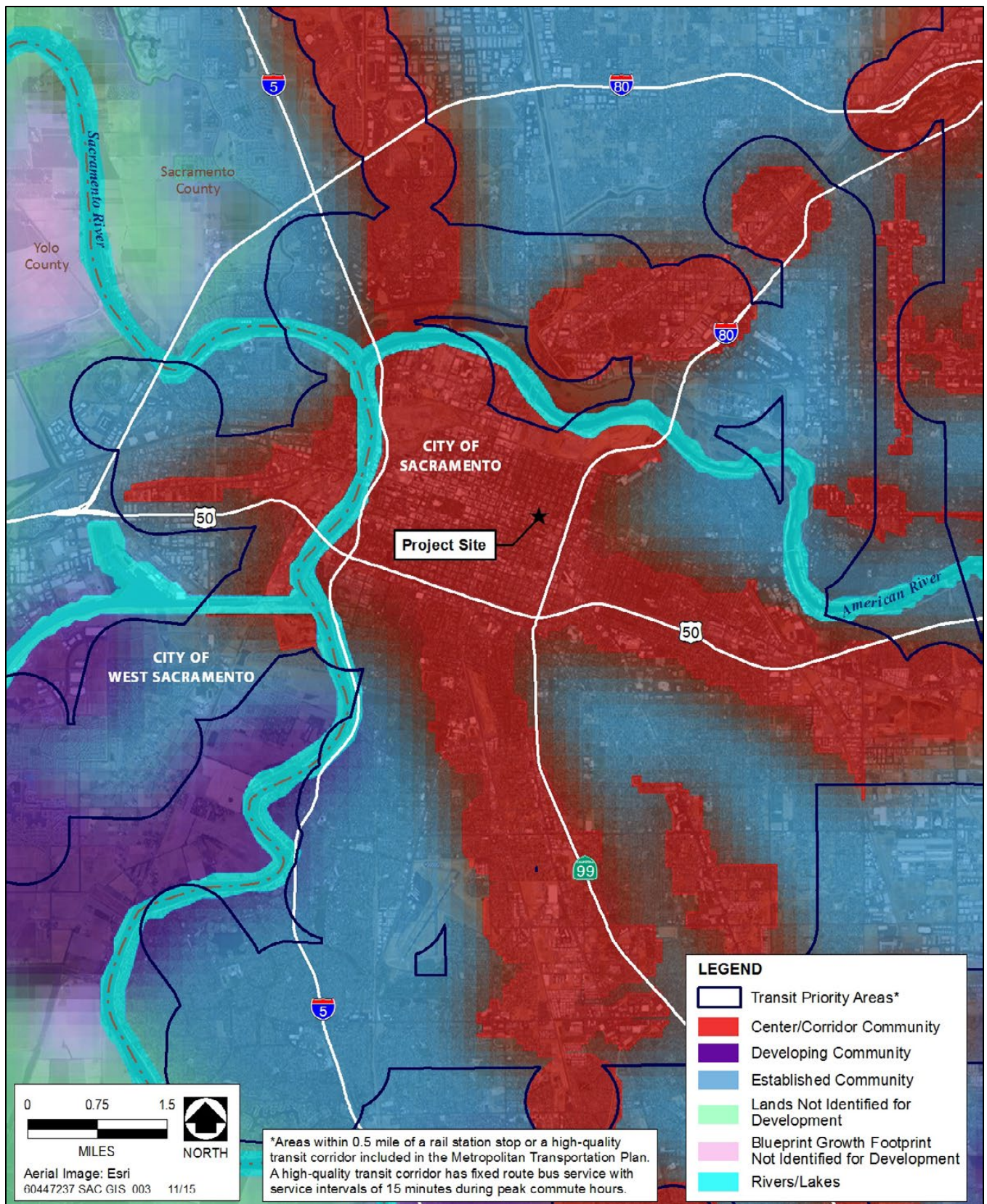
The Preferred Blueprint Scenario was incorporated into SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2035, the long-range transportation plan for the region. The MTP/SCS designates the region using five "community types" (Center and Corridor Community, Developing Community, Established Community, Rural Residential Community, and Lands Not Identified for Development in the MTP/SCS Planning Period). The MTP/SCS designates the project site as a Center and Corridor Community and a Transit Priority Area (TPA) (see Exhibit 3-3). A Center and Corridor Community is typically

"...higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as ... commercial corridors..., or other high density destinations. They typically have more compact development patterns, a greater mix of



Source: City of Sacramento 2014

Exhibit 3-2. Zoning Map



Source: SACOG 2011a

Exhibit 3-3. SACOG Community Types and Transit Priority Areas

uses, and a wider variety of transportation infrastructure compared to the rest of the region. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types” (SACOG 2011a:32).

Center and Corridor Communities are typically higher in development density and have a greater mixing of uses compared to other community types. Centers and Corridors include historic downtowns, main streets, commercial corridors, transit-rich areas, central business districts, town centers, and areas that have been developed at higher densities and development intensities. Some of the Center and Corridor Communities have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more relatively supportive of walking and bicycling compared to other community types.

The Center and Corridor Communities consist of areas that are typically higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region (SACOG 2012, Chapter 3, page 32).

The MTP/SCS also identifies “Transit Priority Areas” (TPAs). Transit Priority Areas are within ½ mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS (SACOG 2012, Chapter 3, page 46). According to SACOG, there is substantial overlap between Transit Priority Areas and Center and Corridor Communities, but Transit Priority Areas “provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period” (SACOG 2012, Chapter 3, page 46).

The MTP/SCS discusses benefits of development within Transit Priority Areas, including:

- ▶ increasing housing choices located near high quality transit, while bringing high-quality transit service to an additional 152,216 existing housing units and 240,013 existing employees;
- ▶ increasing ridership to support existing and new rail and bus services and reduce vehicle miles traveled and GHG emissions; and
- ▶ increasing farebox recovery rates, or the ability for rider fares to cover a larger share of the costs of transit service.

A “Determination of MTP/SCS Consistency Worksheet” has been prepared for the proposed project and is appended to this SCEA (Appendix C). As described in the letter included in Appendix C, SACOG concurs with the City’s determination that the proposed project is consistent with the MTP/SCS.

The proposed project qualifies as a “Transit Priority Project,” in accordance with SB 375. The MTP/SCS identifies that Transit Priority Areas “provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period” (SACOG 2012; Chapter 3, page 46). The proposed project is

consistent with identified benefits outlined in the MTP/SCS for proposed developments within Transit Priority Areas (Appendix C).

MINERAL RESOURCES

The project site is developed and, as such, is not the source of any known mineral resource. The project site is not designated as a locally important mineral resource recovery site (City of Sacramento 2009: Figure 6.5-3).

POPULATION AND HOUSING

According to the California Department of Finance (DOF), Sacramento's population was 480,105 on January 1, 2015 (DOF 2015). The 2013–2021 Housing Element estimated the Central City's population to be 32,367 in 2010 (City of Sacramento 2013:Table H 3-2). The 2035 General Plan Master EIR forecasts that 109,312 people will live in the Central City Area by 2035 (City of Sacramento 2014).

As of January 2014, the City of Sacramento had an estimated 191,776 housing units, of which 114,014 are single-family detached units, 13,063 are single-family attached units, and 61,505 are multi-family units (DOF 2015). According to the 2005-2009 U.S. Census Bureau American Community Survey 5-Year Estimates, and the most recently available U.S. Census Bureau data, there are 20,253 households in the Central City area's 14 census tracts (U.S. Census Bureau 2009).

Vacancy rates are relatively low, particularly in the Central City. The U.S. Census Bureau's 2009-2013 American Community Survey 5-Year Estimates identified a homeowner vacancy rate of 2.4% and a rental vacancy rate of 5.6% in the City of Sacramento (U.S. Census Bureau 2015). The Colliers International Sacramento Multifamily Report, Sacramento Third Quarter 2015 reported a 96.8% occupancy rate in the Central City (3.2% vacancy rate) in the third quarter of 2015, with market absorption of 321 units during the prior 12 months and delivery of 346 units (Colliers International 2015).

According to the City's 2013–2021 Housing Element, there were 32,367 residents in the Central City in 2010 (City of Sacramento 2013, p. Table H 3-2). The 2010 Census (SF-1) counted 18,101 households in the Central City's census tracts, resulting in an average household size of approximately 1.8 persons (U.S. Census Bureau, 2014b). For the Census Tracts that represent the Central City area, in all but two of the tracts (20 and 21), the 2010 average household size was less than 1.8. For Census Tract 14, where the project is proposed, the average household size was 1.38 in 2010 and the average homeowner household size was 1.48. Assuming no vacancies and an average household size between 1.48 and 1.8, the project would bring an additional 198 to 241 residents to this part of Midtown.

In addition to the construction of up to 134 dwelling units, which provide the opportunity for an additional 198 to 241 residents, the project would also provide employment opportunities. The project proposes approximately 11,000 square feet of ground-floor retail space and a total of approximately 14,100 square feet of non-residential space in total. Depending on whether proposed space is occupied by office, retail, or restaurant uses, the project could provide the opportunity for between 35 and 57 jobs (City of Sacramento 2005).

The City's Housing Element anticipates the construction of 11,475 new housing units citywide by 2021 (City of Sacramento 2013:Table H 9-1). The City Council also approved an initiative, The Downtown Housing Initiative Plan (Resolution #2015-0282, August 25,2015), to facilitate construction of 10,000 "places to live"—a combination of rapid rehousing, workforce housing, and market rate housing—in the Central City between 2015 and 2025. The proposed project would represent about 1% of the City's total estimated housing construction through 2021 and contribute about 1.3% to the City's Downtown Housing Initiative goal. The additional population projected at buildout of the proposed project represents less than 0.5% of the projected population of 109,312 for the Central City area by 2035 (City of Sacramento 2013:Table H 3-3). The projected population increase attributed to proposed project is within the population projections for the Central City area made by the City's 2035 General Plan Master EIR and the 2013–2021 Housing Element. The proposed project would not induce population growth beyond that anticipated in the City's 2035 General Plan Master EIR.

SACOG's MTP/SCS identifies areas in the region sufficient to house all of the region's population. The housing identified in the MTP/SCS accommodates the forecasted population for the region, taking into account market vacancy factors. The MTP/SCS estimates that available housing in the Central City area will need to more than double from 2008 to 2035 (SACOG 2012, p. 53).

According to Appendix E-3 of the MTP/SCS, the forecast includes 69,208 new housing units and 77,098 new employees by 2035 in the City of Sacramento, with approximately 52 percent of the employment growth (39,753) and 62 percent of the housing (43,099) in Center and Corridor Communities (Table 2-2) (SACOG 2012, Appendix E-3, page 54). Development from the project when added to other entitled projects will not exceed the MTP/SCS build out assumptions for the City or the Center and Corridor Communities in the City.

The proposed project would involve construction of new residences and businesses and on-site infrastructure improvements. The project site is in an existing developed area of downtown Sacramento and the new residences, businesses, and improvements proposed as part of the project would accommodate a portion of the regional growth forecast in the 2035 General Plan and the MTP/SCS. The project does not displace existing homes or provide off-site infrastructure improvements that could induce further development.

3.1 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Air Quality. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section addresses air quality in the project vicinity as relevant to the proposed project. The analysis describes the existing environmental conditions, the methods used for assessment, and the potential air quality impacts associated with implementing the proposed project.

3.1.1 ENVIRONMENTAL SETTING

The project site is located in the City of Sacramento, within the boundaries of the Sacramento Valley Air Basin (SVAB), in an area regulated by the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SVAB is bounded on the north and west by the Coast Ranges, on the east by the southern portion of the Cascade Range and the northern portion of the Sierra Nevada, and on the south by the San Joaquin Valley Air Basin. Summer conditions are typically characterized by high temperatures and low humidity. Rainstorms occur occasionally during winter, and are interspersed by stagnant and sometimes foggy conditions. Rain falls mainly from late October to early May, in amounts that vary substantially each year.

In order to help public agencies evaluate air quality impacts, the SMAQMD has developed the *Guide to Air Quality Assessment in Sacramento County*. Analyses included in this section were performed based on the SMAQMD’s *CEQA Guide to Air Quality Assessment* (SMAQMD 2014a). Mitigation measures are included to address potentially significant impacts of the proposed project. Project emissions information is included in Appendix J to this SCEA.

Federal and state air quality standards have been established for six common air pollutants, known as criteria pollutants, for which health-based air quality standards have been established at the national level by the U.S. Environmental Protection Agency (EPA) and at the state level by the California Air

Resources Board (ARB). These standards are known as the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS). The criteria pollutants include particulate matter (PM) (which is further subdivided into PM of diameter equal to or less than 10 micrometers [PM_{10}] and PM of diameter equal to or less than 2.5 micrometers [$PM_{2.5}$]), ground-level ozone, carbon monoxide (CO), sulfur dioxide, nitrogen dioxide, and lead. For each of the criteria air pollutants, EPA and ARB designate areas as attainment, nonattainment, maintenance, or unclassified relative to the various pollutant standards set by the Federal Clean Air Act and the California Clean Air Act. Sacramento County is currently designated as nonattainment for ozone and 24-hour $PM_{2.5}$ under the NAAQS, and as nonattainment for ozone, PM_{10} , and $PM_{2.5}$ under the CAAQS. For all other CAAQS and NAAQS, the region is designated as attainment or unclassifiable.

In addition to criteria air pollutants, toxic air contaminants (TACs) are also a category of environmental concern. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations, such as gasoline stations and dry cleaners, and motor vehicle exhaust. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. Existing sensitive receptors in the vicinity of the project site include the senior residential facility, St. Francis Manor, which is located directly across J Street north of the project site, and the residences along 25th Street, just south of the project site, and St. Francis of Assisi Elementary School at 2500 K Street. In addition, the St. Francis of Assisi Parish church is located at the intersection of 26th and K Streets, southeast of the project site and several restaurants and cafes with outdoor seating are located near the project site.

3.1.2 DISCUSSION

a) **Would the project conflict with or obstruct implementation of an applicable air quality plan?**

Less than Significant. An air quality plan provides a strategy for an air district, city, county or region to maintain or achieve attainment status of a NAAQS or CAAQS through various air pollution control strategies. An air quality plan includes an estimate of emissions for the region, which are based, in part, on projections of population and vehicle miles traveled.

The following air quality plans are applicable to development in the Sacramento area:

- ▶ Sacramento SMAQMD Air Quality Attainment Plan
- ▶ Sacramento Regional Ozone Attainment Plan (OAP)
- ▶ $PM_{2.5}$ State Implementation Plan
- ▶ PM_{10} Attainment Redesignation and Maintenance Plan

The Sacramento Regional OAP was developed by the air districts in the Sacramento Region to bring the region into attainment with the state and federal ambient air quality standards for ozone. With

respect to PM₁₀ and PM_{2.5}, SMAQMD has adopted measures to maintain attainment of the federal ambient air quality standards, known as the Basic Construction Emission Control Practices.

A project would conflict with or obstruct implementation of an air quality plan if the project would exceed the estimated emissions used as the basis of the plan, or if the project would lead to an increase in existing or contribute to new air quality violations or delay the attainment of a NAAQS or CAAQS. For example, if a project would result in population and/or employment growth in excess of estimates included in the applicable air quality plan, it is anticipated that it would generate emissions not accounted for in the applicable air quality plan emissions budget and potentially obstruct implementation of the plan. Therefore, projects need to be evaluated to determine whether they would generate population and/or employment growth and, if so, whether that growth would exceed the projected growth rates included in the relevant air quality plans.

As is described in Chapter 2 of this SCEA, the proposed project would result in the construction of a multi-story, mixed-use development in downtown, which would be consistent with the Sacramento Area Council of Governments' (SACOG's) Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035 (the MTP/SCS) to improve the jobs/housing balance downtown and reduce vehicle miles traveled within the City of Sacramento in order to achieve the goals of AB 32 and SB 375.

As discussed in Section 2 of this SCEA, "Project Description," the MTP/SCS designates the region using five "community types" (Center and Corridor Community, Developing Community, Established Community, Rural Residential Community, and Lands Not Identified for Development in the MTP/SCS Planning Period). The project site is in a Center and Corridor Community.

Center and Corridor Communities are typically higher in development density and have a greater mixing of uses compared to other community types. Centers and Corridors include historic downtowns, main streets, commercial corridors, transit-rich areas, central business districts, town centers, and areas that have been developed at higher densities and development intensities. Some of the Center and Corridor Communities have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more relatively supportive of walking and bicycling compared to other community types.

The Center and Corridor Communities consist of areas that are typically higher density and have a more diverse land use mix than other areas in the region. Centers and Corridors are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high-density destinations. They typically have a relatively more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region (SACOG 2012, Chapter 3, page 32).

The MTP/SCS also identifies "Transit Priority Areas" (TPAs). Transit Priority Areas are within ½ mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS (SACOG 2012, Chapter 3, page 46). According to SACOG, there is substantial overlap between Transit Priority Areas and Center and Corridor Communities, but Transit Priority Areas "provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period" (SACOG 2012, Chapter 3, page 46).

According to Appendix E-3 of the MTP/SCS, the forecast includes 69,208 new housing units and 77,098 new employees by 2035 in the City of Sacramento, with approximately 52 percent of the employment growth (39,753) and 62 percent of the housing (43,099) in Center and Corridor Communities (Table 2-2) (SACOG 2012, Appendix E-3, page 54). Development from the project when added to other entitled projects will not exceed the MTP/SCS build out assumptions for the City or the Center and Corridor Communities in the City.

The project is consistent with the uses and densities described for the Center and Corridor Communities in the MTP/SCS. The project is consistent with the allowable land uses from the City's General Plan and is at least 80 percent of the allowed density or intensity of the allowed uses. Therefore, the project is consistent with the MTP/SCS.

According to the City's 2035 General Plan, the project site is designated as Urban Corridor Low. The Urban Corridor Low designation includes street corridors that have multi-story structures and more-intense uses at major intersections. The proposed project's design and land uses are consistent with this designation (City of Sacramento 2014b:4.11-6).

Since the project would be consistent with the strategies of SACOG's MTP/SCS and the land use designations for the project site in the City's 2035 General Plan and 2035 General Plan Master EIR, the proposed project would be consistent with applicable air quality plans. The impact is **less than significant**.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Less than Significant. Implementation of the proposed project would result in air emissions during both construction and operation phases. SMAQMD has established construction-related thresholds of significance for criteria air pollutants, which are considered the allowable emissions limits for individual projects to avoid impeding the region's ability to attain and maintain ambient air quality standards. The construction emissions associated with implementation of the proposed project were compared to the applicable SMAQMD thresholds of significance to determine the potential impact.

Project construction would occur over an approximately 17-month period and would consist of building demolition, site preparation, grading, building construction, and application of architectural coatings. In addition, although the domestic water demands of the project can be met through existing infrastructure, in order to comply with the required fire flows the project would also require off-site connection to water lines at 25th Street or I Street. These off-site infrastructure-related construction emissions were also modeled as part of this project. The proposed project would result in the short-term generation of ROG, NO_x, PM₁₀ and PM_{2.5} emissions during construction activities. ROG and NO_x emissions would primarily be the result of exhaust emissions from mobile equipment, including off-road construction equipment and on-road motor vehicles. Exhaust emissions from construction equipment and motor vehicles would also generate PM₁₀ and PM_{2.5} emissions, but to a lesser extent. The primary source of PM₁₀ and PM_{2.5} emissions would be earth and material disturbance activities, such as building demolition, grading, and site preparation.

As shown in Table 3.1-1, on-site project construction activities would result in maximum daily emissions of approximately 32 pounds of ROG, 56 pounds of NO_x, 13 pounds of PM₁₀ (combined exhaust and fugitive dust) and 8 pounds of PM_{2.5}.¹ Because the exact timing of the off-site infrastructure improvements is not known at this time, it was conservatively assumed that off-site infrastructure construction emissions could overlap with the maximum daily on-site construction activities. Therefore, total construction activities would result in maximum daily emissions of approximately 34 pounds of ROG, 71 pounds of NO_x, 14 pounds of PM₁₀, and 9 pounds of PM_{2.5}, which we used to compare to SMAQMD's thresholds of significance. Additional modeling assumptions and details are provided in Appendix J. The total maximum daily NO_x, PM₁₀, and PM_{2.5} emissions shown in Table 3.1-1 would not exceed the applicable SMAQMD thresholds of significance. The impact is **less than significant**.

Emissions Source	Maximum Daily Emissions (pounds per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2017 Construction	5.6	56.2	13.4	8.0
2018 Construction	32.4	21.6	2.5	1.5
Off-Site Water Pipeline Construction	1.3	14.9	0.9	0.8
Maximum Daily Emissions (pounds per day)¹	33.7	71.1	14.4	8.8
SMAQMD Thresholds of Significance (pounds per day)	-	85	80	82
Exceeds SMAQMD Thresholds?	NO	NO	NO	NO

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with aerodynamic diameter less than 10 microns; PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns; SMAQMD = Sacramento Metropolitan Air Quality Management District. ¹ Maximum daily emissions assume the maximum daily on-site emissions from 2017 or 2018 would occur simultaneously with the off-site water pipeline construction activities.

Source: Data modeled by AECOM in 2016

Although the proposed project's construction-related emissions would not exceed SMAQMD's construction threshold of significance, SMAQMD recommends that all projects involving construction activities, regardless of the significance determination, implement SMAQMD's Basic Construction Emission Control Practices (SMAQMD 2014). SMAQMD's Basic Construction Emission Control Practices include such measures as watering the construction site twice daily, limiting vehicle speeds on unpaved roadways to 15 miles per hour, minimizing vehicle idling, covering haul trucks transporting soil, and cleaning paved roads. Mitigation Measure 3.1-1 is included below to further reduce the short-term, construction-related impact.

Mitigation Measure 3.1-1: SMAQMD Basic Construction Emission Control Practices

The project applicant and/or contractor/s shall:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

¹ Emissions generated by the proposed project's construction activities were modeled using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. CalEEMod allows the user to enter project-specific construction information, such as the types, number, and horsepower of construction equipment, and the number and length of off-site motor vehicle trips. Project construction emissions were estimated for construction worker commutes, haul trucks, and the use of off-road equipment.

- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Complete paving of accessways and sidewalks to be paved as soon as possible.
- The following practices describe exhaust emission control from diesel powered fleets working at a construction site. California regulations limit idling from both on-road and off-road diesel powered equipment. The California Air Resources Board enforces the idling limitations.
- 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. Have the equipment checked by a certified mechanic and determined to be running in proper condition before it is operated.

Operations

Daily activities associated with the long-term operation of the proposed project would generate criteria air pollutant emissions and precursors from mobile and area sources. Mobile-source emissions are those associated with vehicles coming to and leaving the project site, which include resident, customer, employee, and delivery vehicles. Area-source emissions include consumer products (e.g., cleaning supplies, kitchen aerosols, cosmetics, and toiletries), natural gas combustion for water and space heating, landscape maintenance equipment, and periodic architectural coatings.

The project site encompasses approximately 0.44 acres of land, which is currently developed with 12,687 square feet of retail, office, and fitness studio uses, as well as one residential structure of approximately 1,500 square feet and 27 surface parking spaces. The ongoing operation of existing, on-site uses generates air pollutant emissions from both mobile- and areas-source emissions. These uses would be removed from the project site prior to occupation of the proposed project. Therefore, to get an accurate estimate of the impacts attributable to the proposed project, it would be appropriate to estimate emissions associated with existing conditions, estimate emissions associated with operation of the proposed project, and then subtract existing emissions from project emissions. Existing and future project-related emissions are presented below. Impact conclusions are based, however, on total gross emissions associated with the project at buildout, partly because it is difficult to accurately estimate existing indirect emissions. Older buildings on the project were constructed prior to current energy

efficiency requirements of the building code and may be less efficient compared to estimates presented below.

Table 3.1-2 summarizes estimated daily operational emissions for the proposed project. The proposed project's gross maximum daily emissions are estimated to be 10 pounds per day of ROG, 6 pounds per day of NO_x, 4 pounds per day of PM₁₀, and 1 pound per day of PM_{2.5}. The proposed project's long-term operational emissions would not exceed any of SMAQMD's operational thresholds of significance. The impact is considered **less than significant**.

Emissions Source	Maximum Daily Emissions (pounds per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	6.0	0.1	0.1	0.1
Energy	0.1	0.9	0.1	0.1
Mobile	3.8	5.3	4.2	1.2
Proposed Project Maximum Daily Emissions (pounds per day)	9.8	6.3	4.3	1.3
Existing Land Use Estimated Maximum Daily Emissions (pounds per day)	1.9	2.4	1.1	0.3
Net Emissions Increase from Existing to Proposed (pounds per day)	7.9	3.9	3.2	1.0
SMAQMD Thresholds of Significance (pounds per day)	85	85	80	82
Exceeds SMAQMD Thresholds?	No	No	No	No

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with aerodynamic diameter less than 10 microns; PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 microns; SMAQMD = Sacramento Metropolitan Air Quality Management District
 Source: Data modeled by AECOM in 2016

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant. As discussed above, construction and operational activities associated with the proposed project would result in less-than-significant impacts with respect to regional thresholds of significance. The region is designated as nonattainment for the federal and state ozone and PM_{2.5} standards and nonattainment for the state PM₁₀ standard. All emissions occurring in the region would contribute on a cumulative basis to these existing nonattainment designations. The nonattainment status of regional pollutants is a result of past and present actions within the SVAB, and this regional impact is cumulative rather than being attributable to any one source. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future projects.

SMAQMD's significance thresholds are designed to identify those projects that would result in significant levels of air pollution on a project level and to assist the region in attaining the applicable CAAQS and NAAQS. Projects that would not exceed these thresholds and would incorporate

SMAQMD Basic Construction Emission Control Practices, would not be considered significant on a project-level and would also not be considered to contribute a cumulatively considerable amount of criteria pollutants for which the project region is nonattainment (i.e., ozone and PM_{2.5} for the NAAQS, and ozone, PM₁₀, and PM_{2.5} for the CAAQS) (SMAQMD 2013). As discussed previously, the proposed project would result in the generation of criteria air pollutant emissions for which the project area is nonattainment for, but both construction and operational emissions would not exceed any of the SMAQMD thresholds. In addition, the proposed project would incorporate the SMAQMD Basic Construction Emission Control Practices (see Mitigation Measure 3.1-1). Therefore, the project would have a **less than cumulatively considerable contribution** to the significant cumulative impacts related to criteria air pollutant nonattainment status.

d) Would the project expose Sensitive Receptors to Substantial Pollutant Concentrations?

Less than Significant. Sensitive receptors are those individuals who are especially vulnerable to the effects of emissions of air pollutants and require special consideration during evaluation of a project's air quality impacts. These individuals include children, older adults, persons with existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Residential areas, schools, playgrounds, athletic facilities, and hospitals are examples of sensitive receptors.

All surrounding parcels are commercial except for the nine-story senior residential building, St. Francis Manor, located directly across J Street from the project site. This building is between the project site to the south and single-family residential neighborhoods to the north. St. Francis Manor is the closest sensitive receptor. Additional nearby sensitive receptors include the residences along 25th Street, just south of the project site, St. Francis of Assisi Elementary School at 2500 K Street, and the St. Francis of Assisi Parish Church, located at 26th and K Streets, southeast of the project site. Several restaurants and cafés with outdoor seating are located near the project site, in addition to the Hart Senior Center within Marshall Park, approximately 0.2 mile from the project site, and Sutter Medical Center and Fort Sutter Surgery Center, each approximately 0.3 mile from the project site.

Construction Related Exposure to Criteria Air Pollutants and TACs

The construction period for the proposed project would be relatively short (approximately 17 months). Sensitive receptors near the project site would potentially be exposed to various criteria air pollutants and TACs during the proposed project's construction activities. As discussed above, within discussion of impact b), construction and operational activities would result in criteria air pollutant emissions at a level that is considered less than significant.

The greatest potential for TAC emissions would be related to diesel PM emissions from heavy-duty construction equipment associated with on-site construction activities such as demolition, excavation, materials handling and installation, and other construction-related activities. 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 extent to which a receptor is exposed to the substance. Health risks are higher if a fixed exposure occurs over a longer period of time. Health effects from carcinogenic TACs usually are described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs.

If the duration of potentially harmful construction activities near a sensitive receptor is two years, then the exposure would be approximately seven percent of the 30-year exposure period used for typical health risk calculations. In addition, implementation of the District's Basic Construction Emission Control Practices, as described in Mitigation Measure 3.1-1, would result in the reduction of diesel PM exhaust emissions in addition to criteria air pollutant emissions, particularly the measures to minimize engine idling time and maintain construction equipment in proper working condition and according to manufacturer's specifications. Thus, short-term construction activities are not anticipated to expose sensitive receptors to prolonged TAC and criteria air pollutant emissions.

With the implementation of Mitigation Measure 3.1-1 and because of the temporary and intermittent use of off-road construction equipment, the dispersive properties of diesel PM, and the relatively low exposure period, project construction would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the impact would be **less than significant**.

Asbestos Containing Materials and Lead-Based Paint

The proposed project would require demolition of on-site buildings that may contain asbestos and may also contain lead-based paint. California requires asbestos and lead abatement to be performed and monitored by contractors with appropriate certifications from the California Department of Public Health. In addition, Cal-OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and preparation of health and safety plans. Cal-OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal-OSHA standards.

The proposed project would be required to comply with SMAQMD 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). Compliance with SMAQMD Rule 902 would be required as a part of the project for actions related to asbestos containing materials. Rule 902 includes health-based standards, guidance for renovations and demolition, special requirements for demolition, waste disposal requirements, testing and recordkeeping procedures, hazard posting requirements, and other measures to avoid adverse health effects.

Existing regulations (8 CCR Sections 1529 and 1532.1) address demolition or salvage of structures where lead or materials containing lead are present; removal or encapsulation of materials containing lead; new construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead; lead contamination/emergency cleanup; transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and maintenance operations associated with the construction activities described in this section. The impact is **less than significant**.

Operation Related TAC Emissions

The proposed project would result in the construction of residential and commercial land uses; such land uses are not typically associated with sources of high levels TAC emissions. There are no anticipated point sources of TAC emissions associated with the proposed project operations. Potential deliveries to the commercial tenants associated with the proposed project operations would be intermittent. The low number of potential heavy-duty truck trips for deliveries would not generate a substantial amount of TAC emissions.

The proposed project would also introduce new residents, considered sensitive receptors, to the project site. The project site is located in an area with a mix of single- and multi-family residential development; retail and commercial services; restaurants and bars; medical, dental, and other types of offices; parks, museums, places of worship, and other civic uses; and other complementary uses. These land uses are not associated with sources of high levels of TAC emissions. The nearest high-volume roadways to the project site are U.S. Highway 50 and Interstate 80, located approximately 5,000 feet south and 1,500 feet east of the project site, respectively. The proposed residential units would be at least three times the distance from the nearest high-volume roadway as is recommended in SMAQMDs Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways (SMAQMD 2011).

The proposed project's operations would not include sources of high levels of TAC emissions and considering the location of the proposed project relative to potential sources of high levels of TAC emissions, proposed residences would not be exposed to substantial pollutant concentrations. Therefore, it is unlikely that the proposed project's operations would expose sensitive receptors to substantial TAC concentrations. The impact is considered **less than significant**.

Carbon Monoxide

Local mobile-source CO emissions and concentrations 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 specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels.

Sacramento Metropolitan Air Quality Management District (SMAQMD) and Bay Area Air Quality Management District (BAAQMD) have developed screening thresholds based on air dispersion modeling to determine if a project would cause an intersection to potentially generate a CO hotspot. The screening thresholds have been developed with conservative assumptions to avoid underestimating CO concentrations. Therefore, a project that would not exceed the screening thresholds would be highly unlikely to generate a CO hotspot and would not expose sensitive receptors to CO concentrations harmful to public health. According to these methodologies, projects would have the potential to generate a CO hotspot if it did contribute a substantial volume of vehicle trips to an intersection that exceeded 44,000 vehicles per hour and 31,600 vehicles per hour for BAAQMD and SMAQMD, respectively (BAAQMD 2010, page 3-4; SMAQMD 2015, page 4-8). For intersections located in areas where vertical and/or horizontal mixing is substantially limited, the screening threshold is 24,000 vehicles per hour. These screening methods are developed to be protective of the public health according to concentration based standards. The street with the highest traffic volumes that

would be affected by project traffic is J Street. Between 21st and 29th Streets, J Street is estimated to have approximately 14,000 trips per day. Under buildout of the 2035 General Plan, J Street is forecast to carry 22,300 trips per day (City of Sacramento 2014, Appendix G, page 3 of 6). As described in Section 3.12 of this SCEA, "Transportation and Traffic," the proposed project would result in 9 morning peak-hour trips and 28 afternoon peak-hour trips to the local freeway network (Interstate 5, U.S 50, SR 99, Business 80, and SR 160). These freeways are not anticipated to have traffic volumes that exceed the screening thresholds (Caltrans 2013). Therefore, implementation of the proposed project is not expected to have the potential to generate CO hotspots. This impact is considered **less than significant**.

e) Would the project create objectionable odors affecting a substantial number of people?

The occurrence and severity of odor impacts depend on numerous factors, such as the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. Offensive odors rarely cause any physical harm, but they can be very unpleasant, leading to considerable distress among the public, and often generating citizen complaints to local governments and regulatory agencies.

Project construction is not anticipated to expose nearby off-site receptors to objectionable odors. Sources that may emit odors during construction activities would include exhaust from diesel construction equipment and heavy-duty trucks, which could be considered offensive to some individuals. Considering the low concentrations of diesel exhaust generated during construction activities along with its highly dispersive properties, residents on neighboring blocks would not be substantially affected by construction-related diesel exhaust odors. Construction activities would occur intermittently throughout the construction period as construction equipment is needed, and therefore would avoid generating a constant plume of odor emissions that could expose nearby receptors. The proposed project would use typical construction techniques, and the odors would be typical of most construction sites and would be temporary in duration.

Since the project does not propose uses that would generate substantial odors that could adversely affect surrounding uses and activities, SMAQMD has a nuisance rule (Rule 402) that, under most scenarios, would apply to uses that cause a public odor nuisance.

Project operation would be for retail and restaurant services and residential units. The existing uses at the site include several retail facilities, a restaurant, and dwelling units. The proposed project operations would not include any additional potential odor sources beyond existing conditions. Therefore, the proposed project's construction and operational emissions would not create objectionable odors affecting a substantial number of people and the impact is considered **less than significant**.

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3.2 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the existing biological resources setting and potential effects from project implementation on those resources. Descriptions and analysis in this section are based primarily on a reconnaissance-level site survey and tree inventory conducted by AECOM biologists on November 17, 2015, aerial photography interpretation, and information obtained from biological resource databases, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database

(CNDDDB) and the California Native Plant Society (CNPS) Inventory. Additional information sources include the Master Environmental Impact Report (MEIR) for the City of Sacramento 2035 General Plan Update (City of Sacramento 2014); and the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy Environmental Impact Report (SACOG MTP SCS EIR) (SACOG 2011).

3.2.1 ENVIRONMENTAL SETTING

The project site is located within the Sacramento East 7.5-minute USGS quadrangle in Midtown Sacramento, an area with a mix of single- and multi-family residential development; retail and commercial services; restaurants and bars; medical, dental, and other types of offices; parks, museums, places of worship, and other civic uses; and other complementary uses. The 0.44-acre project site is currently developed with retail, office, and fitness studio uses, along with surface parking spaces. The project site and vicinity have been developed for urban use for 150 years or more.

The project site is completely covered in impervious surfaces with the exception of small landscape beds along the J Street and 25th Street sidewalks. There are no native plant communities or natural habitats on the project site and the only vegetation present is ornamental street trees, shrubs, vines, and turf grass in the landscaped beds. Landscape species observed include bigleaf periwinkle (*Vinca major*), English ivy (*Hedera helix*), privet (*Ligustrum* sp.), and Bermuda grass (*Cynodon dactylon*).

A tree inventory conducted by AECOM identified 11 trees of 8 different species on the project site. Tree species present consist of two southern magnolia (*Magnolia grandiflora*), one London plane tree (*Platanus x acerifolia*), one common hackberry (*Celtis occidentalis*), one crape myrtle (*Lagerstroemia indica*), two ginkgo (*Ginkgo biloba*), two pin oak (*Quercus palustris*), one Chinese pistache (*Pistacia chinensis*), and two date palm (*Phoenix canariensis*). All of the trees on site are nonnative landscape trees and all have a diameter at breast height of greater than 6 inches and would be considered mature. However, none of the trees qualify as Heritage Trees, which the City defines as any tree with a trunk circumference of 100 or more inches and of good quality in terms of health, vigor, and conformity for its species. Nine of the 11 on-site trees are considered City Street Trees because they are growing within the public street rights-of-way.

There are no wetlands or waterways on or adjacent to the project site and no riparian habitat or sensitive plant communities. Habitat on the project site is classified as urban according to the California Department of Fish and Wildlife's (CDFW's) California Wildlife Habitat Relationship System (Mayer and Laudenslayer 1988).

Urban landscapes, such as the project area, typically provide low-value habitat for most wildlife species because of an overall lack of vegetative cover and high levels of human disturbance. Common wildlife species that are likely to be associated with the disturbed habitats present on or immediately adjacent to the project site are species adapted to disturbed or urban environments, such as house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), American robin (*Turdus migratorius*), rock pigeon (*Columba livia*), brown rat (*Rattus norvegicus*), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*), which are known to occur in the Midtown area.

3.2.2 DISCUSSION

- a) **Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service:**

Less than Significant with Mitigation. Review of the CNDDDB, CNPS, and the City's 2035 General Plan Master EIR identified a total of 63 special-status species that have been documented in the Sacramento East and eight surrounding quadrangles. These special-status species consist of 16 threatened or endangered wildlife species, 4 threatened or endangered plant species, 28 wildlife species of special concern, and 15 plant species with a California Rare Plant Rank of 1B or 2B.

Swainson's hawk and white-tailed kite occasionally nest in urban areas if there is a suitable nest tree and the site is within close proximity to foraging habitat (England et al. 1995 in Estep 2009a). Swainson's hawks typically nest in tall trees (around 50 feet tall on average) that provide a panoramic view of the hawk's territory, have dense enough foliage to visually protect the nest from disturbances, and are within 2 miles of foraging habitat (Estep 1989, Anderson et al. 2007). There are no trees on or adjacent to the project site that provide the appropriate size, structure, and visibility to make suitable nest sites for Swainson's hawk. Additionally, suitable foraging habitat within approximately 2 miles of the site is very limited. Reproductive success decreases for Swainson's hawks as distance from foraging habitat increases and Swainson's hawks nesting in urban areas have been shown to have lower reproductive success than those nesting in rural areas. Therefore, urban settings, such as the project area, are considered low-quality nesting habitat (England et al. 1995, England et al. 1997) and this species is not expected to nest on or adjacent to the project site.

White-tailed kite generally only nest at the edges of urban areas near agricultural fields or grassland foraging habitats or within urban parks. They most often build their nests near the tops of trees (generally 20 to 100 feet above ground) with dense canopies (CDFW 2005). None of the trees on the project site have the height and dense canopy structure that would protect this species from surrounding human disturbances. This species rarely nests more than 0.5 mile from its preferred foraging habitats. Preferred foraging habitat in the Central Valley includes alfalfa and other hay crops, irrigated pastures, sugar beets, and tomatoes (Erichsen et al. 1994, Estep pers. comm. 2014), but they also forage in dry pastures, annual grasslands, open oak woodlands, rice stubble fields, seasonal wetlands, marsh edges, and occasionally in orchards (Estep pers. comm. 2014). None of these habitats occur on or adjacent to the project site. Therefore, this species is not expected to occur on the project site.

The project site does not contain sensitive plant communities or suitable habitat for special-status plant species known to occur in the region. The majority of special-status wildlife species known to occur within the larger nine-quadrangle search area have no potential to occur on the project site because they are associated with habitats that are not present on the project site (e.g., vernal pools, freshwater marsh, or other aquatic or riparian habitats).

Fourteen of the special-status species known to occur in the region are fish species that have no potential to occur on the project site because there is no aquatic habitat present. There are no elderberry shrubs on or near the project site that could support valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Additionally, species associated with grassland habitats, such as American badger (*Taxidea taxus*), northern harrier (*Circus cyaneus*), grasshopper sparrow (*Ammodramus savannarum*), and burrowing owls (*Athene cunicularia*) would not be expected to use the project site because there is no open grassland habitat present. There are no burrows or open, friable ground available for burrowing owls or badgers. Western red bat (*Lasiurus blossevillii*) is the only special-status bat species that has been documented in the project area. This species roosts primarily in the foliage of riparian trees near open areas for foraging; this type of habitat is not present. Therefore, impacts on special-status species would be **less than significant**.

Although special-status raptors or other special-status birds are not expected to occur, migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA) and Section 3503 of the California Fish and Game Code could nest in trees on or adjacent to the project site and could be disturbed by construction activities conducted during the bird nesting season, which is generally considered to be February 15-September 15. Project construction would result in direct removal of up to 11 trees from the project site. Tree removal and ground disturbances associated with project construction could result in the direct destruction of active nests of birds protected under the MBTA or California Fish and Game Code. Project construction could also result in disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. While loss of some nests of common migratory bird species (e.g., American robin, house sparrow) would not be considered a significant impact because it would not result in a substantial effect on their populations locally or regionally, destruction of any migratory bird or raptor nest is a violation of the MBTA and Section 3503 of the California Fish and Game Code. The potential loss of an active nest or mortality of chicks and eggs of common raptor species and migratory birds would be an effect on other species of special concern to agencies or natural resource organizations. This impact is considered **potentially significant**.

Mitigation Measure 3.2-1: Avoid and Minimize Impacts on Nesting Birds Protected by the Migratory Bird Treaty Act and California Fish and Game Code (Implements 2035 General Plan Policy ER 2.1.10 and MTP/SCS Mitigation Measure BIO-9)

The following measures shall be implemented to reduce potential impacts on nesting raptors and migratory birds to a less-than-significant level:

- If tree removal or construction activities on the project site are to begin during the nesting season for raptors or other protected bird species in the region (generally February 15-September 15), a qualified biologist shall conduct preconstruction surveys in areas of suitable nesting habitat for common raptors and other bird species protected by the MBTA or California Fish and Game Code located within 500 feet of project activity. Surveys shall be conducted no more than 10 days before tree removal or ground disturbance is expected to occur.

- If no active nests are found, no further mitigation is required. If active nests are found, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. The appropriate buffer size for all nesting birds shall be determined by a qualified biologist, but shall extend at least 50 feet from the nest. Buffer size will vary depending on site-specific conditions, the species of nesting bird, nature of the project activity, the extent of existing disturbance in the area, visibility of the disturbance from the nest site, and other relevant circumstances.
- No construction activity shall occur within the buffer area of an active nest until a qualified biologist confirms that the chicks have fledged and are no longer dependent on the nest, or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. The qualified biologist shall determine the status of the nest at least weekly during the nesting season. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance shall be increased until the agitated behavior ceases.

The analysis reported in this SCEA and Mitigation Measure 3.2-1 complies with relevant portions of General Plan Policy 2.1.10 and MTP/SCS Program EIR Mitigation Measure BIO-9 (as discussed below). Implementation of Mitigation Measure 3.2-1 ensures that the construction impact on protected bird species and their nests would be **less than significant with mitigation**.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

Potential impacts on biological resources resulting from implementing the 2035 General Plan were evaluated in Chapter 4.3 of the Master EIR. The contribution to regional loss of special-status plant or wildlife species or their habitat associated with implementing the General Plan was found to be a significant and unavoidable impact – related to loss of nesting and foraging habitat for special-status birds. Although the project site is not expected to support special-status bird nests, it may support nests of raptors and other bird species protected under the MBTA or California Fish and Game Code. General Plan Policy ER 2.1.10, described below, was adopted to avoid or lessen impacts on protected species. The research, site visit, analysis and reporting included as a part of this SCEA implements Policy ER 2.1.10, as appropriate, for the project site and the proposed project.

- ▶ **Policy ER 2.1.10 Habitat Assessments.** The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency) or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or (2) suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service

(USFWS) (depending on the species) for further consultation and development of avoidance and/or mitigation measures consistent with State and federal law.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Construction-related impacts on biological resources, such as loss or disturbance of breeding birds (or bird nests) were analyzed in the MTP/SCS EIR under Impact BIO-7 and found to be potentially significant. Mitigation Measure BIO-9, described below, was proposed to mitigate construction-related impacts to biological resources. Because trees on and adjacent to the project site provide potential nesting habitat for protected bird species, this measure is applicable to the proposed project.

A biological reconnaissance survey was performed on the site on November 17, 2015. That biological reconnaissance survey determined the site, and surrounding areas along J Street and 25th Street, contain suitable nesting habitat for bird species protected by the MBTA or the California Fish and Game Code. A project-specific mitigation measure (Mitigation Measure 3.2-1) is proposed to address impacts on nesting birds. No other sensitive biological resources occur on the site due to lack of suitable habitat.

The research, site visit, analysis and reporting included as a part of this SCEA, along with the incorporation of Mitigation Measure 3.2-1 implements Mitigation Measure BIO-9, as appropriate for the project site and the proposed project.

Mitigation Measure BIO-9: Avoid and Minimize, and Mitigate for Construction-Related Impacts. *Implementing agencies should require project applicants to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, sensitive biological resources. The assessment should be conducted by appropriately trained professionals pursuant to adopted protocols, and standards in the industry. As necessary and as required by regulatory agencies, project applicants should prepare mitigation and monitoring plans that identify avoidance and minimization measures that should reduce the level of potential direct and indirect impacts to sensitive biological resources to below thresholds of significance. These measures should be consistent with the requirements of CEQA. Where federally or state listed species could be potentially impacted by construction activities, the project applicant should adhere to regulatory guidelines and policies that identify specific avoidance and minimization measures to insure that these actions do not result in the take of a listed species, except as authorized under a USFWS Biological Opinion or a CDFW Incidental Take Permit.*

- b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?**

No Impact. There are no riparian habitats or other sensitive natural communities on the project site. Therefore, implementation of the proposed project would not have any adverse effects on sensitive natural communities. **No impact** would occur.

- c) **Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No Impact. There are no wetlands or other waters of the United States on the project site. Therefore, implementation of the proposed project would not have any adverse effects on federally protected wetlands or waters of the United States. **No impact** would occur.

- d) **Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

No Impact. Wildlife corridors are features that provide connections between habitat patches that would otherwise be isolated and unusable. Based on the biological resources investigation, there are no wildlife corridors or nursery sites present within the project site. Project development would not interfere substantially with the movement of any native resident or migratory wildlife species because the project site is fully developed and does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. Therefore, construction of the proposed project would not interfere with the movement of wildlife or impede the use of a wildlife nursery site. **No impact** would occur.

- e) **Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

No Impact. Project implementation could result in removal of up to 11 trees, 9 of which are City Street Trees. Removal of any of these 9 City Street Trees requires compliance with provisions of Chapter 12.56 of the City's Code, the City's Tree Preservation Ordinance. This section of the City's Code requires review and permitting of tree removals, and replacement of trees, where appropriate. A project-specific mitigation measure (Mitigation Measure 3.2-1) is proposed to address impacts on nesting birds. No other sensitive biological resources occur on the site due to lack of suitable habitat. Since the project will be required to comply with the City's Tree Preservation Ordinance, construction of the proposed project would not conflict with any local policies or ordinances protecting biological resources. **No impact** would occur.

- f) **Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

No Impact. The project site is not located within an area covered by an adopted or proposed habitat conservation plan, natural community conservation plan, or other local, regional, or state conservation plan. Therefore, project implementation would not conflict with the provisions of an adopted habitat conservation plan. **No impact** would occur.

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3.3 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes known archaeological resource sensitivity and built environment resources in the project study area, and their significance findings.

3.3.1 ENVIRONMENTAL SETTING

ARCHAEOLOGICAL CONTEXT

Native American settlement in the Sacramento area began roughly 12,000 years ago, and following Frederickson (1974) and Moratto (1984), a cultural chronology, based largely on discrete cultural traits observed in the stratigraphic sequence, has been developed for the Central California region (which includes the vicinity of the project site). These periods include the Paleo-Indian (10000 to 6000 BC), the three-staged Archaic (including the Lower [6000 to 3000 BC], Middle [3000 to 1000 BC], and Upper [1000 BC to AD 500]), and the Emergent Periods (AD 500 to 188) (Kelley et al. 2005). Few Paleo-Indian sites have been identified in northern California, and Lower Archaic sites are also relatively rare in the project vicinity. However, by the Middle Archaic, there is a substantial increase in the number of sites identified in this region, and this trend continues through the Upper Archaic.

Ethnographic Period

The project site is located in the traditional territory of the Nisenan, whose village sites were located on low rises or gentle slopes (Wilson and Towne 1978:388). Significant contact with nonnatives occurred in the early 19th century as Spanish, Mexican, and American explorers began to investigate the Sacramento Valley. Those Nisenan who were not killed by the diseases carried by the Europeans were forced from their lands by intimidation and violence.

HISTORIC PERIOD

John Sutter arrived in California and built a fort, which he named New Helvetia, through the support of a Mexican land grant around 1840 near the confluence of the Sacramento and American Rivers. New Helvetia served as a trading colony and stockade, and was an important stopping point for immigrants

traveling on the overland trails. Sutter fell into debt and transferred his property to his son, who took 4 square miles of Sutter's land and subdivided it. John Sutter, Jr. began selling lots in January 1849. That same year gold was discovered in California and the community, named Sacramento after the river that ran beside it, incorporated and served as an important gateway to California's gold fields (McGowan and Willis 1983:35-37).

Outside the city, agriculture eventually supplanted gold as the main industry in the area. Fruit became a major cash crop and a land boom drew immigrants in large numbers in the late 19th century. Large Mexican land grants around the city were eventually sold to the public for developments and new areas around the city were annexed in the early 1900s. Accessible by the automobile, which was introduced to Sacramento in 1900, the growing city expanded in its population and economy. Suburbs and planned communities that harkened to Sacramento's agricultural economy grew around the city, such as Orangevale, Citrus Heights, Fair Oaks, and Rancho Del Paso (Casteneda, Simpson et al. 2013:166).

During the early 1930s, the Great Depression affected Sacramento. Transient encampments could be found along both the Sacramento and American Rivers and suburban residential development practically ended. Unemployment affected Sacramento's two major industries: agriculture and the railroad (Casteneda, Simpson et al. 2013:186-187). Between 1933 and 1939, the federal Public Works Administration and Works Progress Administration provided relief for workers through projects to construct new buildings, including schools, and improve infrastructure. Before the United States entered World War II in 1941, Mather Field, a World War I air base dormant since its closure in the 1920s, was reactivated in 1938. McClellan Air Force Base also operated before World War II, but during the war it expanded and served as a training, repair, and refitting base for aircraft being readied for combat and those that were severely damaged in combat (Casteneda, Simpson et al. 2013:208; McGowan and Willis 1983:85).

Sacramento's population increased dramatically after World War II. Developers enacted large building programs in the north and east areas outside the City limits. Roads were also constructed, improved, and widened. By 1963, Sacramento could be approached from every direction via a freeway (McGowan and Willis 1983:88-89).

As the suburban areas of Sacramento expanded, the city's downtown was rapidly declining. In 1950, the City established the Sacramento Redevelopment Agency, which started proposing redevelopment plans for Sacramento's downtown. By 1961, 15 blocks of deteriorated buildings were demolished. Government office buildings were constructed on M Street (renamed Capitol Mall in downtown) in the early 1950s. State government buildings continued to be built in downtown and on Capitol Mall through the late 1970s. Sacramento grew again in the 21st century, attracting new residents and businesses. By 2010, Sacramento encompassed more than 92 square miles and had more than 466,000 residents (McGowan and Willis 1983: 94-101; U.S. Census Bureau 2015).

3.3.2 METHODOLOGY

RESEARCH

A records search was performed by staff of the North Central Information Center (NCIC) of the California Historical Resources Information System on November 20, 2015 (Sac-15-189). The purpose

of the records search was to determine whether known cultural resources have been recorded within or adjacent to the project site; to identify the degree to which the project area and vicinity have been previously studied; assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of previously recorded resources in the vicinity; and develop a context for the identification and preliminary evaluation of cultural resources.

The NCIC-conducted records search used a study area defined as the parcel containing the project components and a 0.5-mile radius. The records search failed to indicate any previously identified cultural resources within the project area and only one previously recorded archaeological resource within the 0.5-mile study area. This resource is an historic-period (circa 1880 to the early 1900s) artifact concentration located approximately three blocks from the project site. The resource exhibited extensive disturbance due to the installation of a concrete utility block, and data potential had been exhausted at the time of its 2007 discovery and subsequent recordation. No other archaeological resources were identified by the NCIC. A total of 11 studies have been completed within the 0.5-mile study area, but none of these included portions of the project parcel.

Additional archival research was conducted at the California History Room, California State Library and the Sacramento Public Library.

NATIVE AMERICAN CONSULTATION

A search of the sacred lands files at the Native American Heritage Commission revealed no listings for the project site or close vicinity. The City complied with its responsibility under AB 52 by notifying requesting tribes of the project, and inviting consultation. No timely request for consultation was received within the 30-day response period provided in Public Resources Code 21080.3.1.

FIELD SURVEY

Background research indicated that the project site is developed and consists primarily of paved areas whose soils have been classified as urban land (U.S. Department of Agriculture [USDA] 2014; Meyer and Rosenthal 2008). Despite the urban character of the vicinity of the project site, AECOM archaeological staff conducted a cursory site visit in order to ensure that any visible, non-paved ground surfaces (such as near tree plantings and ornamental vegetation) were visually inspected. The survey occurred on November 30, 2015 and was negative for cultural resources.

A qualified architectural historian conducted a survey of the project site on November 13, 2015, and recorded existing buildings and structures through digital photography and handwritten notes.

SITE-SPECIFIC SURVEY FINDINGS

Review of available map data (GLO 1865; 1872) indicates that the project site is at the southeastern boundary of what was once the New Helvetia Rancho, but no structures or features specific to the project site are depicted on those maps.

The project site is 0.11 mile northwest of the Sutter's Fort and the current State Indian Museum, between what are now known as K and L Streets and 26th and 28th Streets. The fort itself, and all but one building (the Central Building) within the fort, are re-creations of the original. The Sutter's Fort and

State Indian Museum compound is not adjacent to the project site and will not be impacted by project-related activities.

A review of ethnographic literature has determined that there are no previously reported ethnographic sites within the project area or the 0.5-mile study area (Wilson and Towne 1978). Multiple ethnographic villages have been recorded in the vicinity of Sacramento, with the majority of these villages located on the north side of the Sacramento River. The nearest ethnographic site is positioned more than one mile from the project site and will not be impacted by project-related activities.

ASSESSMENT OF ARCHAEOLOGICAL RESOURCE SENSITIVITY

Much of Sacramento is built on alluvial deposits. Before levees were constructed around the City, the Sacramento River had a wide floodplain. Native Americans would have located village sites on terraces adjacent to the river and above the floodplain (Hamilton et al. 2005:37-38). Creeks, waterways, and high spots are identified as areas that typically are assessed as moderately sensitive for archaeological sites because these areas could have been used for seasonal camping or for specific tasks, such as food procurement. Low-sensitivity areas are locations where previous studies indicate that archaeological sites are unlikely to occur or where prior development has left the subsurface character sufficiently disturbed as to suggest a low potential to contain intact archaeological deposits (City of Sacramento 2009).

Based on the degree of previous urban development, as well as information obtained from NCIC, NAHC, and available ethnographic and historic literature, the project site is considered to possess a low to moderate sensitivity for prehistoric-period resources and historic-period resources. The building presently on site was originally constructed in 1915 and was the subject of multiple renovation efforts throughout the 20th century. Initially a residential structure, the property was converted to commercial space that included a concrete parking area. Any potential to encounter intact subsurface deposits associated with the early occupation of this building was likely diminished during the grading and preparation required for construction.

The project site is positioned approximately 0.11 mile from the historic Sutter Fort, and it is a sufficient distance such that project-related activities will not impact known components associated with that resource. However, it is possible that unrecorded archaeological resources may be in the vicinity. It was not uncommon for camps and settlements to be erected outside the confines of a formalized fort. To date, none have been reported in the immediate project vicinity, but this may be due to the limited number of studies previously conducted in the project area.

Although the vicinity of the project is classified as urban land complex, the proposed parking structure could extend into the alluvium beneath it. As historic-period resources have been previously observed within alluvium deposits in Sacramento, there remains the possibility that such deposits could be encountered during excavation for and construction of the proposed cellar and sub-cellar parking area. The project geotechnical report (Appendix E) recommends that the proposed building be supported on either a mat foundation bearing in the dense gravel layer at a depth of approximately 20 to 25 feet below grade or on deep foundations. ENGEO (see Appendix E) indicates that the building may be supported drilled, cast-in-place, straight-shaft friction piers. The piers would have a minimum diameter

of 24 inches and extend to a depth of at least 30 feet below the bottom of the pier cap. The tops of drilled piers would likely be at about the top of the dense gravel layer (approximately 20–25 feet bgs) and would extend below the groundwater table to depths of approximately 50–55 feet bgs.

3.3.3 DISCUSSION

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No Impact. Of the two parcels in the project area only one parcel, APN 007-0103-002-0000, contained buildings 45 years old or older and required evaluation. A former residence, built ca. 1915, with a ca. 1949 commercial storefront addition do not meet the criteria for the California Register of Historical Resources or the Sacramento Register of Historic and Cultural Resources. The property was one of several residences constructed in the area in the late 19th or early 20th century that later received commercial additions in the post-World War II years, particularly along J Street. Some of these commercial additions onto late 19th/early 20th Century homes have been identified as potentially eligible, including properties on J Street (Deering, pers. comm. 2016). This building's addition, however, is not significant in its own right, and is not an important example of an architectural type, period or method of construction, nor is it associated with a significant event or person. Lastly, it is not likely to yield information important to history. The property is not considered a historical resource for the purposes of CEQA.¹ A detailed inventory and evaluation of the property is presented in the California Department of Parks and Recreation (DPR) 523 form set located in Appendix I of this SCEA. There is **no impact**.

b) Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?

Less than Significant with Mitigation. Maximum excavation for the proposed project is estimated to be between 20 to 25 feet below ground surface. The tops of drilled piers would likely be at approximately 20–25 feet bgs and would extend below the groundwater table to depths of approximately 50–55 feet bgs. This construction could result in inadvertent damage to unknown unique, buried archaeological deposits. This would be a **potentially significant** impact.

Mitigation Measure 3.3-1: Stop Work If Any Prehistoric or Historic Subsurface Cultural Resources Are Discovered, Consult a Qualified Archaeologist to Assess the Significance of the Find, and Implement Appropriate Measures, as Required.

If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 100 feet of the resources shall be halted and a qualified archaeologist shall be consulted within 24 hours to assess the significance of the find, according to CCR Section 15064.5 of the State CEQA Guidelines. If any find is determined to be significant, representatives from the City and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be

¹ In addition to CEQA criteria, the City of Sacramento has historic preservation sections in the City Code, though most components can be found in Title 17, Section 17.604. This section provides for the identification, protection, enhancement, and adaptive reuse of significant historic and cultural resources within the city. The ordinance provides the statutory framework for local preservation decisions.

recorded on DPR Form 523 (Historic Resource Recordation form), and all significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. If it is determined that the proposed development could damage an historical resource or a unique archaeological resource (as defined pursuant to the State CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California Public Resources Code and CCR Section 15126.4 of the State CEQA Guidelines, with a preference for preservation in place. If avoidance is infeasible, other appropriate measures (e.g., data recovery) will be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out.

Consistent with State CEQA Guidelines CCR Section 15126.4(b)(3), this may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, the qualified archaeologist shall develop a treatment plan in consultation with the City's Community Development Department and (if the find is of Native American origin) the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The treatment plan shall include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the City's Preservation Director and the North Central Information Center of the California Historical Resources Information System. Any resources discovered shall be returned to the Native American tribe determined to be the most likely descendant.

Additionally, in accordance with Section 5097.993 of the California Public Resources Code, the project applicant or contractor(s) shall inform project personnel that the collection of any Native American artifact is prohibited by law.

Implementation of Mitigation Measure 3.3-1 would reduce the impact on previously undiscovered cultural resources to a less-than-significant level.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.4-2 found that there are areas of relatively high sensitivity that could be affected by infill development. As noted in the City's General Plan Master EIR:

“discoveries during infill construction in downtown Sacramento have shown that the entire downtown area is highly sensitive for both historic- and prehistoric-period archaeological resources...Increased maximum density allowances in the urban area could result in development that could damage prehistoric- and historic-period archaeological resources. Additionally, infrastructure or other public works improvements which require ground-disturbance could result in damage to or destruction of archaeological resources (City of Sacramento 2014, page 4.4-8).

The City found that General Plan policies would reduce potential impacts associated with buildout of the City's Policy Area, but that the City could not ensure the protection of all important archaeological resources throughout the City. Therefore, the impact was considered significant and unavoidable at the General Plan level.

The Executive Summary of the City's General Plan Master EIR cites the following policies as related to the loss of archaeological resources: Policies HCR 2.1.1 – 2.1.6, 2.1.8, 2.1.10, 2.1.16, 3.1.1 – 3.1.4, and ERC 5.1.4. Some are relevant to new development and others are commitments by the City. Policies HCR 2.1.2 and 2.1.16 are identified in the narrative analysis of the City's General Plan Master EIR as protecting archaeological resources. Of the policies cited in the Master EIR, the following are relevant to the proposed project:

- ▶ **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 2.1.6 Planning.** The City shall take historical and cultural resources into consideration in the development of planning studies and documents.
- ▶ **Policy HCR 2.1.8 Historic Preservation Enforcement.** The City shall ensure that City enforcement procedures and activities comply with local, State, and Federal historic and cultural preservation requirements.
- ▶ **Policy HCR 2.1.16 Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

The consultation, research, analysis, and reporting conducted to support this SCEA implements Policies 2.1.1, 2.1.3, and 2.1.6. Mitigation Measure 3.3-1 (listed above) implements Policies 2.1.2, 2.1.8, and 2.1.16.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Impact CR-2 of the MTP/SCS EIR determined that new project construction and operation could adversely affect important archaeological resources. The MTP/SCS EIR includes Mitigation Measures CR-2 and CR-3 to address potential impacts related to archaeological resources, but found that even with the incorporation of this mitigation, the impact would be significant and unavoidable (SACOG 2012, page 7-56). Mitigation Measure CR-2 is relevant to the proposed project and is included below for the reader's edification.

Mitigation Measure CR-2: Conduct Archaeological Resource Studies and Identify and Implement Project-Specific Mitigation. *The implementing agency, prior to planning, design and engineering of specific projects in the proposed MTP/SCS, should ensure that archaeological resources are treated appropriately according to state, federal, and local laws and regulations, as applicable. If an archaeological resource is determined to be historically significant (CEQA Guidelines, § 15064.5(a).), then Mitigation Measure CR-1 should be applied. The mitigation measure below applies to non-historically significant archaeological resources.*

When a project has been identified as potentially affecting a unique archaeological resource, an archaeological inventory should be conducted by a qualified archaeologist. The study should comply with P.R.C. section 21083.2 and CEQA Guidelines section 15064.5(c); and, if federal funding or permits are required, NHPA section 106. The study should consist of the following elements:

- a records search at the appropriate Information Center of the California Historical Resources Information System;*
- contact with the Native American Heritage Commission (NAHC) to search their sacred lands database and provide a list of potentially interested Native American representatives;*
- contact with Native American representatives;*
- necessary background, archival and historic research;*
- a pedestrian survey, unless it is not recommended by the Information Center, which will include locating previous sites and conducting a systematic survey of the area for previously unrecorded sites; and*
- site records on appropriate Department of Parks and Recreation 523 forms, when sites are located.*

These elements should be compiled into an Archaeological Survey Report that should be submitted to the appropriate Information Center and should also be used for SHPO consultation if the project is subject to NHPA section 106.

If no archaeological resources are identified in the Archaeological Survey Report, then mitigation is complete, and there is no impact to archaeological resources for the project. The impact would be less than significant (LS).

If the archaeological survey and/or the records search indicate that unique archaeological resources, as defined (Pub. Resources Code, § 21083.2(g).), are located in the specific project area, mitigation measures shall be identified including avoidance through project redesign, data recovery excavation, and/or public interpretation of the resource.

If an archaeological resource is determined to be neither unique nor historical, and the determination and potential impacts are adequately documented, the effects of on those resources is less than significant (LS) (CEQA Guidelines, § 15064.5(c)(4).).

If archaeological materials are inadvertently discovered during construction, work should stop within 100 feet of the find. If avoidance is not feasible, a qualified archaeologist familiar with the local conditions should recommend further work necessary to determine importance in accordance with applicable local, state, and federal guidelines. If the archaeological resource is determined to be important under federal, state, or local guidelines, treatment measures should be developed consistent with its status as either an historical resource or unique archaeological resource as described above (see also Mitigation Measures CR-1 and CR-3).

The consultation, research, analysis, and reporting included as a part of the SCEA implements portions of Mitigation Measure CR-2 that relate to the records search, contact with the Native American Heritage Commission, and background research. Mitigation Measure 3.3-1 implements other relevant aspects of MTP/SCS EIR Mitigation Measure CR-2, revised as appropriate to apply to this proposed project.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation. No indication exists that any particular area in the project site has been used for human burial purposes in the recent or distant past, human remains are unlikely to be encountered during construction of the proposed project. However, in the unlikely event that human remains are discovered during subsurface activities, they could be inadvertently damaged. This is considered a **potentially significant** impact.

Mitigation Measure 3.3-2: Stop Work If Human Skeletal Remains Are Uncovered, and Follow the Procedures Set Forth in State CEQA Guidelines Section 15064.5(e)(1).

In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery during construction, the City and its construction contractor(s) will take the following steps:

- (1) No further excavation or disturbance of the project site or any nearby area reasonably suspected to overlie adjacent human remains will occur until:
 - (A) the coroner of Sacramento County has been contacted to determine that no investigation of the cause of death is required, and
 - (B) if the coroner determines the remains to be Native American:

1. the coroner shall contact the Native American Heritage Commission within 24 hours;
2. the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendant from the deceased Native American; and
3. the most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Section 5097.98 of the Public Resources Code; or

(2) Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:

- (A) the Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant fails to make a recommendation within 24 hours after being notified by the commission;
- (B) the most likely descendant identified fails to make a recommendation; or
- (C) the landowner or his or her authorized representative rejects the recommendation of the most likely descendant, and mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Implementation of Mitigation Measure 3.3-2 would reduce the impact related to the disturbance or destruction of human remains to a less-than-significant level.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The City's Master EIR does not evaluate impacts related to human remains separately, but instead discusses this under Impact 4.4-2, along with other archaeological resources impacts. The City found that General Plan policies would reduce potential impacts associated with buildout of the City's Policy Area, but that the City could not ensure the protection of all important archaeological resources throughout the City. Therefore, the impact was considered significant and unavoidable at the General Plan level.

The Executive Summary of the City's General Plan Master EIR cites the following policies as related to the loss of archaeological resources: Policies HCR 2.1.1 – 2.1.6, 2.1.8, 2.1.10, 2.1.16, 3.1.1 – 3.1.4, and ERC 5.1.4. Some are relevant to new development and others are commitments by the City. Policies HCR 2.1.2 and 2.1.16 are identified in the narrative analysis of the City's General Plan Master EIR as protecting archaeological resources. Of the policies cited in the Master EIR, the following are relevant to the proposed project:

- ▶ **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 2.1.6 Planning.** The City shall take historical and cultural resources into consideration in the development of planning studies and documents.
- ▶ **Policy HCR 2.1.8 Historic Preservation Enforcement.** The City shall ensure that City enforcement procedures and activities comply with local, State, and Federal historic and cultural preservation requirements.
- ▶ **Policy HCR 2.1.16 Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

The consultation, research, analysis, and reporting conducted to support this SCEA implements Policies 2.1.1, 2.1.3, and 2.1.6. Mitigation Measure 3.3-2 (listed above) implements Policies 2.1.2, 2.1.8, and 2.1.16.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Impact CR-4 of the MTP/SCS EIR determined that the impact related to human remains from concurrent construction projects and ongoing operations related to land use and transportation planning considered under the MTP/SCS would be less than significant. No mitigation was incorporated (SACOG 2012, page 7-60).

d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?

No Impact. With the adoption of Assembly Bill (AB) 52, impacts to tribal cultural resources must also be addressed under CEQA. As defined in Public Resources Code Section 21074, a tribal cultural resource is a site, feature, place, cultural landscape, sacred place or object with cultural value to a “California Native American tribe,” that is either on, or eligible for inclusion in, the California Register of Historical Resources or a local historic register, or is a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a tribal cultural resource.

There are no California Register of Historical Resources eligible or otherwise resources within the area potentially affected by project implementation. Similarly, the NAHC review of their Sacred Lands File failed to identify resources of concern to the local Native American community within any of the project sites that comprise the area potentially affected by project implementation. Finally, no areas or issues of concern were identified within the project area as a result of the tribal outreach completed by the City of Sacramento environmental planning staff. As such, implementation of the proposed project would have **no impact** to tribal cultural resources as defined in Public Resources Code Section 21074.

3.4 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Would the project:				
a) Develop land use patterns that cause wasteful, inefficient, and unnecessary consumption of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section addresses electrical and natural gas services and energy use related to transportation and also provides a brief overview of state and local laws and regulations pertaining to energy. The analysis considers the primary uses of energy for the proposed project; the benefit of existing regulations that require energy-efficient construction and operation; the location, design, and mix of uses of the proposed project relative to energy use; the degree to which the proposed project would create physical environmental effects related to the construction or expansion of existing transmission facilities; and the potential for the proposed project to result in the wasteful, inefficient, and unnecessary consumption of energy.

3.4.1 ENVIRONMENTAL SETTING

ELECTRICAL SERVICE

The Sacramento Municipal Utility District (SMUD) generates, transmits, and distributes electricity to approximately 1.4 million customers through approximately 10,473 miles of electric transmission and distribution lines within its estimated 900-square-mile service area in Sacramento County and a small portion of Placer County (SMUD 2014).

In 2011, SMUD generated approximately 10,421 million kilowatt-hours (kWh) of electricity within its service area (California Energy Commission [CEC] 2015a). Of this total, the city of Sacramento received 3,691 million kWh, which accounted for 35 percent of the total electrical consumption within the SMUD service area (City of Sacramento 2014a:6-6). Electrical consumption in SMUD’s service area increased by 1.4 percent during 2013 to approximately 10,564 million kWh (CEC 2015a).

SMUD receives power through varied sources, including hydropower, natural-gas-fired generators, renewable energy from solar and wind power, and power purchased on the wholesale market.

ENERGY CONSERVATION

SMUD has created two separate programs to grow renewable energy supplies for its customers and conserve energy in its service area: a green pricing program called Greenergy and a RPS program.

SMUD's renewable energy supply is accounted separately for these two programs and aggregated to provide a total, non-large hydro-renewable energy supply.

SMUD's voluntary "Geenergy" green pricing program began in 1997. Geenergy is a voluntary program where customers may elect to obtain 100 or 50 percent, respectively of their electricity from a renewable source by paying a monthly fee (SMUD 2015c). Residential customers also have the option of selecting renewable energy supply for 50 percent of their electricity and offsetting the carbon footprint with special purchases in carbon offset projects.

SMUD's RPS program was approved by SMUD's elected board 1 year before the state RPS program was approved by the legislature and governor. To meet its annual renewables goals, SMUD both contracts for renewable electricity from independent power producers and builds and owns renewable energy power plants. SMUD met its renewable energy supply goals of 24 percent for 2011 (20 percent RPS + 4 percent Geenergy in 2011). SMUD has chosen to meet or exceed the state requirements and anticipates meeting the 2020 goal of 37 percent (33 percent RPS plus 4 percent Geenergy) (SMUD 2015c).

NATURAL GAS SERVICE

Natural gas service in Sacramento County is provided by Pacific Gas and Electric Company (PG&E) through portions of PG&E's approximately 46,000 miles of natural gas distribution pipelines. The Central City area generally is served by a grid system of high pressure natural gas distribution pipelines and a secondary, low pressure system that in some cases runs parallel to high pressure mains. The midtown area is served by a grid system of high-pressure natural gas pipelines that range in size from 4 inches to 12 inches in diameter. There is also a secondary low-pressure system that consists of primarily 2-inch and 4-inch lines.

ENERGY USE FOR TRANSPORTATION

Transportation is, by far, the largest energy consuming sector in California, accounting for approximately 38 percent of all energy use in the state (U.S. Energy Information Administration 2013). Since transportation accounts for more energy consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the travel demand reducing features of the project site and design are important for consideration in an assessment of energy efficiency (Lawrence Berkeley National Laboratory 2013).

The total gasoline and diesel fuel consumed in the City is expected to increase between 2011 and 2035. However, the per-capita vehicle miles traveled (VMT) in the city of Sacramento are expected to decline during the same time period. In addition, the city of Sacramento's per capita VMT is anticipated to be less than the regional per capita VMT. The regional per-capita VMT in 2020 is estimated to be 25.4 miles per day, while the city's per-capita VMT would average 23.8 miles per day (Sacramento Area Council of Governments [SACOG] 2011, Chapter 5B, page 84). In 2035, forecast regional average per capita VMT is 24.1 miles per day, whereas the city would have an average of approximately 22.2 miles per day.

The reduction in VMT associated with the location and urban design environment of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the MTP/SCS. The regional VMT per capita in 2008 was estimated to be 26 miles per day. For the traffic analysis zone that includes the project site, the average per-capita VMT in 2008 was approximately 9 miles per day. In 2035, forecast regional average per-capita VMT is 24 miles per day, whereas the project site and vicinity would have an average of approximately 7 miles per day. Therefore, the project site and vicinity is estimated to have per capita VMT rates of approximately 66 percent less than the regional average in 2008 and 71 percent less than the regional average in 2035 (SACOG 2012).

California Building Energy Efficiency Standards

The proposed project would be required to comply with Title 24 of the California Code of Regulations related to energy efficiency. Title 24 provides energy efficiency standards for both residential and nonresidential buildings. The Building Energy Efficiency Standards were revised in 2013 and became effective on July 1, 2014.

The CEC expects implementation of the 2013 Building Energy Efficiency Standards to reduce the growth in electricity use by 555.5 GWh per year and reduce the growth in natural gas use by 7.0 MM therms per year. The energy savings attributable to new low-rise, multi-family residential buildings is 5.9 GWh, 6.0 MW of demand, and 0.18 MM therms of gas. The energy savings attributable to new nonresidential buildings is 272.3 GWh of electricity, 50.3 MW of demand, and 3.74 MM therms of gas. Alterations to existing non-residential buildings are a substantial part of the projected energy savings. These savings result from retrofit insulation requirements for existing roofs, improvements in interior lighting, and increased efficiency requirements for HVAC equipment. The energy savings attributable to alterations to existing non-residential buildings is 255.4 GWh per year of electricity savings and 2.4 MM therms per year of natural gas savings (CEC 2013c).

In addition, the 2013 California Green Building Code (Part 11, Title 24) requires mandatory inspections of energy systems (e.g., heat furnace, air conditioner, and mechanical equipment) for non-residential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies.

The proposed project would be required to comply with the current energy performance standards found in Title 24 of the California Code of Regulations, resulting in reductions in energy demand, including the 2013 California Green Building Code (Part 11 of Title 24).

3.4.2 DISCUSSION

The checklist questions listed above, which were derived from the guidance in Appendix F, are addressed below to evaluate the proposed project's energy impacts.

a) Would the project develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy?

Less than Significant. The proposed project would not be expected to cause the inefficient, wasteful, or unnecessary consumption of energy.

Construction-Related Energy Consumption

Implementation of the proposed project would increase the consumption of energy for the duration of the proposed project's construction in the form of electricity, natural gas, and petroleum products. The primary energy demands during construction would be associated with construction vehicle fueling. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the city of Sacramento or Sacramento County. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Residential- and Commercial-Related Energy Consumption

The residential units and commercial space proposed on the project site would be more energy efficient than average single- or multi-family units in the City and also more energy efficient compared to the existing commercial land uses occupying the project site. Most residential energy use goes to space heating, thus smaller units in multifamily buildings that share walls and require less heating and cooling consume less energy than single-family detached homes. The average energy consumption for multifamily housing units is approximately half of the energy consumed by an average single-family detached home (U.S Environmental Protection Agency 2013). In addition, compact residential development in transit-oriented locations generally results in approximately 30 percent less energy consumption than traditional single-family detached homes (U.S. Environmental Protection Agency 2013). Both proposed residential and commercial land uses would be built to meet the most current California Building Energy Efficiency Standards described above, which would be more stringent than the standards that existed at the time the existing land uses on the project site and multi-family homes in the region were constructed. Furthermore, as described in Chapter 2.0, "Project Description," the proposed project would comply with the requirements for LEED Platinum certification, which would include energy efficiency design requirements beyond those of the California Building Energy Efficiency Standards. Therefore, proposed residential and commercial land uses would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Transportation-Related Energy Consumption

The proposed project is in the Central City area, where there is a highly connected grid street network, frequent transit service, relatively high residential densities and non-residential intensities, and other characteristics that reduce travel demand. The existing character of the project vicinity and design of the project would allow new residents to access jobs and amenities such as stores, restaurants, and cultural events using public transit, walking, and biking, which would reduce overall transportation-related energy consumption. The average distance for vehicle trips from the proposed project would be shorter due to the proximity of amenities and places of employment, further reducing transportation-related energy consumption.

The reduction in VMT associated with the location of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the MTP/SCS. The regional VMT per

capita in 2008 was estimated to be approximately 25.8 miles per day (SACOG 2011, Chapter 5B, page 86). For the traffic analysis zone that includes the project site (i.e., Center and Corridor Communities), the average per capita VMT in 2008 for project site was approximately 14.3 miles per day. In 2035, forecast regional average per capita VMT is 24.1 miles per day, whereas the project site vicinity (i.e., Center and Corridor Communities) would have an average of approximately 12.5 miles per day (SACOG 2011, Chapter 5B, page 88). Therefore, the proposed project is estimated to have a per capita VMT rate of approximately 52 percent less than the regional average in 2008 and 48 percent less than the regional average in 2035.

Conclusion

As described above, the proposed residential and commercial land uses would be more energy efficient compared to average single- and multi-family dwelling units in the City and compared to the existing commercial land uses on the project site. Furthermore, the proposed project would reduce transportation-related energy consumption by eliminating trips and reducing trip lengths. In addition, with implementation of Building Energy Efficiency Standards (Title 24 of the California Code of Regulations) and compliance with the requirements of LEED Platinum, the proposed project would construct new residential and commercial land uses that meet the most current and stringent energy efficiency standards. The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards.¹ This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of “cool roofing” materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. The proposed project would not be expected to cause the inefficient, wasteful, or unnecessary consumption of energy. The impact is considered **less than significant**.

b) Would the project require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant. The existing development is served by SMUD’s aboveground and underground electric transmission and distribution lines. SMUD would use existing facilities lines to supply the necessary service to the project site, which currently serve the existing land uses. This existing system consists of multiple circuits and interconnects with several substations located nearby. The project has been designed in coordination with SMUD, including accommodating installation and ongoing access to a new transformer on the project site.

The existing development is served by a grid system of PG&E high-pressure natural gas pipelines that range in size from 4 inches to 12 inches in diameter. There is also a secondary low-pressure system that consists of primarily 2-inch and 4-inch lines. Existing on-site gas lines would be realigned, as necessary, to serve the new building.

¹ For more information, please see the California 2013 Green Buildings Standards Code. California Code of Regulations, Title 24, Part 11. Available: <http://www.documents.dgs.ca.gov/bsc/CALGreen/2013-California-Green-Building-Standards-Code.PDF>.

Electrical demand for the proposed project would be approximately 1.37 million kWh per year, and natural gas demand for the proposed project would be approximately 3,262,409 thousand British thermal units per year (AECOM 2016). This would represent a net change in electricity and natural gas demand from existing conditions of approximately 1.15 million kWh per year and 2,860,349 thousand British thermal units per year (AECOM 2016). Based on SMUD's and PG&E's total service area and total supply of energy, the energy demands created by the proposed project are not considered substantial in relation to the total amount of existing and future energy supplied by SMUD (10,564 million kWh of electricity in 2013 and 12,071 million kWh in 2024) and PG&E (4,808 MM therms of natural gas in 2013 and 4,888 MM therms in 2024).

The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards.² This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of "cool roofing" materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. The energy demand estimates presented earlier do not factor in the project's commitment to Tier 1 standards.

The proposed project's increase in energy demand would not be substantial in relation to existing or future demands in SMUD's and PG&E's service area and existing infrastructure is available to serve the proposed project, the proposed project would not require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. The impact is considered **less than significant**.

² For more information, please see the California 2013 Green Buildings Standards Code. California Code of Regulations, Title 24, Part 11. Available: <http://www.documents.dgs.ca.gov/bsc/CALGreen/2013-California-Green-Building-Standards-Code.PDF>.

3.5 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 ENVIRONMENTAL SETTING

GEOLOGY

The project site is located in the Sacramento Valley, which forms the northern portion of the Great Valley geomorphic province of California. The Great Valley is a northwest-trending asymmetrical depression (formed by intersecting, downward-sloping folds of bedrock) approximately 50 miles wide and 400 miles long. It lies between the mountains of the Sierra Nevada to the east, the Cascade Range and Klamath Mountains to the north, and the Coast Ranges to the west.

Most of the surface of the Great Valley is covered with Holocene (11,700 years Before Present [B.P.] to Present Day) and Pleistocene-age (2.6 million to 11,700 years B.P.) alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by rivers and deposited on the valley floor. Rock formations at the project site (described in further detail below) consist of younger alluvium underlain by the geologically older and erosion-resistant Riverbank Formation. Because of the low topographic position and proximity to the confluence of the Sacramento and American rivers, the Sacramento area has been subjected to repeated inundation by floodwaters during the past several thousand years. The floodwaters deposit fine sand and silt-rich alluvium along the flanks of the river bank and finer-grained clay and silt are carried in suspension onto the distal floodplain. This hydraulic sorting process created a 'natural levee' landform with a topographic gradient that slopes away from the river. Additionally, the use of pressurized jets of water during historic hydraulic mining of gold-rich deposits in upstream watersheds washed substantial amounts of fine and coarse-grained sediment out of the hills. This sediment outwash choked the stream channels, and large storm events subsequently transported the sediment downstream, depositing it in the Sacramento and American River channels and adjacent flood plains. (Fugro William Lettis & Associates, Inc. 2010.)

The Sacramento Valley has historically experienced a low level of seismic activity during the last 11,700 years. The closest fault to the project site with evidence of displacement during Holocene time is a segment of the Dunnigan Hills Fault located approximately 29 miles to the northwest. In general, active faults are located along the western margin of the Central Valley and within the Coast Ranges, approximately 30–40 miles to the southwest (Jennings and Bryant 2010). Table 3.5-1 provides the approximate distance to active regional faults and their estimated moment magnitude (ENGEO 2015: 3–4 – [see Appendix E of this SCEA]). The moment magnitude scale is used to describe the relative strength of a seismic event relative to the energy that is released in such an event.

SOILS

A review of Natural Resources Conservation Service (NRCS 2015) soil survey data indicates that the project site is composed of Urban Land; NRCS does not provide soil characteristics for this soil type. However, a site-specific *Geotechnical Exploration* prepared by ENGEO in 2015 determined that the project site consists of non-plastic to low plasticity sandy silt, silty clay, and silty sand from the surface to depths of 17.5–22 feet below the ground surface (bgs), underlain by a 2- to 3-foot-thick layer of medium dense silty sand. Dense silty gravel with sand and cobble was encountered at depths ranging from 20–25 feet bgs (this likely represents the Riverbank Formation). The gravel layer extended to a depth of approximately 37 feet bgs. Medium dense clayey sand to very stiff/hard sandy lean clay was encountered at depths ranging from 40–55 feet bgs. At a depth of approximately 55 feet bgs, the exploration encountered hard sandy clay and very dense silty sand. Lean clay and poorly graded sand were present from 60–101.5 feet bgs. (ENGEO 2015: 7, Appendix A.) In general, fine-grained silty and sandy soils have high water erosion potential if not properly stabilized. Furthermore, in general, silty and clayey soils tend to impede the downward flow of water and are, therefore, of low permeability, while sandy soils have large pore spaces and are, therefore, highly permeable.

Table 3.5-1. Active Regional Faults			
Fault Name	Regional Location	Approximate Distance from Project Site (miles)	Projected Maximum Moment Magnitude
Great Valley 4a, Trout Creek	Margin between Sacramento Valley and Coast Range	28	6.5
Great Valley 4a, Gordon Valley	Margin between Sacramento Valley and Coast Range	31	6.7
Great Valley 3, Mysterious Ridge	Margin between Sacramento Valley and Coast Range	32	6.7
Great Valley 5, Pittsburg Kirby Hills	Margin between Sacramento Valley and Coast Range	34	6.5
Hunting Creek-Berryessa	Coast Range	40	6.7
Green Valley (Connected)	Coast Range	40	6.6
West Napa	Coast Range	50	6.5
Greenville (Connected)	Coast Range	52	6.7
Great Valley Segment 2	Margin between Sacramento Valley and Coast Range	57	6.3
Mount Diablo Thrust	Coast Range	57	6.5
Great Valley Segment 7	Margin between San Joaquin Valley and Coast Range	58	6.6
Calaveras (Combined)	Coast Range	60	6.8
Bartlett Springs	Coast Range	61	6.9
Hayward-Rodgers Creek (Combined)	Coast Range	62	7.2
Source: ENGEO 2015: 3–4			

PALEONTOLOGICAL RESOURCES

Based on a review of geologic mapping prepared by Dupras (1999) and Wagner et al. (1987), earthmoving activities at the project site would occur in the following geologic formations:

- ▶ **Levee and Channel Deposits.** Holocene-age deposits of active stream channels and their natural levees, as well as adjacent broad alluvial fans. These surficial deposits at the project site extend to a depth of approximately 17.5–22 feet bgs.
- ▶ **Riverbank Formation.** This formation is Pleistocene in age; estimates place the age between 130,000 and 450,000 years Before Present (B.P.) (Marchand and Allwardt 1981). In the project vicinity, the Riverbank Formation forms higher alluvial fans and terraces of major rivers, such as the American and Sacramento and can be divided into upper and lower members. Sediments in the Riverbank Formation consist of weathered reddish gravel, sand, and silt that form alluvial terraces and fans. In the Sacramento Valley, this formation contains more mafic rock fragments than the San Joaquin Valley and thus tends toward stronger soil-profile developments that are more easily distinguishable from the younger Modesto Formation (Helley and Harwood 1985). The Pleistocene-

age Riverbank Formation outcrops at the surface approximately 0.5 mile to the east and south, and underlies the Holocene alluvium at the project site. Dense silty gravel with sand and cobble was encountered at depths ranging from 20–25 feet bgs; based on its composition, this layer likely represents the Riverbank Formation.

Paleontological Resource Assessment Criteria

A paleontologically sensitive rock unit is one that is rated high for potential paleontological productivity and is known to have produced unique, scientifically important fossils. The potential paleontological productivity rating of a rock formation exposed in a project area refers to the abundance and densities of fossil specimens, previously recorded fossil sites, or both in exposures of the unit in other locations. Exposures of a specific rock formation in the project area are most likely to yield fossil remains representing particular species in quantities or densities similar to those previously recorded from that formation in other locations. Therefore, the paleontological sensitivity determination of a rock formation is based primarily on the types and numbers of fossils that have been previously recorded from that rock formation (i.e., the paleontological productivity).

For the purposes of this analysis, a unique paleontological resource or site is one that is considered significant under the following professional paleontological standards.

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

- ▶ a type specimen (i.e., the individual from which a species or subspecies has been described);
- ▶ a member of a rare species;
- ▶ a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;
- ▶ a skeletal element different from, or a specimen more complete than, those now available for its species; or
- ▶ a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates are generally common; the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare. The value or importance of different fossil groups varies, depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions such as part of a research project.

Paleontological Resources Inventory

Geologic maps and available published geological and paleontological literature covering the geology of the project study area were reviewed to determine the exposed and subsurface rock formations, to assess the potential paleontological productivity of each rock formation, and to delineate their respective areal distribution in the project study area. The number and location of previously recorded fossil sites from rock formations exposed within the project study area and the types of fossil remains each rock formations has produced were evaluated based on published geological and paleontological literature. The literature review was supplemented by a records search from the University of California, Berkeley Museum of Paleontology (UCMP) on November 20, 2015.

Paleontological Resources Assessment by Rock Unit

Levee and Channel Deposits

The Levee and Channel Deposits are of Holocene age. By definition, to be considered a unique paleontological resource, a fossil must be more than 11,700 years old. Holocene deposits contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources. Therefore, these formations are considered to be of low paleontological sensitivity.

Riverbank Formation

The Pleistocene epoch, known as the “great ice age,” began approximately 2.6 million years ago. Based on his survey of vertebrate fauna from the nonmarine late Cenozoic deposits of the San Francisco Bay region, Savage (1951) concluded that two major divisions of Pleistocene-age fossils could be recognized: the Irvingtonian (older Pleistocene fauna) and the Rancholabrean (younger Pleistocene fauna). These two divisions of Quaternary Cenozoic vertebrate fossils are widely recognized today in the field of paleontology. The age of the later Pleistocene, Rancholabrean fauna was based on the presence of bison and of many mammalian species that inhabit the same area today. In addition to bison, larger land mammals identified as part of the Rancholabrean fauna include mammoths, mastodons, camels, horses, and ground sloths. The Irvingtonian fauna is more scarce, and is represented by *Borophagus* (bone-crushing dogs), hyenas, saber-toothed cats, rabbits, giant marmots, horses, mammoths, and mastodons.

Remains of land mammals have been found at several localities in alluvial deposits referable to the Riverbank Formation in the Sacramento region. Jefferson (1991a, 1991b) compiled a database of California Late Pleistocene vertebrate fossils from published records, technical reports, unpublished manuscripts, information from colleagues, and inspection of paleontological collections at more than 40 public and private museums. Jefferson lists six different localities in Sacramento, all referable to the Riverbank Formation. For example, the Teichert Gravel Pit on State Route 16 in southeastern Sacramento County yielded specimens of broad-footed mole, Harlan’s ground sloth, rabbit, California ground squirrel, Botta’s pocket gopher, pocket mouse, groove-toothed harvest mouse, woodrat, vole, coyote, dire wolf, mammoth, horse, western camel, deer, antique bison, fish (carps and minnows), frog, snake, Pacific pond turtle, and the family Anatidae (ducks, geese, and swans).

There are at least nine recorded Rancholabrean-age vertebrate fossil sites from the Riverbank Formation in Sacramento County. Most recently, Pleistocene-age mammoth remains were discovered on July 2, 2004, during excavation of a Sacramento Municipal Utility District trench in Elk Grove (Kolber 2004). Mammoth remains recovered from that site consisted of a tusk, ribs, teeth, and portions of a shoulder blade. UCMP locality V-74086, located in south Sacramento at Ehrhardt Avenue, also contained fossilized Rancholabrean-age mammoth remains. The other UCMP sites in Sacramento—localities V-6747, V-6846, V-68141, V-69129, and V-75126—contained remains of Rancholabrean-age bison, camel, coyote, horse, Harlan’s ground sloth, mammoth, woodrat, fish, mole, snake, and gopher. Pleistocene-age fossils were recovered from the Riverbank Formation at the ARCO Arena site (Hilton et al. 2000); those fossils included remains of Harlan’s ground sloth, bison, coyote, horse, camel, squirrel, antelope or deer, and mammoth. Finally, San Diego Society of Natural History locality 0663 (Jefferson 1991a, 1991b) included fossil specimens of Rancholabrean-age horse and camel recovered from sediments in Sacramento.

Several localities near the cities of Davis and Woodland have yielded the remains of Rancholabrean-age rodents, snakes, horses, antelope, Harlan’s ground sloth, mammoth, and saber-toothed cat from sediments referable to the Riverbank Formation (Hay 1927; UCMP 2015). Three sites in Sutter County have yielded Rancholabrean vertebrate fossils recovered from Pleistocene-age sediments (UCMP 2015). UCMP locality V-4043 in the Sutter Buttes yielded remains from a Pleistocene-age horse in sediments referable to the Riverbank Formation.

Fossil specimens from the Riverbank Formation have been reported by Marchand and Allwardt (1981) near the type locality in the city of Riverbank. Fossil specimens from sediments referable to the Riverbank Formation have been reported at numerous other locations throughout the Central Valley (UCMP 2015), including Lathrop, Modesto, Stockton, Tracy (along the Delta-Mendota Canal), Manteca, and Merced.

The results of the UCMP paleontological records search (UCMP 2015) indicated that no fossil remains have been recovered from the project site. However, the occurrence of Pleistocene vertebrate fossil remains in sediments referable to the Riverbank Formation in Sacramento and throughout the Central Valley indicates that this rock formation is paleontologically sensitive.

3.5.2 DISCUSSION

- a) **Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Less than Significant. The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone (California Geological Survey 2012) or any other known fault. The nearest fault zoned under the Alquist-Priolo Act is the Green Valley Fault, approximately 40 miles to the southwest. Because the damage from surface fault rupture is generally limited to a linear zone a few yards wide, the potential

for surface fault rupture to cause damage to proposed structures is negligible and this impact is considered **less than significant**.

ii) Strong seismic ground shaking?

Less than Significant. The Sacramento Valley has historically experienced a low level of seismic activity during the last 11,700 years. In general, active faults are located along the western margin of the Central Valley and within the Coast Ranges, approximately 30–40 miles to the southwest (Jennings and Bryant 2010).

ENGEO (2015) has prepared a preliminary *Geotechnical Exploration* at the project site that includes an evaluation of seismic hazards. The intensity of ground shaking depends on the distance from the earthquake's epicenter to the site, the magnitude of the earthquake, site soil conditions, and the characteristics of the source. Ground motions from seismic activity can be estimated by probabilistic method at specified hazard levels and by site-specific design calculations using a computer model. ENGEO (2015: 15) made a preliminary determination that a peak horizontal ground acceleration of 0.30 *g* (where *g* is the percentage of gravity) would be appropriate for use in earthquake-resistant design at the project site. This calculation indicates that a relatively low level of seismic shaking would be expected at the site. ENGEO (2015: 15) determined the project site's seismic design parameters as required by the California Building Standards Code, and has incorporated appropriate recommendations into the project's foundation and retaining wall design. The design requirements contained in the California Building Standards Code are intended to reduce the potential loss of life and property to the maximum extent practicable. Therefore, this impact is considered **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant. Soil liquefaction most commonly occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Liquefaction may also occur in the absence of a seismic event, when unconsolidated soil above a hardpan becomes saturated with water. Factors determining the liquefaction potential are the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits, as well as uncompacted fill and other Holocene materials deposited by sedimentation in rivers and lakes (fluvial or alluvial deposits), as well as debris or eroded material (colluvial deposits), are more susceptible to liquefaction. Localities most susceptible to liquefaction-induced damage are underlain by loose, water-saturated, granular sediment within 40 feet of the ground surface. Liquefaction poses a hazard to engineered structures such as buildings, bridges, and underground utility pipelines. The loss of soil strength can result in bearing capacity insufficient to support foundation loads, increased lateral pressure on retaining walls, and slope instability.

ENGEO (2015: 9–10) performed a site-specific liquefaction analysis for the thin layers of medium dense silty sand/silt overlying the dense gravel layer at depths of 18–24 feet bgs. (Below the dense gravel layer, medium plasticity sandy lean clay to lean clay underlain by hard and very dense lean clay and sand were encountered by soil borings; however, ENGEO determined that these soils were not susceptible to liquefaction). The results of the liquefaction analysis indicated that the limited deposits immediately above the dense gravel may be potentially liquefiable. Based on the calculated factors of

safety and thickness of the layers, ENGEO estimated that liquefaction-induced settlement of approximately 0.5–0.75 inch is possible during a seismic event with a projected maximum moment magnitude of 6.6. Because the proposed structure includes a basement and ENGEO recommends use of a mat foundation extending to a minimum depth of 20 feet below grade (which would encounter the medium dense silty sand), ENGEO recommended that these liquefiable soil layers be removed during construction. With implementation of the geotechnical engineering recommendation to remove these liquefiable soil layers, which is consistent with the requirements of the California Building Standards Code, this impact would be **less than significant**.

iv) Landslides?

No Impact. The project site is located in an area of nearly flat topography and is not located adjacent to any steep slopes where landslides were represent a hazard. Thus, there would be **no impact**.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant with Mitigation. Project implementation would result in earth-moving activities throughout the approximately 0.44-acre project site. As described above, ENGEO (2015: 7) found that the upper 17 feet of the soil profile at the project site consists of sandy silt and silty sand. These soil types are highly susceptible to both wind and water erosion. Construction activities associated with the project, including grading, staging, trenching, and foundation excavation, would expose soils to erosive forces and could transport sediment into the drainage system (and ultimately into the Sacramento River). Intense rainfall and associated stormwater runoff could also result in short periods of sheet erosion within areas of exposed or stockpiled soils.

Project construction activities that do not follow proper procedures and best management practices (BMPs) to minimize erosion could temporarily degrade existing water quality and beneficial uses in downstream waterbodies from construction-related sediment transport and could violate water quality standards or waste discharge requirements. The impact is considered **potentially significant**.

Mitigation Measure 3.5-1a: Prepare and Implement an Erosion and Sediment Control Plan.

Before the start of earth-moving activities, the project applicant shall prepare an Erosion and Sediment Control Plan for City approval. The plan shall contain a listing of all site-specific BMPs that would be used to control surface runoff and erosion, retain sediment, and prevent pollution from off-site stormwater runoff during earthmoving activities. Erosion and sediment-control BMPs determined by the City to be necessary and feasible shall be implemented at the project site.

Mitigation Measure 3.5-1b: Implement Mitigation Measure 3.8-1 (File a Notice of Intent with the Central Valley Regional Water Quality Control Board to Obtain Coverage under Order R5-2013-074 or Waste Discharge Requirement and a Memorandum of Understanding with the City of Sacramento, and Prepare a Construction Dewatering Plan).

With implementation of Mitigation Measure 3.5-1a, the proposed project would reduce construction-related erosion and sediment transport by preparing and implementing an erosion and sediment control

plan that contains site-specific BMPs designed to protect the water quality and beneficial uses during construction. In addition, with implementation of Mitigation Measure 3.5-1b (Mitigation Measure 3.8-1 from the “Hydrology and Water Quality” section of this SCEA), the project applicant would be required to obtain coverage under SWRCB’s Construction General Permit Order No. 2009-0009-DWQ and Order R5-2013-074 or waste discharge requirements, which would include compliance with the *Stormwater Quality Improvement Plan for the County of Sacramento and the Cities of Citrus heights, Elk Grove, Folsom, Galt, and Rancho Cordova* (Sacramento Stormwater Quality Partnership [SSQP] 2009) and implementation of sediment control measures and BMPs as set forth in the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions* (City of Sacramento 2007). These measures will be designed to control surface runoff and erosion, retain sediment, and prevent pollution from off-site stormwater runoff during earthmoving activities. Therefore, this impact would be **less than significant with mitigation**.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.5-3 found that site preparation activities, such as grading and trenching, at future project sites could lead to increased erosion by creating unstable rock or soil surfaces, by changing the permeability or runoff characteristics of the soil, or by modifying or creating new pathways for drainage. The analysis noted that compliance with Chapter 15.88 of the City Code, also known as the Grading Ordinance, requires that an Erosion and Sediment Control Plan must be prepared for each project within the city prior to the commencement of grading. An erosion control professional, landscape architect, or civil engineer specializing in erosion control must design the Erosion and Sediment Control Plan and be on the project site during the installation of erosion and sediment control measures, and supervise implementation of the installation and maintenance of such facilities throughout the site clearing, grading, and construction periods. The analysis concluded that with adherence to the City Grading Ordinance and applicable general plan policies, impacts associated with soil erosion would be less than significant.

The following *Sacramento 2035 General Plan* policies from the Environmental Resources Element (City of Sacramento 2015) set performance standards and criteria that address potential construction-related erosion and loss of topsoil impacts of future development within the city. Mitigation Measures 3.5-1a and 3.5-1b (listed above) implements applicable General Plan policies.

- ▶ **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 (e.g., cluster development), 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 1.1.7: 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.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Impact GEO-2 of the MTP/SCS EIR determined that new project construction and operation could result in increased runoff, wind and water erosion, sedimentation, and soil compaction. The analysis also found that all major earthwork requires a grading permit, to minimize erosion, in compliance with local building codes. Furthermore, new development and uses may be subject to compliance with an NPDES permit, including the implementation of BMPs that are specifically designed to reduce soil erosion or loss of topsoil. The MTP/SCS EIR found that with implementation of Mitigation Measure GEO-1, impacts from soil erosion and loss of topsoil would be less than significant. Mitigation Measures 3.5-1a and 3.5-1b (listed above) incorporate the MTP/SCS mitigation, with revisions that are applicable to this proposed project. Mitigation Measure GEO-1 from the MTP/SCS EIR is included below for the reader's edification.

Mitigation Measure GEO-1: Reduce soil erosion and loss of topsoil through erosion control mitigation and SWPPP. *The implementing agency should require the development and implementation of detailed erosion control measures, consistent with the CBC and UBC regulations and guidelines and/or local NPDES, to address erosion control specific to the project site; revegetate sites to minimize soil loss and prevent significant soil erosion; avoid construction on unstable slopes and other areas subject to soil erosion where possible; require management techniques that minimize soil loss and erosion; manage grading to maximize the capture and retention of water runoff through ditches, trenches, siltation ponds, or similar measures; and minimize erosion through adopted protocols and standards in the industry. The implementing agency should also require land use and transportation projects to comply with locally adopted grading, erosion, and/or sediment control ordinances beginning when any preconstruction or construction-related grading or soil storage first occurs, until all final improvements are completed. If a local grading, erosion, and/or sediment control ordinance or other applicable plans or regulations do not exist, the jurisdiction should adopt ordinances substantially addressing the foregoing features and apply those ordinances to new development projects.*

- c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

Less than Significant. ENGEO (2015: 13) anticipates that existing undocumented fill is likely present at the project site from both the former and existing site development. This undocumented fill material may date back to original development of the site in the early 1900s and therefore may contain debris, as well as a lack of appropriate soil compaction, that could result in inappropriate support for bearing loads (i.e., unstable soils). The proposed building footprint would cover nearly the entire project site and the bottom of the basement excavation is expected to extend to at least approximately 20 feet bgs. Therefore, it is likely that existing undocumented fills would be encountered. In order to provide appropriate foundation support, ENGEO recommends that the fill materials be removed as part of the basement excavation. In addition, undocumented fill in areas outside of the basement excavation that would support future improvements would also require overexcavation and removal. With implementation of the geotechnical engineering recommendation to remove any undocumented fill layers encountered during construction and replace these soils with clean, appropriately compacted fill

material, which is consistent with design standards contained in the California Building Standards Code, this impact would be **less than significant**.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

Less than Significant. Some medium plasticity clayey sands were encountered in borings obtained by ENGEO (2015: 7) at depths of 40–51 feet bgs. However, ENGEO did not identify expansive soils as a hazard from a geotechnical perspective. Furthermore, the results of site-specific soil testing have been incorporated by ENGEO in the proposed project’s structural design and earthwork recommendation, consistent with the requirements of the California Building Standards Code. Therefore, this impact is considered **less than significant**.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Wastewater treatment for the proposed project would continue to be provided by the City of Sacramento via underground sewer pipelines. Thus, there would be **no impact** related to soil suitability for use of septic tanks or alternative waste water disposal systems.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation. As discussed in detail above in the Environmental Setting, the Levee and Channel Deposits that outcrop at the surface and extend to a depth of approximately 17–22 feet bgs at the project site are of Holocene age. Holocene deposits contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources. Therefore, these formations are considered to be of low paleontological sensitivity. However, excavation for the proposed underground parking would extend approximately 20 feet bgs for mat foundations. As noted in the *Geotechnical Exploration* prepared by ENGEO (2015:17), if pier foundations were utilized, excavation would extend 30–50 feet bgs. The Riverbank Formation is present at depths of approximately 20–25 feet bgs, and therefore may be countered during project-related excavation activities. Because numerous vertebrate fossils have been recovered from the Riverbank Formation in northern and central California, including at least nine different localities from Sacramento County, this formation is considered to be paleontologically sensitive. Therefore, earthmoving activities in the Riverbank Formation could result in accidental damage to or destruction of unique paleontological resources. The impact is considered **potentially significant**.

Mitigation Measure 3.5-2: Conduct Construction Personnel Education, Stop Work if Paleontological Resources are Discovered, Assess the Significance of the Find, and Prepare and Implement a Recovery Plan, as Required.

To minimize the potential for destruction of or damage to potentially unique, scientifically important paleontological resources during project-related earthmoving activities, the project applicant shall implement the following measures to minimize accidental damage to or destruction of unique paleontological resources:

- Before the start of any earthmoving activities, the project applicant shall retain a qualified paleontologist to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.
- If paleontological resources are discovered during earthmoving activities, the construction crew shall notify the project applicant and the City of Sacramento Community Development Department and shall immediately cease work in the vicinity of the find. The project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered

With implementation of Mitigation Measure 3.5-2, construction workers would receive training regarding the possibility of encountering paleontological resources and, in the event that resources were discovered, work would stop immediately and fossil specimens would be recovered and recorded and would undergo appropriate curation. Therefore, this impact would be **less than significant with mitigation**.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.5-5 found that ground-disturbing activities in fossil-bearing rock formations have the potential to damage or destroy paleontological resources that may be present below the ground surface. Therefore, any earth-disturbing activities resulting from General Plan implementation could damage or destroy fossils in these rock units. The analysis concluded that with adherence to applicable General Plan policies, impacts would be less than significant.

The following *Sacramento 2035 General Plan* policy and implementation program from the Historic and Cultural Resources Element (City of Sacramento 2015) set performance standards and criteria that address potential paleontological resources impacts of future development within the city. Mitigation Measure 3.5-2 (listed above) has been identified to implement applicable General Plan policies.

- ▶ **Policy HCR 2.1.6 Planning.** The City shall take historical and cultural resources into consideration in the development of planning studies and documents.
- ▶ **Policy HCR 2.1.10 Early Project Consultation.** The City shall minimize potential impacts to historic and cultural resources by consulting with property owners, land developers, and the building industry early in the development review process.

- ▶ **Policy HCR 2.1.16 Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Impact CR-3 of the MTP/SCS EIR determined that ground-disturbing activities such as excavation for building foundations, trenching for utility lines, and grading, could damage or destroy sensitive paleontological resources. The MTP/SCS EIR found that with implementation of Mitigation Measure CR-4, the impact related to potential damage to or destruction of unique paleontological resources would be less than significant. The research and analysis presented in this SCEA, along with the adoption of Mitigation Measure 3.5-2 (listed above) incorporates the MTP/SCS mitigation, with revisions that are applicable to this proposed project. Mitigation Measure CR-4 from the MTP/SCS EIR is included below for the reader's edification.

Mitigation Measure CR-4: Conduct project-specific paleontological resource studies and identify and implement mitigation. *As part of planning, design and engineering of projects that result from the proposed MTP/SCS, the implementing agency should ensure that paleontological resources are identified and appropriately mitigated. If a project is located within an area of high or moderate paleontological resource sensitivity or near a known unique geological feature, and would remove at least 2,500 cubic yards of soil from a previously unearthed area, the implementing agency should retain a qualified paleontologist prior to construction to evaluate sensitivity for unique paleontological resources in their project area. When a project has been identified as potentially affecting a unique paleontological resource, a paleontological resources assessment should be prepared. This study should comply with standards in the industry such as the Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontological Resources (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee, 1995 and 2007). Any area of known unique paleontological resources should be avoided during construction when feasible. The implementing agency should establish construction protocols to ensure that contractors take appropriate measures to avoid destroying fossil materials discovered during construction. If unique paleontological resources are discovered during construction and/or avoidance is not feasible, the property owner should be encouraged to allow excavation, identification, cataloging and/or other documentation by a qualified paleontologist. The property owner should be further encouraged to donate the resource to a local agency, state university, or other applicable institution, for curation and display for public education purposes.*

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3.6 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section describes the global setting related to greenhouse gas (GHG) emissions and potential impacts related to the proposed project. The analysis is conducted using guidance provided by the City of Sacramento and Sacramento Metropolitan Air Quality Management District, and using the land use development model, California Emissions Estimator Model Version 2013.2.2 (CAPCOA 2013).

3.6.1 ENVIRONMENTAL SETTING

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth’s surface temperature. A portion of the solar radiation that enters the earth’s atmosphere is absorbed by the earth’s surface, and a smaller portion of this radiation is reflected back toward space. This infrared radiation (i.e., thermal heat) is absorbed by GHGs within the earth’s atmosphere. As a result, infrared radiation released from the earth 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 the earth.

Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels, waste treatment, and agricultural processes. The following GHGs are often described as the principal contributors to human-induced global climate change:

- ▶ Carbon dioxide (CO₂)
- ▶ Methane (CH₄)
- ▶ Nitrous oxide (N₂O)
- ▶ Hydrofluorocarbons
- ▶ Perfluorocarbons
- ▶ Sulfur hexafluoride
- ▶ Nitrogen Trifluoride¹

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere with that of CO₂. The GWP of a GHG is based on several factors, such as the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in

¹ Nitrogen trifluoride is recognized by the State of California as a GHG (California Health and Safety Code, Section 38505[g]).

the atmosphere (its “atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG; therefore, CO₂ has a GWP of 1. GHGs with lower emissions rates than CO₂ still may contribute to climate change because they are more effective than CO₂ at absorbing outgoing infrared radiation (i.e., they have a high GWP). The concept of CO₂ equivalent (CO₂e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

GHGs are present in the atmosphere naturally, are released by natural and anthropogenic sources, and are formed from secondary reactions taking place in the atmosphere. GHG emissions contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, electric utility, residential, commercial, and agricultural sources. For purposes of accounting for and regulating GHG emissions, sources of GHG emissions are grouped into emission categories. The California Air Resources Board (ARB) identifies the following categories that account for most anthropogenic GHG emissions generated within California:

- ▶ Transportation: On-road motor vehicles, recreational vehicles, aviation, ships, and rail
- ▶ Electricity: Use and production of electrical energy
- ▶ Industry: Mainly stationary sources (e.g., boilers and engines) associated with process emissions
- ▶ Commercial and Residential: Area sources, such as landscape maintenance equipment, fireplaces, and consumption of natural gas for space and water heating
- ▶ Agriculture: Agricultural sources that include off-road farm equipment; irrigation pumps; crop residue burning (CO₂); and emissions from flooded soils, livestock waste, crop residue decomposition, and fertilizer volatilization (CH₄ and N₂O)
- ▶ High Global Warming Potential Gases: Refrigerants for stationary and mobile source air conditioning and refrigeration, electrical insulation (e.g., SF₆), and various consumer products that use pressurized containers
- ▶ Recycling and Waste: Waste management facilities and landfills; primary emissions are CO₂ from combustion and CH₄ from landfills and wastewater treatment

The majority of CO₂ emissions are byproducts of fossil fuel combustion, which would be the main GHG pollutant generated by the proposed project. CH₄ is the main component of natural gas and is associated with agricultural practices and landfills. N₂O is a colorless gas that results from industrial processes, vehicle emissions, and agricultural practices. GHG emissions related to human activities have been determined as “extremely likely” responsible (indicating 95% certainty) for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s atmosphere and oceans, with corresponding effects on global circulation patterns and climate (ARB 2014).

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, no single project alone is expected to measurably contribute to a noticeable incremental change in the global average temperature, or to a global, local, or micro climate. Therefore, impacts related to GHG emissions are widely accepted to have potential cumulative impacts because, while

GHG emissions from a single project may not have a significant impact on climate change, GHG emissions from multiple projects could cumulatively effect change in global climate.

3.6.2 DISCUSSION

- a) **Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**
- b) **Would the proeject conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

These two checklist items are addressed together, since consistency with a plan for reducing GHG emissions (item b)) is a way of determining whether a project generates GHG emissions that may have a significant impact on the environment (item a)).

Construction-related GHG exhaust emissions would be generated by sources such as heavy-duty off-road equipment, trucks hauling materials to the project site, and worker commute vehicles. Operational emissions would be associated with worker commutes (i.e., mobile sources), energy consumption (i.e., electricity and natural gas), water consumption, and waste disposal. GHG emissions were estimated using the same methodology discussed earlier in Section 3.1, "Air Quality." CalEEMod Version 2013.2.2 can estimate GHG emissions from construction and operational activities in units of carbon dioxide equivalents (CO₂e).

SMAQMD has established quantitative significance thresholds for evaluating GHG emissions in CEQA analyses. For construction and operational emissions, one option for a significance threshold is 1,100 metric tons (MT) CO₂e per year (SMAQMD 2014). Any residential, commercial, or industrial project that would generate more than 1,100 MT CO₂e per year during construction or operations would be considered to cause a cumulatively considerable incremental contribution to the significant cumulative impact of climate change.

As is shown in Table 3.6-1, maximum construction-related GHG emissions for the proposed project were estimated to be 455 MT CO₂e, occurring during the first year of construction. Therefore, construction-related GHG emissions would not exceed the SMAQMD's threshold of significance.

Operation of the proposed project would generate GHG emissions from area sources, mobile sources, and electricity use. Table 3.6-1 summarizes the annual operational emissions and amortized construction GHG emissions for the proposed project, as well as existing operational emissions estimates for current land uses on the project site. Construction emissions were amortized over a 25-year period. This is conservative, as the proposed building will likely have a much longer lifetime. The analysis is also conservative because it does not take into account the project's commitment to include energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards.² This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of "cool roofing"

² For more information, please see the California 2013 Green Buildings Standards Code. California Code of Regulations, Title 24, Part 11. Available: <http://www.documents.dgs.ca.gov/bsc/CALGreen/2013-California-Green-Building-Standards-Code.PDF>.

materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. As shown in Table 3.6-1, the net change from existing emissions and the project-related annual operational and amortized construction GHG emissions were estimated at a total of 1,073 MT CO₂e per year, which is below the SMAQMD threshold of 1,100 MT CO₂e per year.

Table 3.6-1. Annual Greenhouse Gas Emissions Estimates	
Emissions Source	CO ₂ e Annual Emissions (Metric Tons/Year)
Construction	
2017 Construction	446
2018 Construction	182
Off-Site Water Pipeline Construction	9
Maximum Construction Emissions	455
Operations	
Proposed Project Annual Operational Emissions	1,354
Existing Operational Emissions	299
Amortized Construction Emissions	18
Net Increase in Emissions	1,073
SMAQMD Thresholds of Significance	1,100
Exceeds SMAQMD Thresholds	No
Source: Modeled by AECOM in 2015 and 2016.	

Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is the long-range transportation plan for the region. The MTP/SCS designates the region using five “community types” (Center and Corridor Community, Developing Community, Established Community, Rural Residential Community, and Lands Not Identified for Development in the MTP/SCS Planning Period). The MTP/SCS designates the project site as a Center and Corridor Community and a Transit Priority Area (TPA) (see Exhibit 3-3). A Center and Corridor Community is typically:

“...higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as ... commercial corridors..., or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types” (SACOG 2011a:32).

Center and Corridor Communities are typically higher in development density and have a greater mixing of uses compared to other community types. Centers and Corridors include historic downtowns, main streets, commercial corridors, transit-rich areas, central business districts, town centers, and areas that have been developed at higher densities and development intensities. Some of the Center and Corridor Communities have frequent transit service, either bus or rail, and all have pedestrian and

bicycling infrastructure that is more relatively supportive of walking and bicycling compared to other community types.

The Center and Corridor Communities consist of areas that are typically higher density and a more diverse land use mix, as compared with surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region (SACOG 2012, Chapter 3, page 32).

The MTP/SCS also identifies “Transit Priority Areas” (TPAs). Transit Priority Areas are within ½ mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS (SACOG 2012, Chapter 3, page 46). According to SACOG, there is substantial overlap between Transit Priority Areas and Center and Corridor Communities, but Transit Priority Areas “provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period” (SACOG 2012, Chapter 3, page 46).

A “Determination of MTP/SCS Consistency Worksheet” has been prepared for the proposed project and is appended to this SCEA (Appendix C). As described in the letter included in Appendix C, SACOG concurs with the City’s determination that the proposed project is consistent with the MTP/SCS.

The proposed project qualifies as a “Transit Priority Project” in accordance with SB 375. The MTP/SCS identifies that Transit Priority Areas “provide additional opportunities to realize the benefits of smart land use during the MTP/SCS planning period” (SACOG 2012; Chapter 3, page 46).

According to Appendix E-3 of the MTP/SCS, the forecast includes 69,208 new housing units and 77,098 new employees by 2035 in the City of Sacramento, with approximately 52 percent of the employment growth (39,753) and 62 percent of the housing (43,099) in Center and Corridor Communities (Table 2-2) (SACOG 2012, Appendix E-3, page 54). Development from the project when added to other entitled projects will not exceed the MTP/SCS build out assumptions for the City or the Center and Corridor Communities in the City.

The project is consistent with the uses and densities described for the Center and Corridor Communities in the MTP/SCS. The project is consistent with the allowable land uses from the City’s General Plan and is at least 80 percent of the allowed density or intensity of the allowed uses. Therefore, the project is consistent with the MTP/SCS.

City of Sacramento Climate Action Plan

On February 14, 2012, to address the issue of climate change and GHG emissions, the City adopted its climate action plan (CAP) (City of Sacramento 2012). The intent of the Climate Action Plan is to identify the nature of GHG emissions in the City and to implement policies, actions, and measures to reduce existing and future GHG emissions. The Climate Action Plan established a GHG emissions reduction target of 15 percent below 2005 levels by the year 2020, and reduction goals of 38 percent below 2005 levels by the year 2030 and 83 percent below 2005 levels by the year 2050.³ The Climate Action Plan

presents strategies and measures intended to achieve the 2020 target and move the City toward the longer-term goals. These strategies and measures relate to:

- ▶ Strategy 1: Sustainable Land Use
- ▶ Strategy 2: Mobility and Connectivity
- ▶ Strategy 3: Energy Efficiency and Renewable Energy
- ▶ Strategy 4: Waste Reduction and Recycling
- ▶ Strategy 5: Water Conservation and Wastewater Reduction
- ▶ Strategy 6: Climate Change Adaptation
- ▶ Strategy 7: Community Involvement and Empowerment

The Sacramento Climate Action Plan was prepared with the intent to be consistent with CEQA Guidelines Section 15183.5, which includes recommendations for GHG reduction programs used for CEQA streamlining (City of Sacramento 2012, p. 1-14).

Sacramento 2035 General Plan and Greenhouse Gas Emission Reduction Strategies

According to the City's 2035 General Plan EIR, the City's "2012 Climate Action Plan strategies, measures, and actions that reduce The 2012 Climate Action Plan strategies, measures, and actions that reduce greenhouse gas (GHG) emissions have been incorporated into appropriate elements of the proposed General Plan" (City of Sacramento 2014, page ES-1 and ES-2). Appendix B of the General Plan is entitled, "Climate Action Plan Policies and Programs." Most of the listed items are "supporting," which, in this context, means that no specific GHG emission reduction estimate was developed, but that the implementation of this policy or program would *support* the City's overall efforts to reduce local sources of GHG emissions. Those policies and implementation programs that do have estimates for 2020 and 2035 emission reduction are outlined below.

- ▶ **Policy LU 2.6.6 Efficiency through Density.** The City shall support an overall increase in average residential densities throughout the city consistent with the adopted General Plan Land Use & Urban Form Diagram, as new housing types shift from lower-density, large lot developments to higher-density, small lot and multifamily developments as a means to increase energy efficiency, conserve water, and reduce waste.

As discussed in Section 2 of this SCEA, "Project Description," and Section 3.0, "Evaluation of Environmental Impacts," mixed-use projects, such as the proposed project, are regulated by the floor area ratio (FAR) standard rather than the density (units per acre) standard. Although the proposed project would exceed the maximum FAR of 3.00 identified in the General Plan, General Plan Policy LU 1.1.10 permits new development to exceed the maximum allowed FAR if the project provides a significant community benefit. City of Sacramento staff have engaged with the applicant and determined that the proposed project would provide significant community benefit.

The project promotes compact development by increasing the density of development at the project site. The compact, infill, and mixed-use nature of the proposed project in the Midtown area would place residents within close proximity to jobs, retail, entertainment, commercial services, parks, health care, cultural / historic facilities, and other community amenities, which would facilitate walking and biking trips, thereby eliminating some vehicle trips. In addition, the project site's transit-oriented location would

make using public transit feasible to reach jobs and other destinations in both the Central City area and the region.

- **Implementation Program: Land Use Element: 5.** As part of the Planning and Development Code Update and development review process, the City shall:
- Streamline the permitting and interconnection process for solar photovoltaic systems.
 - Remove barriers related to the implementation of green building strategies and to include incentives that are not currently in the City Code (i.e., Green Development Code).
 - Update and/or establish criteria and standards to require water efficiency upgrades as a condition of issuing permits for renovations or additions of existing buildings that involve plumbing fixtures consistent with SB 407, which requires single-family homes and multi-family and commercial properties built before January 1, 1994, to upgrade noncompliant plumbing fixtures to water- efficient models at transfer of property.
 - Explore options to improve parking lot shading requirements to improve the health and vigor of the trees. Allow additional trees and landscaping to be installed in existing parking lots without requiring replacement of lost parking spaces (when increase in building area or change in use is not being proposed).
 - Explore options to require paving for new development to meet minimum Solar Reflectance Index (SRI) values; and incorporate cool pavement technology into the regular maintenance of existing streets, sidewalks, parking areas, and bike lanes.
 - Establish a limit on area of impervious surface allowable and require the use of pervious surface materials in new developments to improve groundwater recharge and limit saltwater intrusion.
 - Develop and adopt building design standards/guidelines that require conveniently located exterior electrical outlets to improve the ease of using electrical landscaping equipment and vehicles rather than gas-powered equipment.
 - Allow “market gardens”, which are gardens or orchards where fruits and vegetables can be to be sold, as a primary or accessory use in all zones, subject to restrictions that limit impacts on surrounding uses.
 - Allow agriculture, as defined in the Planning and Development Code, by right in industrial zones.
 - Provide incentives for developers to include community gardens and rooftop gardens in new development projects.

The above implementation program applies to the City, rather than to proposed new development. However, the project would be required to comply with relevant items from this implementation list that have been made a part of the City’s Planning and Development Code. The project proposes to use the rooftop space for activities, and therefore does not propose rooftop solar facilities. The proposed project

has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards. This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of “cool roofing” materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. The project does not propose parking lots, so this bullet from above would not be applicable. The project site is developed with impervious surfaces today, and the project does not propose to increase this coverage. The project does not propose community gardens or agriculture.

- ▶ **Policy M 2.1.1 Pedestrian Master Plan.** The City shall maintain and implement a Pedestrian Master Plan that carries out the goals and policies of the General Plan. All new development shall be consistent with the applicable provisions of the Pedestrian Master Plan.

Here again, this policy is directed to the City. However, new development, such as the proposed project will be required to comply with relevant provisions of the Pedestrian Master Plan. As discussed in more detail in Section 3.12 of this SCEA, “Transportation and Traffic,” the proposed project would not result in the removal of any existing or planned pedestrian facility or bikeway/bike lane. Existing facilities are expected to support the increase in bicyclists and pedestrians associated with the proposed project.

According to the Sacramento Pedestrian Master Plan, the project site is within the highest ranking of Pedestrian Demand Areas. The MTP/SCS identifies the project area as a Center and Corridor Community and as a “Transit Priority Areas” (TPAs). The Center and Corridor Communities consist of areas that are typically higher density and more mixed than surrounding land uses. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region (SACOG 2012, Chapter 3, page 32). Transit Priority Areas are within 0.5 mile of an existing or planned major transit stop or high-quality transit corridor included in the MTP/SCS (SACOG 2012, Chapter 3, page 46). The MTP/SCS discusses benefits of development within Transit Priority Areas, including:

- ▶ increasing housing choices located near high quality transit, while bringing high-quality transit service to an additional 152,216 existing housing units and 240,013 existing employees; and
- ▶ increasing ridership to support existing and new rail and bus services and reduce vehicle miles traveled and GHG emissions.

The proposed project would be located adjacent to, and will improve, a Sacramento Regional Transit bus stop for Line 30, which travels between Downtown Sacramento and California State University, Sacramento. In addition, several other bus lines are accessible within less than a 0.25 mile walk from the project site. As noted under checklist item 3, the project site is within region with more mixed use, such as restaurants, services, jobs, etc. In addition, the project would introduce several additional commercial services to the area.

The proposed project site is within a developed area with a fairly comprehensive pedestrian network. All streets in the vicinity of the project site provide sidewalks on both sides of the street. The Proposed Project will create a pedestrian-friendly building that includes pedestrian-scale design, alley activation,

ample parking, tree canopy preservation, and the expansion of commercial opportunities on all four sides. The project is consistent with the Pedestrian Master Plan due to its location, proximity to transit and other services, as well as project specific design components. The project proposes a pedestrian walkway connecting J Street to Jazz Alley along the project site's eastern boundary. Accessible from this covered walkway is a proposed 798 square-foot café that will include shaded outdoor seating located within the building's internal 1,288 square-foot publicly accessible courtyard and vertical garden. The pedestrian walkway terminates at Jazz Alley, where a fifth retail/restaurant space will front onto the alley, including an alley-facing mezzanine level balcony. The project proposes an open air courtyard with a vertical garden component in both the residential and commercial portions of the building.

The proposed project site is within a developed area with a comprehensive bicycle network. All streets within the project area provide separated sidewalks on both sides of the street and on-street Class II bike lanes. Class II bike lanes exist on both sides of K Street (one block south of the project site) and an existing bike route exists on 25th Street.

- ▶ **Policy M 4.3.2 Traffic Calming Measures.** Consistent with the Roadway Network and Street Typology policies in this General Plan and Goal M 4.3, the City shall use traffic calming measures to reduce vehicle speeds and volumes while also encouraging walking and bicycling. Specific measures may include, but are not limited to, marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts, traffic circles, on-street parking, planter strips with street trees, chicanes/chokers, and geometric design features. (CAP Action 2.1.1)

Here again, this policy is directed to the City.

- ▶ **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. (CAP Action 2.6.1)

This policy is not related to the proposed project.

- ▶ **Program: 11.** The City shall implement the Bikeway Master Plan by (1) increasing, or causing to be increased the amount of secure bicycle parking within the City by 50 locations annually, and (2) expanding the existing bikeway system by 5 percent annually. (CAP Action 2.3.1)

This policy is directed to the City. The project includes 101 bike parking spaces (60 in the cellar, 20 in the sidewalk area, 11 on the first floor, and 10 on the mezzanine). The project supports this program.

- ▶ **Program: 14.** The City shall work with Sacramento RT and community partners to increase public transit service above and beyond what is already planned in the 2035 Metropolitan Transportation Plan by 5 percent in 2020 and 10 percent in 2030. (CAP Action 2.4.1)

This policy is directed to the City. The project supports this program by proposing transit supportive density (134 dwelling units [and non-residential uses] on approximately 0.44 acres, which is approximately 305 units per acre) in a Transit Priority Area adjacent to transit service.

- ▶ **Policy U 2.1.10 Water Conservation Standards.** The City shall achieve a 20 percent reduction in per-capita water use by 2020 consistent with the State's 20x2020 Water Conservation Plan (California Water Resources Control Board, 2010).

The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards. This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of "cool roofing" materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. The energy demand estimates presented earlier do not factor in the project's commitment to Tier 1 standards. The project supports this policy, which is directed to the City.

- ▶ **Policy U 2.1.13 Recycled Water.** The City shall continue to investigate the feasibility of utilizing recycled water where appropriate, cost effective, safe, and environmentally sustainable.

This policy is directed to the City and not to new development.

- ▶ **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.

This policy is directed to the City and not to new development.

- ▶ **Policy U 5.1.2 Landfill Capacity.** The City shall continue to coordinate with Sacramento County in providing long-term landfill disposal capacity within the Sacramento Region to reduce greenhouse gas emissions.

This policy is directed to the City and not to new development.

- ▶ **Policy U 6.1.15 Energy Efficiency Partnerships.** The City shall continue to build partnerships (e.g., Sacramento County Business Environmental Resource Center (BERC) and SMUD) to promote energy efficiency and conservation for the business community and residents.

This policy is directed to the City and not to new development. However, the applicant has engaged with SMUD and is partnering to promote energy efficiency within the project. The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards.

- ▶ **Program 27.** The City shall maintain the Clean Energy Sacramento program (i.e., clean energy financing district managed by Ygrene Energy) and shall report annually on financing provided for energy efficiency, renewable energy, and water efficiency upgrades and retrofits for all types of real property (residential, commercial and industrial).

This program is directed to the City and not to new development.

- ▶ **Program 28.** The City shall work with community partners to develop and implement a voluntary rental housing program to improve the energy efficiency of existing rental units (both single-family and multi-family). If the voluntary program does not achieve an average energy savings of 15 percent per unit in at least 10,000 units/year by the end of 2014, the program may switch to mandatory energy efficiency improvements for rental housing.

This program is directed to the City and not to new development.

- ▶ **Program 29.** The City shall develop and adopt a Commercial Energy Conservation Ordinance (CECO) that requires the implementation of mandatory energy efficiency standards for all commercial and industrial properties. CECO would involve retrofitting existing commercial and industrial buildings for which a building permit is pulled for renovation or addition above a specified project size threshold.

The proposed project has committed to including energy and water conservation features, waste management techniques and materials selection, and other elements consistent with the California Green Building Code Tier 1 voluntary standards. This voluntary set of standards includes requirements related to stockpiling of soil, limitations on the percentage of landscaped area, minimum requirements for permeable paving, use of “cool roofing” materials, high efficiency lighting, advanced building efficiency performance requirements, reduction in construction waste, use of low pollutant floor covering materials, and other standards. The energy demand estimates presented earlier do not factor in the project’s commitment to Tier 1 standards. The project supports this policy, which is directed to the City.

The project is consistent with each applicable General Plan policy and implementation program that has GHG emissions reductions calculated as a part of the 2035 General Plan.

Conclusion

The most important source of GHG emissions in the state and City is transportation and the project would be located and designed in a way that would reduce transportation-related emissions compared to citywide and regional averages. The reduction in VMT associated with the location and urban design environment of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the MTP/SCS. The regional VMT per capita in 2008 was estimated to be 26 miles per day. For the traffic analysis zone that includes the project site, the average per-capita VMT in 2008 was approximately 9 miles per day. In 2035, forecast regional average per-capita VMT is 24 miles per day, whereas the project site and vicinity would have an average of approximately 7 miles per day. Therefore, the project site and vicinity is estimated to have per capita VMT rates of approximately

66 percent less than the regional average in 2008 and 71 percent less than the regional average in 2035 (SACOG 2012).

The project is consistent with the MTP/SCS, which is designed to reduce GHG emissions, and is also consistent with relevant policies and programs from the 2035 General Plan intended to reduce emissions consistent with statewide mandates. Emissions are also below the significance threshold recommended by SMAQMD. The impact is **less than cumulatively considerable**.

3.7 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.7.1 ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS

Phase I Environmental Site Assessment

In 2014, AEI Consultants (AEI) performed a Phase I Environmental Site Assessment for the project site (see Appendix F). The Phase I Environmental Site Assessment included a review of local, state, and federal environmental record sources and historical sources, including historic aerial photographs, fire

insurance maps, agency records, and city directories. AEI conducted a site reconnaissance on April 2, 2014. The following discussion of existing conditions on and surrounding the project site is based on the Phase I Environmental Site Assessment prepared by AEI and, where noted, further research performed by AECOM.

Recognized Environmental Conditions

Review of historical sources show a dry cleaning facility (Red Feather Cleaners) was located on the project site from at least 1930 to at least 1968. Sanborn Fire Insurance maps from 1951 and 1952 indicate the presence of a hazardous materials storage area and solvent tank located in the southern portion of the project site and the contents of the solvent tank are unknown. However, based on the period of use, it is likely the dry cleaning tenants stored Stoddard solvent or tetrachloroethylene (PCE). Dry cleaning operations typically used chlorinated solvents, particularly PCE, during the dry cleaning process. These solvents, even when properly stored and handled, can readily migrate into the subsurface as a result of small releases associated with on-site operations. Chlorinated solvents are highly mobile chemicals that can easily accumulate in soil and migrate to groundwater beneath a facility. Based on this information, AEI determined that the historic use of the project site as a dry cleaning facility represents evidence of a recognized environmental condition¹ (AEI 2014:6).

Groundwater Sampling

A subsurface investigation report was conducted by for the project site in 2004. Two groundwater samples and one soil sample were collected from the project site and analyzed for total petroleum hydrocarbons as Stoddard solvent (TPHs) and for PCE. Groundwater was encountered at 23 feet and the soil sample was collected at 5 feet. Both groundwater samples contained concentrations of TPHs and PCE and the soil sample contained only concentrations of TPHs. Although PCEs was present in the groundwater, the report concluded that the compounds more closely resembled hydraulic oil than PCEs. The report also concluded that although levels of detectable TPHs were low, the Sacramento Environmental Management Department (SCEMD) could require additional work at the site to assess the extent of hydraulic fluid impact (AEI 2014:ii-iii).

AEI reviewed correspondences from SCEMD to the property owner regarding the project site. The property owner failed to respond to their requests for further investigation, and the case was referred to the Central Valley Regional Water Quality Control Board (RWQCB). The release case is currently open. In addition, because of the limited scope of the subsurface investigation in 2004, AEI recommended that the appropriate regulatory oversight agencies be contacted to determine which activities must be completed at the site in order to obtain regulatory case closure and/or complete further subsurface investigations (AEI 2014:12).

¹ The American Society of Testing and Materials (ASTM) Standard Practice E 1527-05 define "Recognized Environmental Conditions" as the "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a part release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

Soil Vapor

AEI performed a Tier 1 Vapor Encroachment Screen as part of the Phase I Environmental Site Assessment to determine whether a potential vapor encroachment condition (VEC) exists. The Vapor Encroachment Screen included the review of reasonably ascertainable information for the subject and nearby properties (AEI 2014:17). According to the SCEMD, property owner failed to respond to their requests for further investigation further investigation of potential VECs. AEI noted that a VEC could not be ruled out and further investigation was needed to assess whether a VEC exists (AEI 2014:iv).

Asbestos

Naturally occurring asbestos (NOA) is a term applied to several types of naturally occurring fibrous materials found in rock formations throughout California. NOA is commonly found in ultramafic rock, including serpentine. Two forms of NOA are associated with serpentinite: chrysotile asbestos and tremolite/actinolite asbestos. NOA is found in ultramafic rocks, which are generally located in discontinuous belts in the Sierra Nevada and Coast Ranges. The project site is underlain by artificial fill and by Holocene-age alluvium (see Section 3.6, "Geology, Soils, and Paleontological Resources," for a detailed description of the rock formations at the project site). These types of rocks do not contain NOA.

Asbestos is designated as a hazardous substance when the fibers have the potential to come in contact with air, because the fibers are small enough to lodge in lung tissue and cause health problems. The presence of asbestos containing materials (ACMs) in existing buildings also poses an inhalation threat if the ACMs are in a friable state. If the ACMs are not friable, then there is no inhalation hazard, because asbestos fibers remain bound in the material matrix. Emissions of asbestos fiber to the ambient air can occur during construction activities, such as renovation or demolition of structures made with ACMs (e.g., insulation), or from grading activities that disturb rock containing NOA. People exposed to asbestos may be at elevated risk for lung cancer and mesothelioma.

AEI observed that on-site structures contain dry wall, acoustic ceiling tiles, base cove mastic, wainscot, and roofing that may contain ACMs. AEI noted that the ACMs appeared to be in good condition and that the potential for fiber release is low (AEI 2014:22). However, AEI recommended that if building renovation or demolition activities occur, an asbestos survey adhering to Asbestos Hazard Emergency Response Act sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs (AEI 2014:v).

Lead-Based Paint

The use of lead as an additive to paint was discontinued in 1978 because human exposure to lead was determined by the U.S. Environmental Protection Agency (EPA) and the U.S. Occupational Health and Safety Administration (OSHA) to represent a human health risk, particularly to young children. Adverse human health effects can occur from ingestion of peeling paint chips (primarily by young children) and inhalation of paint dust (when lead-based paint is scraped, sanded, or heated during repair or demolition activities).

AEI indicated that because the existing on-site structures were constructed before 1978, there is the potential for lead-based paint on-site (AEI 2014:23). Painted surfaces observed by AEI were in good condition.

Polychlorinated Biphenyls

Pole- and pad-mounted transformers may contain polychlorinated biphenyls (PCBs). PCBs are considered hazardous materials because of their toxicity; they have been shown to cause cancer in animals, along with effects on the immune, reproductive, nervous, and endocrine systems, and studies have shown evidence of similar effects in humans (EPA 2000).

One pad-mounted transformer was observed in the southwestern portion of the project site, north of Jazz Alley. The transformer is owned and operated by the Sacramento Municipal Utility District (SMUD), and based on the presumed date of installation, is expected to contain PCB (AEI 2014:21). No spills, staining, or leaks were observed on or around the transformer.

Phase II Environmental Site Assessment

In November of 2014, AEI conducted a Phase II investigation at the project site to evaluate potential environmental impacts associated with historical dry cleaning operations (AEI 2015:2–3). Two soil borings were advanced on the project site for collection of soil and groundwater samples. No constituents were detected above the laboratory reporting limits in the soil samples. PCE was detected at 1.6 micrograms per liter ($\mu\text{g/L}$) in groundwater at the first soil boring and at 1.3 $\mu\text{g/L}$ in groundwater at the second soil boring. However, both of these concentrations are below the California Drinking Water Standard of 5 $\mu\text{g/L}$.

Additionally, seven soil vapor samples were collected as part of the November 2014 investigation. PCE was detected at 11,000 micrograms per cubic meter ($\mu\text{g/m}^3$) in one sample and 5,000 $\mu\text{g/m}^3$ in the second sample. Both boring locations are in the facility parking lot, and as a result, the presence of PCE in these two locations does not appear to represent a potential cause for concern with respect to vapor intrusion on the project site.

PCE concentrations in the soil gas samples from the remaining locations sampled ranged between 80 and 920 $\mu\text{g/m}^3$. Trichloroethylene, acetone, benzene, ethylbenzene, and toluene were also detected in soil gas samples collected from the project site; however, the detected concentrations of these constituents were all below their respective screening levels.

Based on the results from the Phase II Environmental Site Assessment, AEI requested a “No Further Action” determination from the Central Valley RWQCB. In their letter dated March 24, 2015, Central Valley RWQCB concurred with the opinion that the PCE concentrations measured on the project site did not appear to represent a risk to occupants of the building on the subject property. However, due to the detections of PCE in soil vapor and groundwater samples collected from the eastern portion of the project site, Central Valley RWQCB requested additional sampling along the sewer located in the alley running along the southern project site to assess potential environmental impacts to adjacent properties and evaluate whether the sewer line is acting as a preferential pathway for the migration of contaminants. Additional investigation activities were conducted on September 16, 2015 and included

collection of groundwater and soil vapor samples from two locations adjacent to the sewer line in Jazz Alley. Groundwater was encountered in these borings at depths of 20–22 feet below the ground surface. The results are summarized below (AEI 2015:4–5).

- ▶ PCE was detected at 10 µg/L in one groundwater sample and at 19 µg/L in the other groundwater sample from HP-10. Both concentrations exceeded the California Drinking Water Standard of 5 µg/L for PCE.
- ▶ TCE was detected in one sample at 0.51 µg/L, which is below the California Drinking Water Standard of 5 µg/L for TCE.
- ▶ All other compounds were below the laboratory reporting limits in the two groundwater samples.
- ▶ PCE was detected at 2,000 and 100,000 µg/m³ in both soil gas samples. Both concentrations exceeded the California Department of Toxic Substances Control (DTSC) Screening Level of 410 µg/m³.
- ▶ Trichloroethylene, acetone, benzene, ethylbenzene, and toluene were also detected in soil gas samples collected from from one of the borings; however, the concentrations detected were all below the respective DTSC Screening Levels.
- ▶ All other volatile organic compounds (VOCs) were below the laboratory reporting limits in the soil gas samples collected from the project site.

Database Searches

As part of the Phase I Environmental Site Assessment, AEI obtained a comprehensive search of more than 19 environmental databases, including those that are maintained in accordance with California Public Resources Code Section 65962.5 (i.e., the Cortese List) (AEI 2014:15–16). The database search results that pertain directly to the project site are discussed above. No other records listed in the database search were determined by AEI to pose a potential human health hazard at the project site.

In November 2015, AECOM searched the GeoTracker database, which is a groundwater information management system maintained by the State Water Resources Control Board (SWRCB) (SWRCB 2015). The Geotracker database provides data relating to leaking underground storage tanks and other types of soil and groundwater contamination, along with associated cleanup activities. No new records of hazardous materials sites other than those already discussed in the Phase I and Phase II Environmental Site Assessments were found.

In addition, AECOM searched the EPA’s Envirofacts web site to identify toxic releases, hazardous waste, or other violations that could affect the site (EPA 2015). The Envirofacts web site presents information from several regulatory agencies and databases, including those for the EPA, DTSC, and Office of Emergency Services, and contains a variety of environmental information maintained by EPA, such as the locations of releases of more than 650 toxic chemicals. No new records of hazardous materials sites other than those already discussed in the Phase I and Phase II Environmental Site Assessments were found.

3.7.2 DISCUSSION

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant. Construction of the proposed project would involve the transportation and storage and use of hazardous materials (e.g., asphalt, fuels, oils, solvents, lubricants) during construction activities. Construction of the proposed project would involve the storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, paint, grease, solvents, paint, etc.). The transportation of hazardous materials is subject to applicable local, state, and federal regulations, which have been specifically designed to minimize the risk of upset during routine operations. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies consist of the California Highway Patrol and the California Department of Transportation. Together, these agencies determine container types used and license hazardous waste haulers for transportation of hazardous waste on public roads.

No acutely hazardous materials would be used during construction of the proposed project. In addition, materials handled would not pose a significant risk to off-site residents or construction workers because they will be required to be used and stored in accordance with existing laws and regulations that are designed to avoid public health and environmental health risks. California Occupational Health and Safety Administration (Cal/OSHA) maintains regulations related to the use of hazardous materials, including requirements for safety training, availability of safety equipment, and hazardous materials exposure warnings. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the types of hazards or chemicals, and documenting employee-training programs.

The project does not propose any uses that would involve significant quantities of hazardous materials during operations. Most household uses of hazardous materials, such as commonly used cleaning products, would be very minor and would not result in a substantial increase in the risk of a hazardous materials incident. The proposed project includes retail, commercial services, and restaurants that could at most involve small quantities of hazardous materials. These businesses would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases, including the Hazardous Materials Release Response Plans and Inventories (Business Plan Act).

Because construction and operation of the proposed project would be required to implement and comply with existing hazardous material regulations, and because each of these regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a coordinated, quicker response to emergencies, impacts related to significant hazards to the public through routine, transport, use, disposal, and risk of upset would be **less than significant**.

b) Would the project 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?

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Items b) and d) are addressed together below, since they are closely related. Item c) is addressed after b) and d).

Less than Significant with Mitigation. As stated previously, a dry cleaning facility was located on the project site and review of historic data indicates the presence of a hazardous materials storage area and solvent tank located in the southern portion of the project site. The contents of the solvent tank are unknown. Based on this information, it was determined that the historic use of the project site as a dry cleaning facility represents evidence of a recognized environmental condition.

Phase I and Phase II Environmental Site Assessments were conducted, the results of which are discussed in detail in the “Environmental Setting” subsection above. Based on the results of the Phase II Environmental Site Assessment, AEI requested a “No Further Action” determination from the Central Valley RWQCB. Central Valley RWQCB concurred with the opinion that the PCE concentrations measured on the project site did not appear to represent a risk to occupants of the building on the project site. However, due to the detections of PCE in soil vapor and groundwater samples collected from the eastern portion of the project site, Central Valley RWQCB requested additional sampling along the sewer located in the alley running along the southern project site to assess potential environmental impacts to adjacent properties and evaluate whether the sewer line may be acting as a preferential pathway for the migration of contaminants. Additional investigation activities were conducted on September 16, 2015 and included collection of groundwater and soil vapor samples from two locations adjacent to the sewer line in Jazz Alley.

The results from the additional investigation activities completed at the project site during September 2015 identified that PCE was present above screening levels in the subsurface adjacent to the sewer line running beneath Jazz Alley. These results appear to indicate that PCE leaked from the sewer line into the subsurface at some time in the past. Historical records indicate that dry cleaning operations on the property ceased in approximately 1970, more than 35 years ago. As a result, it appears unlikely that there would be a continuing release of PCE to the subsurface in this area.

Based on the results from the additional investigation activities conducted at the project site in September 2015, AEI recommended collection of additional soil gas and groundwater samples from locations on the adjacent properties to the south of the sewer line and alleyway to assess potential environmental impacts on these properties (AEI 2015:4).

The proposed project would require demolition of on-site buildings that contain dry wall, acoustic ceiling tiles, roofing, and other materials that contain asbestos and may also contain lead-based paint. Compliance with Sacramento Metropolitan Air Quality Management District Rule 902 would be required as a part of the proposed project for actions related to asbestos-containing materials. Rule 902 includes health-based standards, guidance for renovations and demolition, special requirements for demolition, waste disposal requirements, testing and recordkeeping procedures, hazard posting requirements, and other measures to avoid adverse health effects. Other existing regulations (e.g., 8 CCR Sections 1529 and 1532.1) address demolition or salvage of structures where lead or materials containing lead are

present; removal or encapsulation of materials containing lead; new construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead; lead contamination/emergency cleanup; transportation, disposal, storage, or containment of lead or materials containing lead on the location at which construction activities are performed, and maintenance operations associated with construction activities. California law requires asbestos and lead abatement to be performed and monitored by contractors with appropriate certifications from Cal/OSHA, which has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and preparation of emergency action and fire prevention plans. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal/OSHA standards. Compliance with the above described regulations would address any adverse effects related to worker safety associated with building demolition where asbestos or lead materials are present. The impact is considered **potentially significant**.

Mitigation Measure 3.7-1: Identify and Remediate for Discovery of Known and Unknown Hazardous Materials.

Prior to commencing any construction activities, a Health and Safety Plan shall be prepared and provided to the Community Development Department by a qualified professional to identify specific measures to take to protect worker and public health and safety and specify measures to identify, manage, and remediate wastes. In the event that excavation or construction of the proposed project reveals evidence of soil or groundwater contamination, USTs, or other environmental concerns, site preparation or construction activities shall not recommence within the contaminated areas until remediation is completed. This is the procedure established in the Health and Safety Plan and a “no further action” letter would be obtained from the appropriate regulatory agency. The Health and Safety Plan shall include the following:

- Pre-construction training of workers to identify potentially hazardous materials.
- Identification of air monitoring procedures and parameters and/or physical observations (soil staining, odors, or buried material) to be used to identify potential contamination.
- Procedures for temporary cessation of construction activity in the area of potential contamination and evaluation of the level of environmental concern if potential contamination is encountered. The evaluation shall include identification of the type and extent of contamination prepared by a qualified professional.
- Procedures for limiting access to the contaminated area to properly trained personnel.
- Procedures for notification and reporting, including internal management and local agencies (fire department, SCEMD, etc.), as needed.
- A worker health and safety plan for excavation of contaminated soil, including soils management, dust control, air monitoring, and other relevant measures.

- Procedures for characterizing and managing excavated soils in accordance with CCR Title 14 and Title 22.
- Procedures for certification of completion of remediation.

Mitigation Measure 3.7-2: Implement Mitigation Measure 3.8-1 (File a Notice of Intent with the Central Valley Regional Water Quality Control Board to Obtain Coverage under Order R5-2013-074 or Waste Discharge Requirement and a Memorandum of Understanding with the City of Sacramento, and Prepare a Construction Dewatering Plan).

Implementation of Mitigation Measures 3.7-1 and 3.7-2 would reduce the impact by requiring preparation of a Health and Safety Plan by a qualified professional to identify specific measures to take to protect worker and public health and safety and specify measures to identify, manage, and remediate wastes. In the event that excavation or construction of the proposed project reveals evidence of soil or groundwater contamination, underground storage tanks (USTs), or other environmental concerns, site preparation or construction activities would not recommence within the contaminated areas until remediation is completed. Mitigation Measure 3.7-1 requires approvals from the appropriate regulatory agency prior to commencing with site preparation or construction, if environmental conditions on-site dictate. This mitigation also requires appropriate training; monitoring of conditions on-site; procedures for stoppage of construction work, if needed; notification of appropriate environmental health and response agencies; and compliance with relevant regulations designed to avoid public and environmental health risk related to on-site demolition and construction activities. The impact would be **less than significant with mitigation**.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.6-1 found that disturbance of sites with known or previously unknown hazardous material or groundwater contamination could cause various short-term or long-term adverse health effects in persons exposed to the hazardous substances. To prevent potential health hazards to construction workers and the public from exposure to previously unknown contamination, Policy PHS 3.1.1 of the Public Health and Safety Element of the 2035 General Plan would require that buildings and sites under consideration for new development or redevelopment are investigated for the presence of hazardous materials prior to development activities. Similarly, Policy PHS 3.1.2 requires that property owners of contaminated sites develop plans to investigate and manage hazardous material contamination to prevent risk to human health or the environment. In addition, upon identification of the contamination, a remediation plan pursuant to Section 25401.05 (a)(1) of the California Health and Safety Code and approved by the appropriate agency or authority must be implemented at the site.

In addition, the analysis of Impact 6.6-1 in the 2035 General Plan Master EIR determined that adverse health effects from exposure to contaminated groundwater could occur if the contaminants were to migrate from the contaminated zone to surrounding areas either before or after development of the surrounding areas, or if contaminated zones were disturbed by future development at the contaminated location. Also, old USTs that were used before permitting and recordkeeping requirements were in place may be present throughout the city. The 2035 General Plan Master EIR determined that if groundwater contamination were to be identified at any particular site, remediation activities would be

required by the Central Valley RWQCB, DTSC, SCEMD, or other appropriate agency before the start of any new construction activities. Potential risks posed by USTs would be minimized by managing the tank according to Sacramento County standards, as enforced and monitored by SCEMD.

Finally, the analysis of Impact 6.6-1 of the General Plan Master EIR found that demolition of existing structures in the city could result in exposure of construction personnel and the public to hazardous substances, such as asbestos or lead-based paints through direct skin contact, accidental ingestion, or airborne inhalation. However, the General Plan Master EIR found that all projects would be required to adhere to various regulations and guidelines pertaining to abatement of and protection from exposure to asbestos and lead, including Sacramento Metropolitan Air Quality Management District Rule 902 pertaining to asbestos abatement; 8 CCR Sections 1529 and 1532.1 (construction safety orders pertaining to asbestos and lead, respectively); CFR Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development.

The following Sacramento 2035 General Plan policies from the Public Health and Safety Element (City of Sacramento 2015) set performance standards and criteria that address potential hydrology and water quality impacts of future development within the city. The project's preparation of a Phase I Environmental Site Assessment and Tier 1 Vapor Encroachment Screen, along with implementation of Mitigation Measures 3.7-1 (listed above) and Mitigation Measure 3.7-2 (described in detail in Section 3.8, "Hydrology and Water Quality," of this SCEA) implement applicable General Plan policies.

Policy 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.

Policy 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.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Construction and operational impacts associated with sites listed under Government Code Section 65962.5 were analyzed in Impacts HAZ-2b, HAZ-3, and HAZ-9 of the MTP/SCS EIR.

The analysis of Impact HAZ-2b found that depending on the site-specific locations of future projects, new development could disturb NOA and release asbestos fibers into the environment if such projects were constructed in ultramafic rock formations. However, because the proposed project is not located in an area that contains NOA, Impact HAZ-2b of the MTP/SCS EIR is not applicable and is not discussed further in this SCEA.

The analyses of Impacts HAZ-4 and HAZ-9 of the MTP/SCS EIR found that future projects could be located on sites where hazardous materials may be present. The analyses determined that preparation of a Phase I Environmental Site Assessment for properties at risk of potential hazardous materials

and/or waste contamination would avoid adverse impacts, because if a Phase I Environmental Site Assessment indicated the presence of contamination, a site-specific Phase II Environmental Site Assessment could be required to test soil and/or groundwater. Based on the outcome of the Phase II Environmental Site Assessment, remediation of contaminated sites could be required before development. This is addressed as a part of Mitigation Measure HAZ-2. However, the MTP/SCS EIR determined that because not all projects would necessarily include a Phase I or Phase II Environmental Site Assessment, the impact would be potentially significant. The MTP/SCS EIR found that implementation of Mitigation Measure HAZ-2 would reduce this impact to a less-than-significant level because a determination would be made about whether future project sites were included on the Cortese List, and if so, Phase I and Phase II Environmental Site Assessments would be prepared and contamination would be remediated.

The Phase I Environmental Site Assessment and research conducted to support this SCEA implements Mitigation Measure HAZ-2 from the MTP/SCS EIR. Mitigation Measure HAZ-2 is included below for the reader's edification.

Mitigation Measure HAZ - 2: Determine if project sites are included on a government list of hazardous materials sites pursuant to Government Code Section 65962.5. The implementing agency should determine whether specific project sites are listed on government lists of hazardous materials and/or waste sites compiled pursuant to Government Code Section 65962.5. Implementing agencies should require preparation of a Phase I ESA that meets ASTM standards for any listed sites or sites with the potential of residual hazardous materials and/or waste as a result of location and/or prior uses. Implementing agencies should require that recommendations of the Phase I ESA be fully implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency should require a Phase II ESA, and recommendations of the Phase II ESA should be fully implemented.

- c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

No Impact. St. Francis of Assisi Elementary School at 2500 K Street is located approximately 250 feet south of the project site, as measured at the closest point. The next closest school to the project site is Washington Elementary School, located approximately 0.6 miles northwest of the project site, as measured at the closest point. The project includes retail, restaurant, and residential uses, and could include office uses, which would not involve hazardous emissions, and which would not require the handling of acutely hazardous materials, substances, or waste.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

No Impact. The project site is not subject to any airport land use plan or located in the clear zone, approach-departure zone, or overflight zone of any airport. The closest public airport to the project site

is the Sacramento Executive Airport, located approximately 6 miles to the south. The project site is not located in the clear zone, approach-departure zone, or overflight zone of any airport. In addition, there are no private airstrips within 2 miles of the project site. Therefore, **no impact** related to airport safety hazards would occur.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. Construction of the proposed project could require temporary lane, street closures, or detours, which could affect emergency access and evacuation routes. In addition, 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. Lane restrictions, closures, and/or detours could cause an increase in traffic volumes or delays on adjacent roadways. In the event of an emergency, emergency response access or response times could be adversely affected.

The proposed project would prepare and implement a traffic management plan for construction activities, as required by Section 12.20.020 of the Sacramento City Code. The City requires that the traffic control plan illustrate the location of the proposed work area; provide a diagram showing 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; show the proposed phases of traffic control; and identify the time periods when 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. Compliance would minimize construction impacts related to interference with emergency response. Therefore, the proposed project's potential to impair or interfere with emergency access and evacuation routes would be **less than significant**.

h) Would the project 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?

No Impact. The project site is located in the developed, urbanized area of midtown Sacramento.

3.8 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.8.1 ENVIRONMENTAL SETTING

SURFACE WATER

The City of Sacramento is located at the confluence of the Sacramento and American rivers within the Sacramento River Basin. Six small tributaries of the Sacramento River run through the greater Sacramento area and provide drainage for the City of Sacramento. These tributaries are Dry Creek, Magpie Creek, and Arcade Creek in the northern portion of the City (north of the American River), and Morrison Creek, Elder Creek, and Laguna Creek in the southern portion of the City (south of the American River). The project site is located within the Sacramento River Watershed, approximately 1 mile south of the American River and approximately 2 miles east of the Sacramento River. The topography on the project site is nearly flat, with elevations ranging from 19–21.5 feet above mean sea level (ENGEO 2015: 6).

The American River watershed encompasses approximately 1,900 square miles and is a tributary to the Sacramento River. The river is regulated by dams, canals, and pipelines for power generation, flood control levees and other facilities, water supply, recreation, fisheries, and wildlife management. Folsom Dam, located on the American River, is owned and operated by the U.S. Bureau of Reclamation. Folsom Lake and its afterbay, Lake Natoma, release water to the lower American River and to the Folsom South Canal.

The *2012 Section 303(d) List of Impaired Waters* for California issued by the State Water Resources Control Board (SWRCB) (2015) indicates that the Sacramento River from Knights Landing to the Sacramento–San Joaquin Delta (Delta) is listed as impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, mercury, polychlorinated biphenyls (PCBs), and unknown toxicity. The Sacramento River flows into the Delta, the northern portion of which is listed as impaired for chlordane, chlorpyrifos, DDT, diazaron, dieldrin, Group A pesticides, invasive species, mercury, PCBs, and unknown toxicity.

Flooding

The most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (FEMA 2014 and 2015; Mendoza, pers. comm. 2016), identifies the project site as being located in an area that is within the 500-year floodplain (2% annual chance flood) and areas protected by levees from 1% annual chance flood. The project site is also located in the Folsom Dam failure inundation area (see Figure 11.6 in the MTP/SCS Program EIR [SACOG 2011]).

High water levels commonly occur along the Sacramento and American rivers in the winter and early spring months as a result of increased flows from stormwater runoff and/or snowmelt. An extensive system of dams, levees, overflow weirs¹, drainage pumping stations, and flood control bypass channels are located on and adjacent to the Sacramento and American rivers, and their respective tributaries, to protect the area from regional flooding. Many of these facilities are maintained by the City; the U.S. Army Corps of Engineers (USACE); and/or by other federal, state, or local agencies.

¹ Diversion structures intended to ensure that flows in the river do not exceed an identified maximum level.

The flood control network controls water flows by regulating the amount of water passing through a particular reach of the river. Urban runoff flows are directed into this system by the City via two systems: (1) conveyance to the Sacramento River and American River through sumps, pipelines, and treatment facilities; or (2) conveyance by the City's Combined Sewer Service System (CSS), along with sewage to the Sacramento Regional Wastewater Treatment Plant (SRWTP) located near Elk Grove.

Hydrologic soil groups² are factored into calculations of erosion potential when drainage plans are prepared. Group A soils generally exhibit a low runoff potential, and Group B soils exhibit a low to medium runoff potential. Group C soils exhibit a medium to high runoff potential, while Group D soils have a high runoff potential. As described in detail in Section 3.5, "Geology, Soils, and Paleontological Resources," the project site soils have been classified by the U.S. Natural Resources Conservation Service (NRCS) as "urban land," and, therefore, the soils have not been assigned to a hydrologic group (NRCS 2015). However, a site-specific *Geotechnical Investigation* prepared by ENGEO in 2015 determined that the project site consists of non-plastic to low plasticity sandy silt, silty clay, and silty sand at depths of 17.5–22 feet below the ground surface (bgs), underlain by a 2- to 3-foot-thick layer of medium dense silty sand. Dense silty gravel with sand was encountered at depths ranging from 17–25 feet bgs; the gravel layer extended to a depth of approximately 37 feet bgs. Medium dense clayey sand to very stiff/hard sandy lean clay was encountered at depths ranging from 40–55 feet bgs. At a depth of approximately 55 feet bgs, the exploration encountered hard sandy clay and very dense silty sand. Lean clay and poorly graded sand were present from 60–101.5 feet bgs (ENGEO 2015: 7, Appendix A). In general, fine-grained silty and sandy soils (which are present at the project site) have high water erosion potential if not properly stabilized. Furthermore, in general, silty and clayey soils tend to impede the downward flow of water and are, therefore, of low permeability, while sandy soils have large pore spaces and are, therefore, highly permeable.

GROUNDWATER

The project site is located in the Sacramento Central Groundwater Basin (Central Basin), which is located entirely within Sacramento County and is managed by the Sacramento Central Groundwater Authority. Groundwater underlying the Central Basin is contained within a shallow aquifer (Modesto Formation) and a deep aquifer (Mehrtens Formation). The shallow aquifer is typically used for private domestic wells and typically requires no treatment. The deep aquifer is separated from the shallow aquifer by a discontinuous clay layer that serves as a semi-confining layer. The deep aquifer typically requires treatment for iron and manganese, which may cause mineral deposits and affect the taste of water. Intensive use of groundwater over the past 60 years has resulted in a general lowering of groundwater elevations. In 2004, groundwater levels in the project vicinity ranged from 20–30 feet below mean sea level (Central Sacramento County Groundwater Forum [CSCGF] 2006:ES-2 through ES-6). During site-specific soil boring activities conducted in 2015, groundwater was encountered at 19.6 feet below the ground surface (bgs) (ENGEO 2015: 8). ENGEO also reviewed data from nearby sites, which indicated that groundwater levels have fluctuated between 15 and 23 feet bgs over the last 20 years. At one location approximately 0.5 mile from the site, groundwater may have risen to approximately 10 feet bgs in abnormally wet seasons (ENGEO 2015: 11).

² A designation developed by the U.S. National Resources Conservation Service that describes the infiltration capacity of soil. Soil associations are categorized in decreasing infiltration capacity from A to D.

Stormwater

The City operates two different systems for stormwater collection and conveyance. The older Central City area is primarily served by a system in which sanitary sewage and storm drainage are collected and conveyed in the same system of pipelines, referred to as the Combined Sewer System (CSS). The CSS provides both sewage and storm drainage services to more than 24,000 parcels in downtown, midtown, Land Park, and East Sacramento areas of Sacramento. The project site is served by the CSS system, which has its own National Pollutant Discharge Elimination System (NPDES) permit (No. CA0079111). All piping, drains, basins, and pumps connected to the CSS are maintained and operated by the City of Sacramento Utilities Department.

Both parcels that comprise the project site were developed with residential uses in the early 1900s. The 2500 J Street parcel was subsequently developed as a dry cleaning establishment in 1971. Both parcels consist primarily of impervious surfaces (i.e., buildings, rooftops, and pavement). The approximately 0.44-acre project site contains approximately 18,589 square feet of buildings, pavement, and other impervious surfaces. Planters with street trees, shrubs, and grass are located along the northern and western sides of the property; these areas comprise approximately 757 square feet of existing pervious surfaces.

3.8.2 DISCUSSION

All of the checklist items a) through j) are addressed below, but in an order that allows related items to be grouped in a single discussion.

- a) **Would the project violate any water quality standards or waste discharge requirements?**
- c) **Would the project 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 which would result in substantial on- or off-site erosion or siltation?**

Less than Significant with Mitigation. Project implementation would result in earthmoving activities throughout the 0.44-acre project site. Construction activities for the project – specifically, demolition, grading, staging, stockpiling, trenching, and foundation excavation—would expose soils to erosive forces and could transport sediment into the drainage system (and ultimately into the nearby Sacramento River), if not managed properly. Such sediment transport could increase turbidity, degrade water quality, and result in siltation to local waterways. The runoff could cause erosion, increased sedimentation, and transport of pollutants to storm drain systems and water courses away from the project area. The potential exists for releases of chemicals typically present at most construction sites, including fuels, oils, paints, and solvents.

Erosion and construction-related wastes (e.g., oil, gas, etc.) have the potential to temporarily degrade existing water quality and beneficial uses³ by altering the dissolved oxygen content, temperature, pH,

³ Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Beneficial uses are set forth in regional Basin Plans adopted by each of California's nine Regional Water Quality Control Boards.

suspended sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Therefore, if uncontrolled, project-related construction activities could violate water quality standards or result in substantial erosion or siltation.

Projects in the City of Sacramento that are served by the CSS are required to comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance. Source control requirements are set forth in the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions* (May 2007), Chapter 4 (City of Sacramento 2007).

Groundwater was encountered at the project site in 2015 at 19.6 feet bgs (ENGEO 2015: 8). Based on historic groundwater data indicating that depth to groundwater ranges from 10–23 feet bgs and the currently proposed basement depth of 20 feet bgs using a mat foundation, ENGEO (2015: 11) anticipates the bottom of the basement may extend to or below the groundwater table and would likely require dewatering during construction. ENGEO indicates that temporary construction dewatering would likely consist of a perimeter system of dewatering wells to temporarily lower the groundwater at the project site while below-grade construction is completed. Once the building construction has extended above the seasonal high groundwater elevation and has sufficient dead weight to resist hydrostatic uplift, the temporary construction dewatering would be terminated.

As an alternative to a mat foundation, ENGEO (2015: 17) indicates that the building may be supported drilled, cast-in-place, straight-shaft friction piers. The piers would have a minimum diameter of 24 inches and extend to a depth of at least 30 feet below the bottom of the pier cap. The tops of drilled piers would likely be at about the top of the dense gravel layer (approximately 20–25 feet bgs) and would extend below the groundwater table to depths of approximately 50–55 feet bgs. Depending on the type of pier installation, dewatering may be required.

Project construction activities that do not follow proper procedures and BMPs to minimize water quality impacts on receiving water and groundwater could temporarily degrade existing water quality and beneficial uses and could violate water quality standards or waste discharge requirements.

As noted, the project will be required to comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance and select appropriate source control requirements from the Stormwater Quality Design Manual for the Sacramento and South Placer Regions. In addition, with implementation of Mitigation Measure 3.8-1 below, the proposed project would protect the water quality and beneficial uses during construction by entering into a Memorandum of Understanding (MOU) with the City of Sacramento and preparing a site-specific construction dewatering plan. Coverage under SWRCB's Construction General Permit Order No. 2009-0009-DWQ and Order R5-2013-074 or a waste discharge requirements would ensure that the proposed project would not violate any waste discharge requirements, exceed water quality objectives, or result in substantial erosion or siltation during construction. Furthermore, if dewatering is required, the proposed project is required to comply with City's Engineering Services Policy No. 0001, which requires approval of a MOU for long-term (greater than one week) groundwater dewatering discharges. The MOU must cover proposed dewatering details, such as flow rate, system design, and contaminant monitoring plan. Therefore, this impact would be **less than significant with mitigation**.

Mitigation Measure 3.8-1: File a Notice of Intent with the Central Valley Regional Water Quality Control Board to Obtain Coverage under Order R5-2013-074 or Waste Discharge Requirement and a Memorandum of Understanding with the City of Sacramento, and Prepare a Construction Dewatering Plan

Before the start of earth-moving activities, the project applicant shall file: (1) a notice of intent with the Central Valley RWQCB to obtain coverage under Order R5-2013-074, or (2) a waste discharge requirement. The project applicant shall also enter into an MOU with the City for construction dewatering activities.

Along with the notice of intent and the MOU, the project applicant shall prepare a site-specific construction dewatering plan, which demonstrates that discharges meet the Sacramento Regional County Sanitation District- (SRCSD) and RWQCB-approved levels and shall contain the following components:

- information about the discharge location;
- a map showing the location of the site, treatment system, discharge point(s), and receiving water;
- an evaluation of reclamation options;
- narrative and schematic descriptions of the existing or proposed treatment system, including blueprints signed by a registered engineer or geologist (if applicable); and
- results of laboratory analysis for the types and amounts of pollutants listed in Attachment B to Order R5-2013-0074, additional water quality screening required by Attachment C to Order R5-2013-0074 (if applicable), and any applicable pollutants listed under Section 303(d) of the CWA for the receiving water if discharging or proposing to discharge to an impaired water body.
- identify landfills to be used for disposal of contaminated sediment associated with the dewatering, if necessary, based on results of laboratory analysis.
- To be authorized by Order R5-2013-074, the project applicant must demonstrate that the discharge or proposed discharge meets the following criteria:
 - Pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to an excursion above any applicable federal water quality criterion established by the U.S. EPA pursuant to CWA section 303;
 - Pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to an excursion above any water quality objective adopted by the Central Valley Water Board or State Water Resources Control Board (State Water Board), including prohibitions of discharge for the receiving waters; and
 - The discharge does not cause acute or chronic toxicity in the receiving water.

- Discharges of more than 0.25 million gallons per day average dry-weather flow are prohibited unless the discharge is 4 months or less in duration.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.7-1 found that earth-disturbing activities associated with construction could result in on- or off-site soil erosion, siltation, and accidental discharges of construction-related hazardous materials, which could degrade downstream surface waters or groundwater. The analysis indicated that compliance with the City of Sacramento's Grading Ordinance would require future public or private contractors to comply with the requirements of the City's SQIP (SSQP 2009). In addition, before the onset of any construction activities, many smaller projects within the City are also required to obtain RWQCB coverage, through site-specific waste discharge requirements. Source control requirements are provided in the Stormwater Quality Design Manual for the Sacramento and South Placer Regions, including BMPs to reduce degradation of water quality from new development and redevelopment projects. In addition, the analysis noted that the City would also require contractors' erosion and sediment control plans (as required by the City's Grading Ordinance) to include BMPs to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities. The analysis concluded that with compliance with the above regulations and applicable general plan policies, impacts would be less than significant.

The following Sacramento 2035 General Plan policies from the Environmental Resources Element (City of Sacramento 2015a) set performance standards and criteria that address potential water quality impacts of future development within the city. Mitigation Measure 3.8-1 (listed above) has been identified to implement applicable General Plan policies, as relevant to the proposed project and project site.

- ▶ **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 (e.g., cluster development), 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 1.1.7: 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.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Violation of Waste Discharge Requirements

Impact HYD-8 of the MTP/SCS EIR found that construction-related earth-moving activities would introduce the potential for increased erosion and sedimentation, with subsequent degradation of water quality and exceedance of storm drain capacity. In addition, construction equipment and activities would have the potential to leak hazardous materials, such as oil and gasoline, and potentially affect

surface water or groundwater quality. However, the MTP/SCS EIR concluded that because all projects are required by law to comply with state, regional, and local NPDES permit requirements, impacts from violation of water quality standards or WDRs would be less than significant.

Increases in Erosion and Siltation

Impact HYD-2 of the MTP/SCS EIR determined that new development may increase stormwater flows, resulting in increased volume and/or velocity and thereby raising the potential for substantial erosion or siltation. However, the analysis noted that most projects must comply with the NPDES Construction General Permit, which requires development of a SWPPP with appropriate BMPs designed to control erosion and siltation. Furthermore, the SSQP has developed the *Sacramento Region Stormwater Quality Design Manual* (SSQP 2014) to reduce runoff and siltation in the region and the City, along with other partners has developed the Stormwater Quality Design Manual for the Sacramento and South Placer Regions. These plans and manuals specify BMPs and additional regulations to reduce runoff, thereby reducing the likelihood of substantial erosion or siltation.

The analysis found that although the regulations discussed above would adequately control the potential for adverse impacts in most circumstances, projects in areas with high erodibility may have impacts that would not be mitigated by existing regulations. The MTP/SCS EIR found that with implementation of Mitigation Measures HYD-1, HYD-2, and HYD-3, the impact related to substantial increases in on- or off-site erosion and siltation would be less than significant. These mitigation measures are included below for the reader's reference.

Mitigation Measure HYD-1: Manage stormwater run-off and other surface drainage. *The implementing agency should require projects to direct stormwater run-off and other surface drainage into an adequate on-site system or into a municipal system with capacity to accept the project drainage. This should be demonstrated by requiring consistency with local stormwater drainage master plans or a project-specific drainage analysis satisfactory to the jurisdiction's engineer of record.*

Mitigation Measure HYD-2: Use best management practices to treat water quality. *The implementing agency should require the use of BMPs or equivalent measures to treat water quality at on-site basins, prior to leaving the project site, and/or at the municipal system as necessary to achieve local or other applicable standards. This should be demonstrated by requiring consistency with local standards and practices for water quality control and management of erosion and sedimentation, and/or other applicable standards, including the CBC and UBC regulations and guidelines and/or local NPDES. Implementation of Mitigation Measure GEO-1 will also help mitigate this impact.*

Mitigation Measure HYD-3: Implement Mitigation Measure GEO-1 (Reduce soil erosion and loss of topsoil through erosion control mitigation and SWPPP). *The implementing agency should require the development and implementation of detailed erosion control measures, consistent with the CBC and UBC regulations and guidelines and/or local NPDES, to address erosion control specific to the project site; revegetate sites to minimize soil loss and prevent significant soil erosion; avoid construction on unstable slopes and other areas subject to soil erosion where possible; require management techniques that minimize soil loss and erosion; manage grading*

to maximize the capture and retention of water runoff through ditches, trenches, siltation ponds, or similar measures; and minimize erosion through adopted protocols and standards in the industry. The implementing agency should also require land use and transportation projects to comply with locally adopted grading, erosion, and/or sediment control ordinances beginning when any preconstruction or construction-related grading or soil storage first occurs, until all final improvements are completed.

If a local grading, erosion, and/or sediment control ordinance or other applicable plans or regulations do not exist, the jurisdiction should adopt ordinances substantially addressing the foregoing features and apply those ordinances to new development projects.

Mitigation Measure 3.8-1 (listed above) incorporates the MTP/SCS mitigation, with revisions that are applicable to this proposed project.

- e) **Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**
- f) **Would the project otherwise substantially degrade water quality?**

Less than Significant with Mitigation. The proposed project consists of redevelopment of an existing developed site. A network of on-site conveyance pipelines will be required to carry the project's stormwater drainage to the City's CSS either in Jazz Alley or 25th Street. After implementation of the proposed project, the amount of impervious surfaces on site would be similar to existing conditions on the project site (e.g., rooftops, sidewalks, driveways, streets, parking lots). The amount of impervious surface area is not expected to increase as compared to existing conditions. Impervious surfaces can hinder infiltration, which can result in more runoff during rain events. Stormwater runoff can be a source of surface-water pollution that can include sediments, which, in addition to being contaminants in their own right, transport other contaminants, such as trace metals, nutrients, and hydrocarbons that adsorb suspended sediment particles. Sediment, organic contaminants, nutrients, trace metals, pathogens, and oil and grease compounds are common pollutants found in urban runoff.

The City operates under a Phase I municipal stormwater permit for discharges to surface waters (NPDES No. CAS082597). The permit requires the City impose water quality and watershed protection measures for all development projects. The intent of the waste discharge requirements in the permit is to attain water quality standards and protection of beneficial uses consistent with the Central Valley Regional Water Quality Control Board's (RWQCB's) Basin Plan.

The City's Grading, Erosion, and Sediment Control Ordinance (Municipal Code Chapter 15.88) and Stormwater Management and Discharge Control Ordinance (Municipal Code Chapter 15.12) provide additional regulation and guidance to prevent degradation of water quality. Compliance also requires stormwater quality treatment and/or BMPs in project design for both construction and operation. Post-construction stormwater quality controls for new development require the use of source-control runoff reduction and treatment control measures set forth in the Stormwater Quality Design Manual for the Sacramento and South Placer Regions.

With implementation of Mitigation Measure 3.8-2 outlined below, the proposed project would protect water quality and beneficial uses during operation through preparation of drainage plans and having an operational pollutant source control program in place. The existing regulatory framework requires new development served by the CSS to protect the quality of water bodies and natural drainage systems through site design, source controls, runoff reduction measures, BMPs, and LID features that are consistent with the City's NPDES permit, the SQIP (SSQP 2009), and the Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Compliance with these regulatory permitting and planning requirements will be required as conditions of project approval. Therefore, the proposed project's impact related to long-term operation related water quality impacts would be **less than significant with mitigation**.

Mitigation Measure 3.8-2: Prepare and Submit Final Drainage Plans and an Operational Pollutant Source Control Program.

Before the start of earthmoving activities, the project applicant shall submit a final drainage plan and pollutant source control program to the City demonstrating to the satisfaction of the Community Development Department that the project is in compliance with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance, the SQIP (SSQP 2009), and the Stormwater Quality Design Manual for the Sacramento and South Placer Regions (City of Sacramento 2007), including the requirement to cause no net increase in runoff as compared to existing conditions. Components of the final drainage plan shall include:

- calculations for the final design scenario, obtained using appropriate engineering methods, that evaluates potential changes to runoff, including increased surface runoff;
- runoff calculations for the 10-year and 100-year (0.01 AEP) storm events (and other, smaller storm events as required) based on the final design scenario and confirmation of required trunk drainage pipeline sizes based on alignments and finalized detention-facility locations;
- City flood control design requirements and measures designed to comply with them, including a demonstration to the satisfaction of the City that 100-year (0.01 AEP) flood flows would be appropriately channeled and contained, such that the risk to people or damage to structures within or down gradient of the project site would not occur;
- a list of stormwater management BMPs to be implemented at the project site that ensure no net increase in runoff. BMPs may include but are not limited to the use of LID techniques to limit increases in stormwater runoff at the point of origination. Some examples of such techniques are the use of surface swales; replacement of conventional impervious surfaces with pervious surfaces (e.g., porous pavement); disconnection of impervious surfaces; and planting of trees to intercept stormwater. These BMPs shall be designed and constructed in accordance with the latest edition of the Stormwater Quality Design Manual for the Sacramento and South Placer Regions (City of Sacramento 2007); and
- a description of the proposed maintenance program for the on-site drainage system.

The project applicant shall also prepare and implement a pollutant source control program for the project's operational phase to control water quality pollutants on the project site. This program shall include components consistent with the Stormwater Quality Design Manual for the Sacramento and South Placer Regions, which may consist of, but are not limited to, informational materials provided to tenants regarding the City's hazardous waste collection stations and waste minimization, prevention of spills in parking areas, and effective management of public trash collection areas.

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.7-2 found that future development would result in new residential, commercial, recreation, and landscaping practices that would increase impervious surfaces. New development would increase stormwater and non-stormwater runoff entering local streams, the Sacramento and American rivers, and the CSS compared to existing conditions, which could affect water quality by potentially increasing sediment and contaminant loads. The analysis indicated that future development would be required to comply with the City's Grading, Erosion and Sediment Control Ordinance and the SQIP new development element that requires operational stormwater quality treatment and/or BMPs to be incorporated into project design. The analysis concluded that with compliance with the above regulations and applicable general plan policies, impacts would be less than significant.

The following Sacramento 2035 General Plan policies from the Environmental Resources Element (City of Sacramento 2015a) set performance standards and criteria that address potential hydrology and water quality impacts of future development within the city. Mitigation Measure 3.8-2 (listed above) has been identified to implement applicable General Plan policies.

- ▶ **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 (e.g., cluster development), 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 U 1.1.1: Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

The analysis of Impact HYD-1 in the MTP/SCS EIR found that new development would increase the amount of impervious surfaces, which would in turn increase the amount of stormwater runoff and the amount of pollutants transported to receiving water bodies. Clean Water Act Section 402 NPDES MS4 Phase I and Phase II permits, require stormwater management plans, which in turn require source and treatment control measures. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff, and must verify compliance. Therefore, because the region is already heavily developed, and because new projects are required to comply with site design, source controls, stormwater treatment, runoff reduction measures, BMPs, and LID features that are consistent with the regional NPDES permit (of which the City is a signatory), the SQIP (SSQP 2009), and the latest edition of the *Sacramento Region Stormwater Quality Design Manual* (SSQP 2014), Impact HYD-1 concluded that policies and regulations specified above are in place to provide adequate stormwater drainage capacity and control polluted runoff. Therefore, the MTP/SCS EIR determined that this impact would be less than significant.

The analysis of Impact HYD-7 in the MTP/SCS EIR found that new development would result in increased impervious surfaces and could result in discharges of constituents to federal Clean Water Act Section 303(d)-listed waters. Several water bodies in the project region, including major rivers, creeks, and tributaries, have been identified under the CWA Section 303(d) list as being impaired by a variety of contaminants. However, to address impaired waters, the SWRCB has several permit processes for municipal stormwater runoff. In addition, local jurisdictions in the region have adopted BMPs and ordinances that address the issues of runoff resulting from new development (such as the SQIP and the *Sacramento Region Stormwater Quality Design Manual*) as described above. The MTP/SCS EIR determined that Impact HYD-7 associated with the capacity of stormwater drainage systems and runoff water quality and would be less than significant, for the same reasons described above under Impact HYD-1.

- b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?**

Less than Significant. The addition of impervious surfaces, especially coupled with urban drainage systems (i.e. curbs, gutters, and storm drain pipes), alters the natural hydrology in a watershed by increasing the volume of stormwater runoff and reducing groundwater recharge. However, the proposed project would entail redevelopment of an existing developed site that is primarily composed of impervious surfaces. Very little groundwater recharge currently occurs at the project site due to existing impervious surfaces, and because the proposed project would not increase the impervious surfaces at the project site, a substantial change to existing groundwater recharge conditions would not occur. Furthermore, the project would be required to incorporate source control measures, runoff reduction measures or LID measures—such as pervious pavers, disconnected pavement, disconnected roof drains, or other measures—that would allow on-site infiltration to occur. The project proposes to retain existing planter areas for the street trees and to increase the size of at least one.

The existing and proposed development does not rely on groundwater for water supply. The proposed project is an infill project in an area that is currently developed with impervious surfaces with limited infiltration capacity. Therefore, impacts on groundwater recharge would be **less than significant**.

- d) **Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?**

Less than Significant with Mitigation. The project could result in greater potential for on- or off-site flooding if drainage facilities are not properly designed and maintained to appropriately convey and detain project-related runoff such that stormwater is treated sufficiently to maintain stormwater quality and quantity. The project site is located in an area that is served by the CSS, where stormwater and wastewater are conveyed in the same underground pipe system. There is an existing 18-inch CSS pipe located within Jazz Alley (immediately adjacent to and south of the project site).

City of Sacramento policy for sewer service in the combined sewer system area is that projects are allowed to connect to the combined sewer main provided that there is enough capacity in the existing sewer lines that are smaller than 18 inches in diameter and they pay their combined sewer impact fee for the net sewer increase for the proposed project. City policy for connection to trunk sewer mains 18 inches and larger in diameter along property frontages is to pay the sewer impact fee for the net increase attributable to the subject project.

Projects in the City of Sacramento are required to comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance and select appropriate source control requirements from the Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Compliance with City policies requires:

- ▶ that urban water quality, runoff water quality, erosion, and sedimentation from new development be controlled through implementation of permanent BMPs and LID features;
- ▶ that there be no net increase in post-development runoff as compared to predevelopment runoff; and
- ▶ that drainage plans be submitted demonstrating appropriate sizing of facilities and compliance with the SQIP requirements for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, State, and local agency flood-control regulations such that drainage facilities would appropriately convey and detain project-related runoff such that stormwater runoff would be treated sufficiently to maintain stormwater quality and quantity.

With implementation of Mitigation Measure 3.8-2 described above and below, the proposed project would reduce the potential for flooding through use of appropriately sized storm drain infrastructure, as well as on-site design, source controls, stormwater treatment, runoff reduction measures, BMPs, and LID features that are consistent with the City's NPDES permit, the SQIP (SSQP 2009), the Stormwater Quality Design Manual for the Sacramento and South Placer Regions, and the *Hydromodification Management Plan* (SSQP 2013). Therefore, the impact related to increased risk of flooding from stormwater runoff would be **less than significant with mitigation**.

Mitigation Measure 3.8-3: Implement Mitigation Measure 3.8-2 (Prepare and Submit Final Drainage Plans and an Operational Pollutant Source Control Program).

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

The Sacramento 2035 General Plan Master EIR Impact 4.7-3 found that increased development would increase the number of people and facilities subject to flooding. Portions of the Sacramento area could be subject to flash, riverine, and urban stormwater flood hazards. These floods are often the result of severe weather and excessive rainfall, either in the city or in areas upstream of the city, such as the Sacramento River watershed in the northern portion of the valley. Numerous flood control projects are either completed or are currently being implemented within the Sacramento Region by the U.S. Army Corps of Engineers and the Sacramento Area Flood Control Agency (SAFCA). In addition, Government Code Section 65302 further requires that general plans establish a set of comprehensive goals, policies, and feasible implementation measures to avoid or minimize the risk of flooding, especially to new development and essential public facilities. The City's Master EIR found that adherence to the above regulations and applicable general plan policies would ensure a less-than-significant impact.

The following Sacramento 2035 General Plan policies from the Environmental Constraints and Environmental Resources Elements (City of Sacramento 2015a) set performance standards and criteria that address potential hydrology impacts related to flooding from alternation of drainages of future development within the city. Mitigation Measure 3.8-3 (listed above) has been identified to implement General Plan policies, as relevant to the proposed project and the project site.

- ▶ **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 to determine whether the proposed development is reasonably safe from flooding and consistent with California Department of Water Resources (DWR) Urban Level of Flood Protection Criteria. The City shall not approve new development or a subdivision or enter into a development agreement for any property within a flood hazard zone unless the adequacy of flood protection specific to the area has been demonstrated.
- ▶ **Policy EC 2.1.12: New Development Design.** The City shall require new development located within a special (100-year) flood hazard area to be designed to minimize the risk of damage in the event of a flood.
- ▶ **Policy EC 2.1.25: Flood Risk Notification.** The City shall annually notify owners of residential development protected from flooding by a levee and/or subject to inundation in the event of levee failure of the risk.
- ▶ **Policy EC 2.1.26: Deed Notification.** The City shall require, for areas protected by levees, all new developments to include a notice within the deed that the property is protected by flooding from a levee and that the property can be subject to flooding if the levee fails or is overwhelmed.

- ▶ **Policy EC 2.1.27: Flood Insurance.** The City shall encourage all residents to purchase flood insurance.
- ▶ **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 (e.g., cluster development), 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 U 1.1.1: Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.
- ▶ **Policy U 1.1.2: Citywide Level of Service Standards.** The City shall establish and maintain service standards [Levels of Service (LOS)] for water, wastewater, stormwater drainage, and solid waste services.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY EIR

Impact HYD-2 of the MTP/SCS EIR determined that new development may increase stormwater flows, resulting in increased volume and/or velocity and thereby raising the potential for on- or off-site flooding. However, the required stormwater drainage capacity infrastructure is required by local regulations. In addition, project applicants must comply with stormwater runoff mitigation plans contained in the SQIP (SSQP 2009) and the *Sacramento Region Stormwater Quality Design Manual* (SSQP 2014). These plans and manuals specify BMPs and additional regulations to reduce runoff, thereby reducing the likelihood of flooding.

The analysis found that although the regulations summarized above would adequately control the potential for adverse impacts in most circumstances, projects in areas with high erodibility may have impacts that would not be mitigated by existing regulations. The MTP/SCS EIR found that with implementation of Mitigation Measures HYD-1, HYD-2, and HYD-3, the impact related to substantial increases in on- or off-site flooding would be less than significant. These mitigation measures are included below for the reader's reference.

Mitigation Measure HYD-1: Manage stormwater run-off and other surface drainage. The implementing agency should require projects to direct stormwater run-off and other surface

drainage into an adequate on-site system or into a municipal system with capacity to accept the project drainage. This should be demonstrated by requiring consistency with local stormwater drainage master plans or a project-specific drainage analysis satisfactory to the jurisdiction's engineer of record.

Mitigation Measure HYD-2: Use best management practices to treat water quality. The implementing agency should require the use of BMPs or equivalent measures to treat water quality at on-site basins, prior to leaving the project site, and/or at the municipal system as necessary to achieve local or other applicable standards. This should be demonstrated by requiring consistency with local standards and practices for water quality control and management of erosion and sedimentation, and/or other applicable standards, including the CBC and UBC regulations and guidelines and/or local NPDES. Implementation of Mitigation Measure GEO-1 will also help mitigate this impact.

Mitigation Measure HYD-3: Implement Mitigation Measure GEO-1 (Reduce soil erosion and loss of topsoil through erosion control mitigation and SWPPP). The implementing agency should require the development and implementation of detailed erosion control measures, consistent with the CBC and UBC regulations and guidelines and/or local NPDES, to address erosion control specific to the project site; revegetate sites to minimize soil loss and prevent significant soil erosion; avoid construction on unstable slopes and other areas subject to soil erosion where possible; require management techniques that minimize soil loss and erosion; manage grading to maximize the capture and retention of water runoff through ditches, trenches, siltation ponds, or similar measures; and minimize erosion through adopted protocols and standards in the industry. The implementing agency should also require land use and transportation projects to comply with locally adopted grading, erosion, and/or sediment control ordinances beginning when any preconstruction or construction-related grading or soil storage first occurs, until all final improvements are completed.

If a local grading, erosion, and/or sediment control ordinance or other applicable plans or regulations do not exist, the jurisdiction should adopt ordinances substantially addressing the foregoing features and apply those ordinances to new development projects.

Mitigation Measure 3.8-3 (listed above) incorporates the MTP/SCS mitigation, with revisions that are applicable to this proposed project and site.

- g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**
- h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?**
- i) Would the project 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?**

Less than Significant. The proposed project is located within a 500-year floodplain protected by levees. SAFCA is the regional authority formed to address the Sacramento area's vulnerability to

catastrophic flooding. SAFCA is working toward ensuring a minimum 100-year level of flood protection throughout the region as quickly as possible, while simultaneously improving the region's flood protection infrastructure to achieve a 200-year or greater level of protection over time. Under the Sacramento Area Flood Control Agency Act of 1990, the California Legislature has given SAFCA broad authority to finance flood control projects. Current SAFCA projects include the Folsom Dam Joint Federal Project; American River Common Features Project; Natomas Levee Improvement Program; South Sacramento Streams Project; Mayhew Levee Improvements Project; Sacramento Bank Protection; and the North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project (SAFCA 2015). Recent studies have shown that the levees directly protecting the project site from 100-year storm events are in good condition and not in need of repair or upgrade (SAFCA 2015). The project site is not located in the Natomas Basin, where levee flood protection has historically been a concern.

The City's Comprehensive Flood Management Plan (CFMP) (City of Sacramento 2015b) was adopted to reduce flood risk and potential loss economic losses caused by flood-related property damage. The CFMP addresses the protection of public safety, such as emergency preparedness, interior drainage, risk communication, protection of critical facilities, and development guidelines. Each major section of the CFMP offers recommendations for new or modified policies, flood preparation measures, and physical structures to enhance the level of flood protection in Sacramento.

The project site is located in the Folsom Dam failure inundation area (see Figure 11.6 in the MTP/SCS Program EIR [SACOG 2011]). The project site is currently developed with existing residential and commercial uses that are covered by the *Sacramento County, Local-Hazard Mitigation Plan* (AMEC Earth & Environmental, Inc. 2004), which contains emergency procedures that would be implemented in the event of levee or dam failure. In addition, a dam evacuation plan incorporating the California Office of Emergency Services' dam evacuation requirements is part of the Local-Hazard Mitigation Plan. The City coordinates with Sacramento County, various districts, fire department and fire protection districts, school districts, and private and public organizations to update the plan. The plan is intended to minimize the threat to public safety and to minimize the response time to an impending or actual sudden release of water from dams.

Certain types of projects that propose relatively large concentrations of people or special needs individuals in a dam inundation area could cause adverse effects related to the implementation of emergency evacuation plans and present conflicts with multi-jurisdictional hazard mitigation plans. Successful implementation of evacuation plans depends on prompt and efficient evacuation to minimize the loss of life. Unique institutions, such as hospitals, schools, and care facilities proposed within dam inundation areas are land uses that would typically be difficult to evacuate safely and expeditiously, thus impeding successful implementation of an evacuation plan. The proposed project does not include any of these facilities and while redevelopment would increase the number of new residences and commercial uses on-site, existing flood risks due to failure of a levee or dam would be similar to the risks under existing conditions, except that a greater number of residents would have the potential to be affected by flooding.

Although the proposed project would increase the number of people that could be exposed to dam or levee failure, the project is not located in an area where levee integrity is a concern, and the City is a

signatory to the *Sacramento County, Local-Hazard Mitigation Plan*, which contains emergency procedures that would be implemented in the event of levee or dam failure. Flood hazards are controlled through compliance with the City's NPDES permit through the implementation of BMPs and LID features, which also require that there be no net increase in post-development runoff as compared to predevelopment runoff; and that drainage plans be submitted demonstrating appropriate sizing of facilities and compliance with the SQIP requirements for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, State, and local agency flood-control regulations.

The levees directly protecting the project site from 100-year storm events are in good condition and not in need of repair or upgrade; the project does not propose any unique uses; and the project area would continue to be managed under the County's *Local-Hazard Mitigation Plan*. The *Local-Hazard Mitigation Plan* includes an emergency evacuation plan with annual progress reports and updates that includes new developed projects that have been implemented within the City's jurisdiction. Therefore, the impact associated with placement of housing and structures within a 100-year floodplain and flooding as a result of the failure of a levee or dam are considered **less than significant**.

j) Would the project result in inundation by seiche, tsunami, or mudflow?

No Impact. The project site is located too far from the Pacific Ocean or any other large body of water to be affected by tsunamis. Mudflows occur only in areas of steep terrain; the project site is nearly flat and is not located adjacent to or in the vicinity of any areas of steep terrain where mudslides could occur. Because the Sacramento Valley is generally not seismically active (see Section 3.5, "Geology and Soils," for further discussion), it is unlikely that a seismic seiche would occur in the Sacramento or American Rivers in the project vicinity. Thus, there would be **no impact**.

3.9 NOISE AND VIBRATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the existing noise and vibration environment and potential effects from project implementation on the existing environment. Descriptions and analysis in this section are based primarily on a reconnaissance-level site survey conducted by AECOM noise specialist on November 18–19, 2015, aerial photography interpretation, and information obtained from noise and vibration sources, including the California Department of Transportation (Caltrans), Environmental Protection Agency (EPA), and Federal Transit Administration (FTA). Additional information sources include the Master Environmental Impact Report (MEIR) for the City of Sacramento 2035 General Plan Update (City of Sacramento 2014) and the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy Environmental Impact Report (SACOG MTP SCS EIR) (SACOG 2011).

3.9.1 ENVIRONMENTAL SETTING

NOISE FUNDAMENTALS AND DESCRIPTORS

Noise is sound that is undesirable or unwanted. The perception of sound is subjective and can vary substantially from person to person. Noise can be generated by mobile (transportation) noise sources, such as automobiles, trucks, and airplanes, and by stationary (nontransportation) noise sources such as

construction activity, machinery, and commercial and industrial operations. The decibel (dB) scale is a conventional unit for measuring the amplitude of sound because it accounts for the large variations in sound pressure amplitudes and reflects the way that people perceive changes in sound amplitude.¹ Several different terms are used to describe noise levels. The noise descriptors most often used to describe environmental noise are listed and defined below.

- ▶ L_{max} (*maximum noise level*): The maximum instantaneous noise level during a specific period of time.
- ▶ L_{eq} (*equivalent noise level*): The average noise level. The L_{eq} represents an average of the sound energy occurring over a specified time period. The 1-hour, A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a 1-hour period. The L_{eq} shows very good correlation with community response to noise.
- ▶ L_{dn} (*day-night average noise level*): The 24-hour L_{eq} with a 10-dB “penalty” for noise events that occur during the noise-sensitive hours between 10 p.m. and 7 a.m. In other words, 10 dB is “added” to noise events that occur in the nighttime hours, and this generates a higher reported noise level when determining compliance with noise standards. The L_{dn} accounts for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- ▶ *CNEL (community noise equivalent level)*: The CNEL is similar to the L_{dn} described above, but with an additional 5-dB “penalty” added to noise events that occur during the noise-sensitive hours between 7 p.m. and 10 p.m., which are typically reserved for relaxation, conversation, reading, and other activities that could be disrupted by noise. When the same 24-hour noise data are used, the reported CNEL is typically approximately 0.5 dB higher than the L_{dn} .

VIBRATION FUNDAMENTALS

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., operating factory machinery) or transient (e.g., explosions).

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. RMS is a measurement of the effective energy content in a vibration signal, expressed mathematically as the average of the squared amplitude of the signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses

¹ Therefore, the addition of sound levels in dB is calculated using a logarithmic (energy) basis. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly added. For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy. There is a strong correlation between the way humans perceive sound and A-weighted sound levels (dBA). All sound levels reported in this section are in terms of A-weighted decibels unless specifically stated otherwise.

experienced by buildings (FTA 2006:7-1 to 7-8; Caltrans 2004:5-7). PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response to vibration. The response of the human body to vibration relates well to average vibration amplitude. Therefore, vibration impacts on humans are evaluated in terms of RMS vibration velocity. Similar to airborne sound, vibration velocity can be expressed in decibel notation, as vibration decibels (VdB).²

The effects of groundborne vibration include movement of building floors, rattling of windows, shaking of items that are sitting on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and impact pile driving (occurring close to structures) during construction. Human annoyance from groundborne vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

EXISTING CONDITIONS

Sensitive Land Uses

Noise-sensitive land uses are those uses where quiet is essential to the purpose of the land use. Residential uses are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels when there may be an expectation of lesser noise at certain times of day (e.g., after 10 p.m.) and on certain days of the week (e.g., Sundays).

All of the properties surrounding the project site are currently non-residential, with the exception of the nine-story senior residential facility, St. Francis Manor, which is located directly across J Street, to the north of the project site (2515 J Street). Other noise-sensitive land uses near the project site include the residential properties at 1018 25th Street; Thai Basil Restaurant with outside seating area at 2431 J Street; and St. Francis of Assisi Elementary School at 2500 K Street.

Vibration-sensitive receptors near the project site include all buildings adjacent and surrounding the project site. Additional sensitive receptors of groundborne vibration would be historic buildings, which are more susceptible to structural damage from vibration. Because of the age and construction materials of the buildings adjacent to the project site, the adjacent buildings to the east of the project site were conservatively assumed as historic buildings for vibration analyses in this IS/MND.

Existing Noise Sources

The predominant source of noise in the vicinity of the project site is vehicular noise emanating from traffic on J, 25th, K, and 26th Streets.

² Vibration levels described in VdB are referenced to 1 micro inch per second.

Ambient Noise Level Surveys

Ambient noise level surveys were conducted on November 18–19, 2015, to document the noise environment and identify noise sources. Five receptor locations were selected to represent the noise-sensitive uses (e.g., residential uses) near the project site (Exhibit 3.9-1).

Twenty-four-hour (long term or “LT”) noise level measurements were completed at two measurement sites, LT-01 and LT-02. Site LT-01 is located on the roof of the existing building at the project site, and is facing the parking lot and Jazz Alley. This location provided an overall assessment of existing noise exposure at the quietest areas within the project site. The average noise level for LT-01 is just under 60 dB L_{dn} . Site LT-02 is also located on the roof of the existing building at the project site, and is facing J Street. This location provided an overall assessment of existing noise exposure at the noisiest areas within the project site. The average noise level for LT-02 is approximately 68 dB L_{dn} .

The long-term measurements show that the noise environment at the project site is within the level recommended by the City as a part of the 2035 General Plan. Policy EC 3.1.1, which references Table EC 1 of the General Plan, recommends a maximum of 70 dBA for urban residential and mixed-use projects.

Short-term (15-minute) monitoring was conducted on November 19, 2015, at the remaining three locations, ST-01 through ST-03, shown in Exhibit 3.9-1. Average daytime hourly noise levels documented by the short-term measurements range from 56.9 dBA L_{eq} (at Site ST-03) to 61.1 dB L_{eq} (at Site ST-01), with maximum noise levels between 69.5 and 80.2 dB (L_{max}). Dominant sources of noise included local traffic and natural sources (e.g., wind, birds).³ The measurements of ambient noise levels at each survey location are summarized in Table 3.9-1.

Roadway Traffic

In addition to the ambient noise measurements, existing traffic noise on the roadways in the project vicinity was calculated to quantify existing traffic noise levels, based on the existing traffic volume (as provided in the project traffic study). Table 3.9-2 summarizes the modeled traffic noise levels 50 feet from the centerline of the roadways near the project site. Modeling of traffic noise levels occurs at this distance because 50 feet is a representative distance from the roadway centerline to adjoining noise-sensitive uses such as residences based on the width of the public rights-of-way surrounding the project site (approximately 80 feet). Table 3.9-2 shows the modeled noise levels and estimated distances to the 70 dB L_{dn} , 65 dB L_{dn} , and 60 dB L_{dn} traffic noise contours, based on the traffic data provided to support this SCEA. As shown in Table 3.9-2, the location of the 70 dB L_{dn} contour ranges from 0 to 44 feet from the centerline of the modeled roadways.⁴

³ Short-term, 15-minute and continuous, 24-hour long-term measurements of ambient noise levels were taken in accordance with applicable ANSI standards using Larson Davis Laboratories (LDL) Models 820 and 824 precision integrating sound level meters. The sound level meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure measurement accuracy. The equipment used meets all pertinent ANSI specifications for Class 1 sound-level meters (ANSI S1.4-1983[R2006]).

⁴ The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) combined with the California Vehicle Noise (Calveno) Reference Energy Mean Emission Levels was used to predict existing traffic noise levels within the project area. The FHWA model is the traffic noise prediction model currently preferred by FHWA, the California Department of Transportation, and county and city governments for assessing traffic noise.

Table 3.9-1. Summary of Ambient Noise Level Survey Results—November 18–19, 2015								
Site	Noise Sources	Land Use	Date(s)	L _{dn}	Average Measured Hourly Noise Levels, dB			
					Daytime (7 a.m.–7 p.m.)		Nighttime (10 p.m.–7 a.m.)	
					L _{eq}	L _{max}	L _{eq}	L _{max}
ST-01	St. Francis of Assisi Elementary School 2500 K Street Sacramento, CA 95816	School	Nov.19	–	61.1	80.2	–	–
ST-02	Thai Basil 2431 J Street Sacramento, CA 95816	Restaurant	Nov.19	–	64.0	72.2	–	–
ST-03	1018 25th Street Sacramento, CA 95816	Residential	Nov.19	–	56.9	69.5	–	–
LT-01	Project Site, Roof facing parking lot and Jazz Alley Sacramento, CA 95816	Project Site	Nov.19 - 20	66.1	59.4	82.2	59.7	78.1
LT-02	Project Site, Roof facing J Street Sacramento, CA 95816	Project Site	Nov.19 - 20	70.0	67.6	98.6	62.7	95.4

Notes: – = nonapplicable periods for short-term measurements; see note below for explanation. dB = A-weighted decibels; L_{dn} = day-night average noise level; L_{eq} = equivalent noise level; L_{max} = maximum instantaneous noise level during a specific period of time; LT = long term; ST = short term

Long term (LT) measurements are taken to measure noise levels continuously over a relatively long period of time (usually 24 hours) to determine the day, and night (L_{dn}) levels for the project area and the affected vicinity. Short term (ST) measurements are spot checks within the study area used to calibrate the road noise model. Short-term measurements are taken for about 10–30 minutes (depending on traffic volumes) with concurrent traffic counts (for calibration) and during the daytime, when ambient traffic noise is highest.

Source: Data compiled by AECOM in 2015

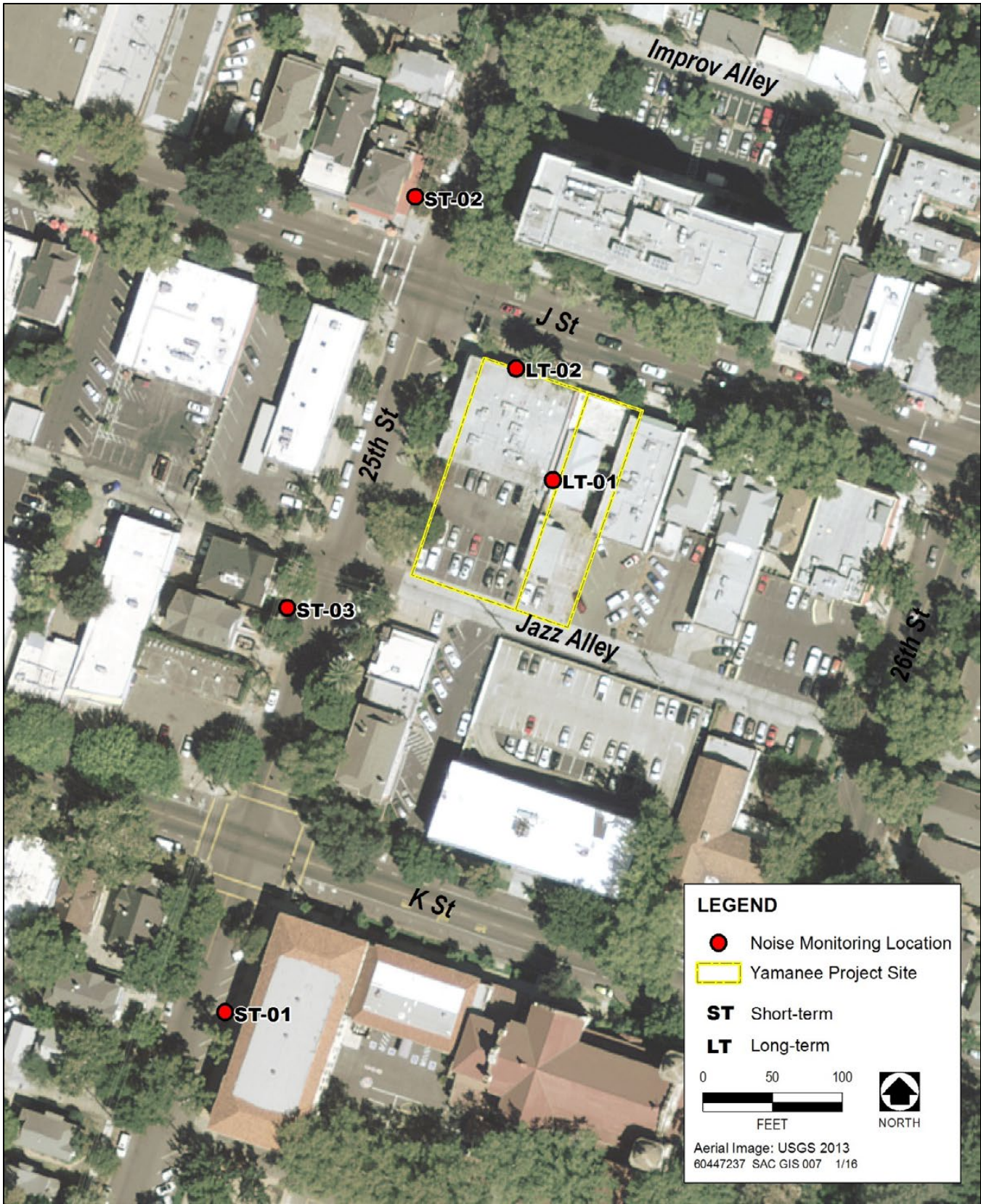
Existing Vibration

The existing vibration environment, like the noise environment, is dominated by transportation-related vibration emanating from roadways near the project site. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the road right-of-way.

3.9.2 DISCUSSION

Since they are closely related, items a), c), and d) are addressed together below.

- a) **Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**
- c) **Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**



Source: Data compiled by AECOM in 2015

Exhibit 3.9-1. Ambient Noise Measurement Sites

Roadway	Roadway Segment	dB, L _{dn} at 50 feet	Distance to Contours, feet		
			70 dB L _{dn}	65 dB L _{dn}	60 dB L _{dn}
J Street	From West of 25th Street to 25th Street	69	42	132	418
J Street	From 25th Street to 26th Street	69	42	133	420
J Street	From 26th Street to East of 26th Street	69	44	138	438
Jazz Alley	From West of 25th Street to 25th Street	40	0	0	1
Jazz Alley	From 25th Street to 26th Street	43	0	0	1
Jazz Alley	From 26th Street to East of 26th Street	42	0	0	1
K Street	From West of 25th Street to 25th Street	62	7	24	74
K Street	From 25th Street to 26th Street	62	8	25	80
K Street	From 26th Street to East of 26th Street	62	8	24	77
25th Street	From South of K Street to K Street	57	2	7	23
25th Street	From K Street to Jazz Alley	56	2	7	21
25th Street	From Jazz Alley to J Street	56	2	7	22
25th Street	From J Street to North of J Street	55	2	5	15
26th Street	From South of K Street to K Street	62	8	26	84
26th Street	From K Street to Jazz Alley	62	8	27	85
26th Street	From Jazz Alley to J Street	62	8	25	78
26th Street	From J Street to North of J Street	61	6	18	57

Notes: dB = A-weighted decibels; L_{dn} = day-night average noise level
Source: Modeling conducted by AECOM in 2015

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Operational Noise

Less than Significant. Implementation of the proposed project would add traffic to the roadway network, increasing traffic noise levels. Project implementation would result in development of on-site noise-sensitive and noise-producing uses.

Land Use Compatibility

Based on the site measurements and the predicted traffic noise levels along the roadways surrounding the project site (i.e., J, K, 25th, and 26th Streets, and Jazz Alley), the future residential units would be exposed to exterior noise levels ranging from 57 dBA L_{dn} along the western boundary (facing 25th Street) to 70 dBA L_{dn} along the northern boundary (facing J Street). Therefore, the exterior noise levels at the residential uses meet the City’s land use/noise compatibility criteria (2035 General Plan Policy EC 3.1.1, reproduced below as Table 3.9-3) of 70 dB L_{dn} for urban residential infill and mixed-use projects.

With respect to interior noise levels, new residential construction and renovated buildings (with insulated windows, door weatherstripping and thresholds, and exterior wall insulation) would provide an exterior-to-interior noise level reduction of at least 25 dB with exterior doors and windows closed (EPA

Table 3.9-3. Exterior Noise Compatibility Standards for Various Land Uses	
Land Use Type	Highest Level of Noise Exposure that is Regarded as “Normally Acceptable” ^a (L _{dn} ^b or CNEL ^c)
Residential—Low Density Single Family, Duplex, Mobile Homes	60 dBA ^{d,e}
Residential—Multi-family	65 dBA
Urban Residential Infill ^f and Mixed-Use Projects ^g	70 dBA
Transient Lodging—Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings—Business, Commercial and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

Notes:

^a As defined in the *State of California General Plan 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.”

^b L_{dn} or day-night average level is an average 24-hour noise measurement that factors in day and night noise levels.

^c CNEL or community noise equivalent level measurements are a weighted average of sound levels gathered throughout a 24-hour period.

^d dBA or A-weighted decibel scale is a measurement of noise levels.

^e The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.

^f With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).

^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.

^j All mixed-use projects located anywhere in the City of Sacramento.

Source: City of Sacramento 2014: Table EC 1; adapted by AECOM in 2015.

1974). Therefore, with the minimum 25-dBA noise reduction provided by the building exterior façade, the expected maximum noise levels at the interior of the residential buildings would be 45 dBA L_{dn}, which would be meet the City’s 45-dBA L_{dn} noise standard, which is established in Policy EC 3.1.3.⁵ Therefore, noise impacts with respect to the interior noise levels would be **less than significant**.

Off-Site Traffic Noise

Implementing the proposed project would result in an increase in traffic volumes, and consequently, an increase in traffic noise. To assess traffic noise impacts on existing noise-sensitive uses, traffic noise levels with the project and without the project were estimated for affected roadway segments using FHWA’s Highway Noise Prediction Model (FHWA-RD-77-108) (FHWA 1978) and traffic data (e.g., average daily traffic [ADT] volumes, vehicle speeds, and percent distribution of vehicle types).⁶ The

⁵ Policy EC 3.1.3 establishes the City’s interior noise standard: “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} for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA Leq (peak hour) for office buildings and similar uses.”

⁶ This model is based on the California vehicle noise (CALVENO) reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. The traffic noise levels presented reflect the use of conservative traffic noise

modeled roadway noise levels assume no natural or artificial shielding; therefore, these estimates should be considered conservative (potentially overestimating impacts). Actual traffic noise exposure levels near the project site would vary depending on a combination of factors, such as variations in daily traffic volumes, shielding provided by existing and proposed structures, and meteorological conditions. See Appendix G for complete modeling inputs and results.

Exterior incremental noise standards are established by 2035 General Plan Policy EC 3.1.2 at any of the studied roadway segments. Policy EC 3.1.2 references Table EC 2, which is reproduced below as Table 3.9-4. As shown in Table 3.9-5, the noise level along existing roadways would not increase substantially as a result of project traffic. Predicted traffic noise levels in the project vicinity would not exceed the exterior noise standards established in the General Plan. The proposed project would increase traffic noise levels by between 0 and 2 dB. In general, a 1-dB increase in noise level is imperceptible, a 3-dB increase is barely perceptible, and a 6-dB increase is clearly noticeable.

Residences and Buildings where People Normally Sleep ^a		Institutional Land Uses with Primarily Daytime and Evening Uses ^b	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Notes:
^a This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
^b This 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: City of Sacramento 2014; Table EC 2; adapted by AECOM in 2014.

Table 3.9-5 summarizes modeled L_{dn} at 50 feet from the roadway centerline for affected roadway segments under existing conditions and with project implementation. To satisfy the City’s land use/noise compatibility criteria (2035 General Plan Policy EC 3.1.1) at proposed and existing noise-sensitive uses, where feasible, exterior noise exposure at these uses may not exceed 70 dB L_{dn} for urban residential infill and mixed-use projects, and schools. As indicated in Table 3.9-5, the predicted traffic noise levels along the analyzed roadways would be at or below the City’s 70-dB L_{dn} ambient noise standard. Therefore, the operational impact related to off-site traffic would be **less than significant**.

modeling methodologies that assume no natural or human-made shielding (e.g., the presence of vegetation, berms, walls, or buildings) from existing or proposed structures or topography. The proposed project’s contribution to the existing and cumulative traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic. Actual traffic noise exposure levels in the vicinity of the project area would vary depending on a combination of factors, such as variations in daily traffic volumes, shielding provided by existing and proposed structures, and meteorological conditions. See Appendix G for complete modeling inputs and results.

Roadway	Roadway Segment	Existing No Project dB, L _{dn} at 50 Feet	Existing Plus Project dB, L _{dn} at 50 Feet	Increase, dB
J Street	From West of 25th Street to 25th Street	69	70	1
J Street	From 25th Street to 26th Street	69	70	1
J Street	From 26th Street to East of 26th Street	69	70	1
Jazz Alley	From West of 25th Street to 25th Street	40	41	1
Jazz Alley	From 25th Street to 26th Street	43	45	2
Jazz Alley	From 26th Street to East of 26th Street	42	43	1
K Street	From West of 25th Street to 25th Street	62	62	0
K Street	From 25th Street to 26th Street	62	62	0
K Street	From 26th Street to East of 26th Street	62	62	0
25th Street	From South of K Street to K Street	57	57	0
25th Street	From K Street to Jazz Alley	56	57	1
25th Street	From Jazz Alley to J Street	56	57	1
25th Street	From J Street to North of J Street	55	55	0
26th Street	From South of K Street to K Street	62	63	1
26th Street	From K Street to Jazz Alley	62	63	1
26th Street	From Jazz Alley to J Street	62	62	0
26th Street	From J Street to North of J Street	61	61	0

Notes: dB = A-weighted decibels; L_{dn} = day-night average noise level
Source: Modeling conducted by AECOM in 2015

On-Site Noise Sources

Occupation of the proposed dwellings and non-residential land uses would expose adjacent noise-sensitive land uses to noise. Noise typically associated with such development includes music, voices, warning sounds associated with alley parking garage access entries, and maintenance equipment. Development on the project site would be required to comply with the Sacramento City Code, which includes restrictions on noise generation. Activities associated with residential operations would result in only minor and intermittent temporary noise exposure, as perceived at the closest residential receptors, primarily during the day and evening hours. The project would require building mechanical equipment (e.g., HVAC equipment).

The type and location of HVAC equipment that would operate at the proposed building has not yet been identified. Mechanical and HVAC equipment associated with the new buildings would be roof-mounted or shielded to avoid adverse noise and aesthetic effects. Noise levels from HVAC equipment vary significantly depending on unit efficiency, size, and location, but would range between 70 to 90 dBA L_{eq} at a distance of 3 feet (EPA 1971). The proposed building would be a minimum of 90 feet from the existing multi-story residences (St. Francis Manor). Assuming average of 80 dBA L_{eq} for residential building HVAC, and based on an attenuation rate of 6 dBA per doubling of distance, this would result in an external noise level of about 51 dBA at the St. Francis Manor residential building (90 feet), which would not exceed City standards for nearby residences. Using the same assumptions for St. Francis Manor HVAC systems, noise levels experienced at future proposed residences would not exceed City standards. The closest existing office building at 2430 J Street and the existing residence (1018 25th

Street) are located approximately 80 feet to the west and southwest of the proposed building, respectively. However, these existing receptors would not be exposed to noise from the HVAC systems of the proposed building because of the lower relative height of these existing buildings. The height of the proposed building would provide shielding between the HVAC systems and these existing buildings. Conservatively assuming no shielding, HVAC systems with an average of 80 dBA L_{eq} , and based on an attenuation rate of 6 dBA per doubling of distance, this would result in an external noise level of about 51 dBA at the nearest existing receptor (80 feet). This level of noise would not exceed City standards for nearby noise-sensitive receptors.

Note that if HVAC systems are located in mechanical rooms, it would result in much lower noise levels due to the attenuation provided by the solid enclosure. Noise shielding cabinets, placed on the roof or mechanical equipment rooms, are typical of roof-mounted HVAC equipment. Normally, the shielding and location of these units reduces noise levels to at least to 55 dBA at 50 feet from the source. New construction is typically required, as part of design review to shield rooftop HVAC equipment, which would further reduce the noise levels. The project proposes, as described in Section 2.6 of this SCEA, to select, locate, and/or shield noise-generating mechanical equipment, as necessary, to comply with the City's Noise Ordinance. The noise impact related to HVAC systems would be **less than significant**.

Construction Noise

Less than Significant. Project implementation would result in temporary, short-term construction activities. Project-related construction noise levels could expose sensitive receptors to elevated noise levels.

Construction activities for the proposed project would temporarily increase noise levels near the construction activities. Such noise increases would result from both on-site construction activities and construction-related vehicle traffic (off-site).

Construction of the proposed project would result in additional vehicle trips on the local roadway network as workers commute and equipment and materials are transported. The exact number of daily trips required for project construction is not known at this time. However, construction activities for a project like Yamanee would not require more than 500 daily one-way trips, even when the project involves intensive earth movement activities (e.g., soil import/export). This very conservative assumption is used purely for the purposes of analysis and the applicant does not anticipate construction related trips that would approach 500 one-way trips per day.

Table 3.9-6 summarizes the modeled traffic noise levels for existing and existing plus construction traffic at 50 feet from the centerline of the studied roadway segments near the project site. Typically, when the traffic volumes doubles on a roadway segment compared to existing conditions, the resultant increase is approximately 3 dB. According to the traffic analysis, peak-hour volumes on roadway segments in the project vicinity range from 139 to 1,500 under existing no project conditions, except along Jazz Alley from west of 25th Street to east of 26th Street, where peak volumes are 30 and 60 vehicles per day.

Roadway	Roadway Segment	Existing dB, L_{eq} at 50 Feet	Existing Plus Construction dB, L_{eq} at 50 Feet	Increase, dB
J Street	From West of 25th Street to 25th Street	70	70	0
J Street	From 25th Street to 26th Street	70	70	0
J Street	From 26th Street to East of 26th Street	70	70	0
Jazz Alley	From West of 25th Street to 25th Street	40	45	5
Jazz Alley	From 25th Street to 26th Street	43	46	3
Jazz Alley	From 26th Street to East of 26th Street	41	46	5
K Street	From West of 25th Street to 25th Street	66	66	0
K Street	From 25th Street to 26th Street	66	66	0
K Street	From 26th Street to East of 26th Street	66	66	0
25th Street	From South of K Street to K Street	61	62	1
25th Street	From K Street to Jazz Alley	60	61	1
25th Street	From Jazz Alley to J Street	60	62	2
25th Street	From J Street to North of J Street	59	61	2
26th Street	From South of K Street to K Street	63	64	1
26th Street	From K Street to Jazz Alley	63	64	1
26th Street	From Jazz Alley to J Street	63	64	1
26th Street	From J Street to North of J Street	61	63	2

Notes: dB = A-weighted decibels; L_{eq} = Equivalent noise level
Source: Modeling conducted by AECOM in 2015

Given the very conservative assumption for construction-related traffic of 500 vehicles daily and assuming nine hours of construction period per day (between the hours of 9 a.m. and 6 p.m.), the project would result in an additional 56 construction vehicles per hour. Project construction-related increases in traffic noise levels along most of the studied roadways would typically not exceed 2 dB as shown in Table 3.9-6. This construction-related increase does not exceed the applicable significance thresholds. As shown in Table 3.9-6, existing noise levels along the Jazz Alley segments range from 40 dB L_{eq} to 43 dB L_{eq} . Project construction-related increases in traffic noise levels along these roadway segments would range from 3 to 5 dB. This level of increase is well below the 12 dB allowable noise increment for existing peak hour noise level of up to 45 dB L_{eq} , as shown in Table 3.9-4. Therefore, this impact would be **less than significant**.

In addition to the movement of trucks and other vehicles related to construction, the project would also require the operation of construction equipment. Primary construction activities considered in the analysis of potential noise impacts on existing residents in the project vicinity include building demolition, grading, site preparation, off-site water pipeline construction, building construction, and application of architectural coatings. The proposed project would be constructed and then occupied over a period of approximately a year and a half. Construction projects result in noise generation through the use of equipment, such as graders, backhoes, skip loaders, water trucks, drilling, and pile driving equipment, and other equipment.

Noise levels associated with construction activities are based on the quantity, type, and usage factors for each type of equipment that would be used during the construction period. Although noise ranges are generally similar for all construction phases, the grading phase tends to involve the noisiest equipment. As shown in Table 3.9-7, the noisiest equipment types operating at construction sites typically range from 88 dB to 90 dB L_{max} at 50 feet (FTA 2006). Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Average noise levels at construction sites typically range from approximately 65 to 89 dB L_{eq} at 50 feet, depending on the activities performed (FTA 2006). Site excavation and grading would involve operation of the heaviest equipment and this phase of construction is anticipated to produce the highest noise levels at neighboring noise-sensitive uses. In addition, the equipment for the off-site water pipeline construction in the urban area would include a concrete saw, which would be the noisiest equipment in this phase. These phases are expected to last for a relatively short amount of time as compared to building construction, which would generate substantially lower levels of construction noise.

Table 3.9-7. Typical Construction Equipment Noise Levels	
Equipment Item	Typical Maximum Noise Level (dB) at 50 Feet
Earthmoving	
Backhoes	80
Bulldozers	85
Front Loaders	80
Graders	85
Paver	85
Roller	85
Scrapers	85
Tractors	84
Slurry Trencher	82
Dump Truck	84
Pickup Truck	55
Materials Handling	
Concrete Mixer Truck	85
Concrete Pump Truck	82
Crane	85
Man Lift	85
Stationary Equipment	
Compressors	80
Generator	82
Pumps	77
Impact Equipment	
Compactor	80
Jack Hammers	85
Impact Pile Drivers (Peak Level) ¹	95
Pneumatic Tools	85
Rock Drills	85
Other Equipment	
Concrete Saws	90

Equipment Item	Typical Maximum Noise Level (dB) at 50 Feet
Vibrating Hopper	85
Welding Machine / Torch	73

Notes: dB = decibels. ¹ The project will not use piles that are installed by hammering. This will reduce construction noise-related impacts. Noise levels are for equipment fitted with properly maintained and operational noise control devices, per manufacturer specifications.
Sources: FTA 2006:12-6

The closest sensitive receptors are the St. Francis Manor Apartments at 2515 J Street (north of the project site) and the single family home at 1018 25th Street (west of the project site), which are 90 feet and 80 feet from the nearest proposed construction activities, respectively. Therefore, the construction noise levels at these sensitive receptors would vary up to 83 to 89 dBA L_{eq} to the north, and 85 to 89 dB dBA L_{eq} to the west (when construction equipment is operating at the property line adjacent to the receptors). Exterior ambient noise levels measured for these noise-sensitive uses are 57 dBA L_{eq} to 68 dBA L_{eq} , as shown in Table 3.9-8. Therefore, project construction would temporarily and periodically increase existing noise levels in the vicinity of the project site by a maximum of 22 dB to 26 dB. With respect to interior noise levels, the typical sound level reduction of buildings in a warm climate is 25 dB with windows closed (EPA 1971). Therefore, the maximum interior noise levels from construction activities at the nearest sensitive receptors would be 50 dBA to 64 dBA.

Receiver	Location	Shortest Distance (ft) Between Noise-Sensitive Uses and Proposed Construction Areas	Exterior Noise Level, dBA L_{eq}		Interior Noise Level, dBA L_{eq}	
			Ambient Noise	Project Noise	Project Noise, Doors/Wind ows Open	Project Noise, Doors/Window s Closed (EPA)
LT-02	Project Site, Roof facing J Street	From (St. Francis Manor) 90	68	84	69	59
ST-01	St. Francis of Assisi Elementary School 2500 K Street	250	61	75	60	50
ST-02	Thai Basil 2431 J Street	100 feet from on-site construction; and 50 feet from pipeline construction activities	64	83 to 89	68 to 74	58 to 64
ST-03	2430 J Street	80 feet from on-site construction; and 50 feet from pipeline construction activities	57	85 to 89	70 to 74	60 to 64

Notes: dB = decibels
Sources: Modeling conducted by AECOM in 2015

The proposed project's construction activities will be required to comply with Section 8.68.080 of the City's Noise Ordinance, which exempts construction activities from the ordinance as long as these activities are limited to between the hours of 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday. This exemption reflects the recognition that construction-related noise is temporary, is generally acceptable when limited to daylight hours, and is part of what residents of urban areas expect (along with sirens, etc.). The impact is considered **less than significant**.

As noted in Section 2.5 of this SCEA, the proposed project will not install any piles that may be required for the building foundation by hammering. In addition, the proposed project includes a menu of noise reduction strategies for project construction, including:

- ▶ Construction shall be limited to the hours between 7:00 AM to 6:00 PM Monday through Saturday and between the hours of 9:00 AM and 6:00 PM on Sunday and holidays.
- ▶ Construction equipment should be well maintained and used judiciously to be as quiet as practical.
- ▶ Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
- ▶ Utilize "quiet" models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
- ▶ Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites.
- ▶ Construct temporary noise barriers or partial enclosures to acoustically shield equipment where feasible. Construct walled enclosures around especially noisy activities or clusters of noisy equipment. For example, shields can be used around pavement breakers and loaded vinyl curtains can be draped under elevated structures.
- ▶ Prohibit unnecessary idling of internal combustion engines.
- ▶ Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where a barrier would be effective at reducing noise.
- ▶ Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
- ▶ Route construction related traffic along major roadways and away from sensitive receptors where feasible.
- ▶ The project applicant or designee shall designate a disturbance coordinator and conspicuously post this person's number around the project site and in construction notifications. The disturbance coordinator shall receive complaints about construction disturbances and, in coordination with the

City, determine the cause of the complaint and implementation of feasible measures to alleviate the problem.

Maintaining construction equipment properly and using the equipment in a way that is as judicious as practical would reduce construction noise levels. The level of noise reduction depends on the age and types of equipment and the level of maintenance, but a 3-dB decrease would be a reasonable estimate. Using good conditions mufflers could reduce construction noise levels by approximately 5-dB. Using quiet technologies for equipment could reduce noise levels by between 5 and 10 dB. For buffering from sensitive uses, the level of noise reduction depends on the distance between the equipment and the noise receiver, but a 3-dB decrease would be a reasonable estimate. For shielding equipment, in most cases, the maximum noise reduction that can be achieved by a barrier is 20 dB for thin walls. A material that has a Transmission Loss (TL) of at least 25 dB or greater may be feasible, and would be adequate for a noise barrier (FHWA 2011). Construction of plywood fences, in most cases, could achieve a maximum noise reduction of 20 dB for thin walls. A material that has a Transmission Loss (TL) of at least 25 dB or greater may be feasible, and would be adequate for a noise barrier (FHWA 2011). For temporary noise blankets, a 10-dB decrease would be a reasonable estimate.

b) Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant with Mitigation. The vibration environment under operation of the proposed project would be similar to that of the existing, dominated by transportation-related vibration from roadways in the vicinity of the project site. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the road right-of-way. Since the project proposes residential, retail, and restaurant uses, there would be no permanent sources of vibration planned a part of the project implementation, and no vibration impact due to operation of the proposed project.

Construction activities have the potential to result in varying degrees of temporary and short-term ground vibration, depending on the specific construction equipment used and operations involved. Ground vibration levels associated with various types of construction equipment, as published by FTA, are summarized in Table 3.9-7.

The geotechnical report for the proposed project recommends that the proposed building be supported either on a mat foundation bearing in the dense gravel layer at a depth of approximately 20 to 25 feet below grade or on deep foundations. The “deep foundation alternative” would require drilled piers.

The estimated maximum vibration levels in VdB generated by the project-related construction equipment (i.e., large bulldozer and caisson drilling or drilling) at the nearest off-site sensitive uses to the north of the project site would be 70 VdB. The construction-related vibration levels at these receptors would be well below the 80 VdB significance threshold for human annoyance. The building structures to the east and west are commercial uses, and to the south is parking garage. These buildings would not be considered sensitive uses for human annoyance.

Groundborne noise and vibration levels at the nearest off-site building structures and sensitive uses (surrounding the project site) were predicted based on the VdB and PPV reference vibration levels shown in Table 3.9-9. As described previously, vibration impacts with respect to potential building damage are analyzed in terms of PPV and impacts relative to human annoyance are analyzed in terms of VdB. The vibration-sensitive receptors are located approximately 10 feet east of the construction site to 90 feet to the north of the project site. As indicated in Table 3.9-9, the estimated vibration levels (in PPV) at the nearest off-site building structures are above the significance threshold of 0.2 in/sec PPV (FTA 2006) for building structures to the east. The impact is considered **potentially significant**.

Mitigation Measure 3.9-1: Prepare and Implement Vibration Control Plan.

Prior to the issuance of any building permit, the project applicant shall develop a Noise and Vibration Control Plan. The plan shall include measures demonstrated to ensure vibration exposure for adjacent buildings would not cause damage to adjacent structures to the east.

- Prior to construction, the applicant shall contact the owner of the building adjacent and to the east to photo document current conditions. This should include photos of existing cracks and other material conditions present on or at the surveyed building – both exterior and interior.
- The construction contractor(s) shall regularly inspect and photograph the building during foundation work, collect vibration data, and report vibration levels to the City Chief Building Official, or his/her designated representative, on a monthly basis.
- If, based on monitoring of building conditions or vibration levels, it is determined necessary to avoid damage, the project applicant shall coordinate with the Chief Building Official, or his/her designated representative, to implement corrective actions, which may include, but is not limited to building protection or stabilization.
- Predrill pile holes to the extent feasible.

The estimates for vibration levels shown in Table 3.9-9 are based on assumptions related to the worst-case construction equipment that could be used on the project site, located at the edge of the project site closest to the adjacent building to the east. Prior to project construction, more detailed plans will be available that identify exactly what types of equipment would be required, and where this equipment would be operated. Both the type and location of equipment could be changed to avoid adverse effects. For example, using a small bulldozer in areas adjacent to buildings to the east would substantially reduce vibration (Table 3.9-9). The use of a 0.2 PPV threshold for this impact is conservative, assuming that the adjacent building would be sensitive, as is the case periodically with historic buildings. Upon further examination as a part of implementing Mitigation Measure 3.9-1, it may not be necessary to achieve vibration levels less than 0.2 PPV in order to avoid adverse effects. If damage is observed, Mitigation Measure 3.9-1 requires changes in corrective actions. The impact would be **less than significant with mitigation**.

Equipment	PPV at 25 Feet (in/sec) ¹	Approximate L _v (VdB) at 25 Feet ²	Nearest Sensitive Receptors											
			North			South			East			West		
			Distance	PPV	VdB	Distance	PPV	VdB	Distance	PPV	VdB	Distance	PPV	VdB
Large bulldozer	0.089	87		0.013	70		0.089	87		0.352	99		0.016	72
Caisson drilling	0.089	87		0.013	70		0.089	87		0.352	99		0.016	72
Loaded trucks	0.076	86	90	0.011	69	25	0.076	86	10	0.300	98	80	0.013	71
Jack-hammer	0.035	79		0.005	62		0.035	79		0.138	91		0.006	64
Small bulldozer	0.003	58		<0.001	41		0.003	58		0.012	70		0.001	43
Significance Threshold				0.5	80		0.5	80		0.2	80		0.5	80

Notes: in/sec = inches per second; VdB = vibration decibels
¹ Where PPV is the peak particle velocity.
² here L_v is the root mean square velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.
Source: FTA 2006

SACRAMENTO 2035 GENERAL PLAN MASTER EIR

Construction vibration impacts associated with the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels were analyzed in Impact 4.8-4 (nonhistoric buildings) and Impact 6.8-6 (historic buildings) of the 2035 General Plan Master EIR.

The 2035 General Plan Master EIR found that vibration from construction activities may affect existing buildings (by causing structural damage) and their occupants (such as by disrupting activities or causing annoyance) if they are located close enough to the construction sites. In general, vibration-induced structural damage could occur only when certain types of construction activity (e.g., blasting, pile driving, heavy earthmoving) take place very close to existing structures. Vibration-induced disruption/annoyance could occur during more common types of construction activity (e.g., heavy earthmoving equipment) at a greater distance from the activity area.

The 2035 General Plan Master EIR identifies policies from the 2035 General Plan that set performance standards and criteria addressing potential vibration impacts of future development in areas within the city. The Master EIR identifies Policies EC 3.1.5 and EC 3.1.6 to reduce vibration impacts.

- ▶ **Policy 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.

- ▶ **Policy 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.

The 2035 General Plan Master EIR found that disruption/annoyance impacts related to construction vibration are event- and location-specific, and because it is not feasible to prohibit all construction within 150 feet of all existing receptors, the residual potential for disruption/annoyance impacts at certain receptors would be significant and unavoidable.

The project would not involve construction that would exceed acceptable interior standards, so Policy EC 3.1.5 is not applicable. This SCEA involves consideration of potential vibration impacts, consistent with Policy EC 3.1.6.

METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY PROGRAM EIR

Impacts associated with vibration was analyzed in Impact NOI-3 of the MTP/SCS Program EIR. The MTP/SCS Program EIR identified that construction of new developments could result in temporary vibration impacts from grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. Such construction activities require the use of construction equipment (e.g., pile drivers, jackhammers) and vehicles that generate large amounts of vibration in the immediate vicinity of the source, often resulting in vibration levels substantially higher than under existing conditions.

The analysis concluded that if the implementing agency adopts MTP/SCS Program EIR Mitigation Measure NOI-3, which requires the project to predrill pile holes for placement of piles, the impact would be reduced to a less-than-significant level. However, the analysis concluded that SACOG cannot require the implementing agency to adopt the mitigation measure, and that it is ultimately the responsibility of a lead agency to determine and adopt mitigation. Therefore, the MTP/SCS Program EIR identified the impact as significant and unavoidable. Mitigation Measure NOI-3 is provided below for the reader's edification.

Mitigation Measure NOI-3: Reduce noise, vibration, and groundborne noise generated by construction activities. *The implementing agency should reduce noise, vibration, and groundborne noise generate by construction activities by taking the following (or equivalent) actions:*

- ▶ *restrict construction activities to permitted hours in accordance with local jurisdiction regulations;*
- ▶ *properly maintain construction equipment and outfit construction equipment with the best available noise suppression devices (e.g., mufflers, silencers, wraps);*
- ▶ *prohibit idling of construction equipment for extended periods of time in the vicinity of sensitive receptors;*

- ▶ *locate stationary equipment such as generators, compressors, rock crushers, and cement mixers as far from sensitive receptors as possible; and*
- ▶ *predrill pile holes to the maximum feasible depth, provided that pile driving is necessary for construction.*

The proposed project (see Section 2.5) prohibits the installation of piles by hammering, which would reduce vibration effects. Mitigation Measure 3.9-1 requires techniques that would avoid adverse vibration-related effects.

e) and f) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? 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?

No Impact. Project implementation would not result in exposure of sensitive uses to aircraft noise.

The project site is not located within an airport land use plan, nor is it located within 2 miles of a public or public-use airport or private airstrip. Distant aircraft operations, although a contributor to the local noise environment, are not considered a substantial source of noise. Therefore, **no impact** would occur.

3.10 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 ENVIRONMENTAL SETTING

Fire Protection Services

The Sacramento Fire Department (SFD) provides fire protection services to the entire City, which encompasses approximately 98 square miles. In addition, SFD serves three contract areas that occupy 47 square miles immediately adjacent to the City boundaries within the unincorporated county. SFD is staffed by more than 500 firefighters and administrative staff members. On a daily basis, the SFD's equipment includes 24 fire engines, eight ladder trucks, and one heavy rescue at 24 fire stations, which are divided into three battalions that function as geographic administrative units (SFD 2015a). The SFD also employs a Special Operations Division that includes a Hazardous Materials Program, Technical Rescue, Boat Program, and Urban Search and Rescue Task Force (SFD 2015b).

According to the 2035 General Plan Master EIR, the City strives to maintain emergency response times that provide optimal fire protection (Policy PHS 2.1.2). The City includes a staffing goal of 1 station every 1.5 mile service radius, per 16,000 residents (City of Sacramento 2014). The Central City area, in which the project site is located, is a densely populated area of the City, with a large daytime population of more than 100,000 people (including residents, workers, and visitors) (City of Sacramento 2014). The 1.5-mile radius service area is a City-wide requirement and applies to the project site.

The project site is located within Fire Station #4 first response jurisdiction (SFD 2012). Fire Station #4 is located at 3145 Granada Way, less than one mile southeast of the project site (SFD 2006). The station includes paramedic and a fire engine (SFD 2006). Additional fire services for the project site could be provided by Fire Station #2, which is located at 1229 I Street, approximately 1.15 mile northwest of the

project site. Further additional fire services for the project site could additionally be provided by Fire Station #1, which is located at 624 Q Street (approximately 2 miles southwest of the project site). The standard procedure for addressing a response to a call is for the closest and available station to respond; however, depending on the situation, multiple stations may respond. In addition, mutual aid agreements are in place with neighboring fire departments (West Sacramento Fire Department, Sacramento Metro Fire Department, and Cosumnes Community Service District Fire Department).

Police Protection Services

The Sacramento Police Department (SPD) is principally responsible for providing police protection services within the jurisdictional limits of the City. In addition, the Sacramento County Sheriff's Department, California Highway Patrol, University of California Davis Medical Center Police Department, and Regional Transit Police Department support SPD to provide police protection in the greater Sacramento area. In 2014, SPD responded to approximately 617,931 calls for service (SPD 2014).

According to the 2014 Annual Report, SPD was staffed in 2014 by 302 full-time and part-time civilian employees and 620 sworn officers (SPD 2014). The SPD uses a variety of data—geographic information system (i.e., GIS)—based data, call and crime frequency information, and records of available personnel—to rebalance its deployment on an annual basis to meet the changing demands of the City. According to the 2035 General Plan Master EIR, the SPD does not have an adopted officer-to-resident ratio, but maintains an internal goal of 2.0 to 2.5 sworn police officers per 1,000 City residents and one civilian support staff member per two sworn officers (City of Sacramento 2014). Based on the most current information the ratio of sworn officers per 1,000 residents is 1.29 (SPD 2014; DOF 2015).

The hiring of new sworn police officers was significantly reduced from the end of 2007 through 2012 due to budget cutbacks, with no new officers hired between 2009 and 2012. Staffing levels and the ratio of officers per 1,000 residents declined during this period, with retirements and attrition. However, with implementation of funding from the City of Sacramento's Measure U, SPD began a large-scale hiring initiative in January 2013. Measure U revenues are deposited into the City's General Fund and have been used to support essential public safety services, including 9-1-1 response, police officers, gang and youth violence prevention, fire protection and emergency medical response, and other essential services. The Police Department's hiring plan anticipates a staff of 723 officers by July 2017 (SPD 2014).¹

Patrol and specialized teams are deployed from three substations serving four command areas: North, Central, East, and South. The project site is within Police District 3 and is located within beat 3B (SPD 2015a). First response to the project site would be provided by SPD Central Command, which serves Downtown, Midtown, the Richards Boulevard corridor, and the Railyards (SPD 2015b). Central Command is located at 300 Richards Boulevard, approximately 3 miles northwest of the center of the project site.

¹ Assuming a January 1, 2015 estimated population of 480,105, the ratio of officers to residents would be approximately 1.5 (DOF 2015).

The SPD also has mutual aid agreements in place with other law enforcement agencies in the event of a natural disaster (i.e. earthquakes and levee failure), terrorism, or other emergency (i.e. hazardous spill) (City of Sacramento 2005a). The SPD maintains a mutual aid agreement with the Sacramento Sheriff’s Department for police protection services within the City limits (City of Sacramento 2005b).

Schools

The project site is located within the Sacramento City Unified School District (SCUSD) boundaries. The SCUSD area covers the Central City area eastward to the Sacramento City limits. SCUSD operates more than 82 schools throughout Sacramento. SCUSD includes traditional elementary, middle, and high schools, as well as charter school facilities and other programs. The 2014–2015 SCUSD enrollment was approximately 46,868 students (CDE 2015).

Based on SCUSD’s 2016–2017 school assignment locator (SCUSD 2016), students at the project site would have the option to attend the following public schools:

- ▶ Theodore Judah Elementary School, 3919 McKinley Blvd., approximately 1.5 mile northeast of the project site;
- ▶ Sutter Middle School, 3150 I Street, approximately 0.75 mile east of the project site; and
- ▶ C. K. McClatchy High School, 3066 Freeport Boulevard, approximately 2.34 miles southwest of the project site.

As shown in Table 3.10-1, Theodore Judah Elementary School, Sutter Middle School, and C. K. McClatchy High School have estimated remaining capacities of 39 students, 241 students, and 536 students per school, respectively. SCUSD has a policy of open enrollment and can provide families with multiple public school choices to consider sending their children to school. SCUSD attendance boundaries are subject to change to accommodate school overcrowding and changes in facility utilization.

School Name	Grades	Enrollment ¹	Design Capacity ²	Estimated Remaining Capacity
Theodore Judah Elementary School	K–6	602	641	39
Sutter Middle School	7–8	1,162	1,403	241
C. K. McClatchy High School	9–12	2,239	2,775	536

Note: Student enrollment in the district changes daily as more students enroll and others leave; therefore, Table 3.10-1 does not necessarily reflect exact current enrollment.
Sources: ¹CDE 2015; ²SCUSD 2012

There are also private schools in the vicinity of the project site. The St. Francis of Assisi Elementary School, a private catholic school, is the nearest private school in the vicinity of the project site, approximately 0.15 mile south (SFAES 2015). There are a number of other private schools in the Central City and neighborhoods adjacent to the Central City, including Land Park, Curtis Park, and East Sacramento.

Other Public Facilities

The project site is located in an urban part of the City of Sacramento that provides for several public service facilities. James Marshall Park, approximately 0.14 mile from the project site, includes the E. M. Hart Senior Center. McKinley Park, located less than one mile from the project site, includes the Clunie Community Center, the McKinley library, and the Shepherd Garden and Art Center (City of Sacramento 2015). The McKinley library includes a collection of 43,000 books and computing workstations (Sacramento Public Library 2015).

3.10.2 DISCUSSION

- a) **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services?**

Fire Protection

Less than Significant. The proposed project would increase the resident population by approximately 198 to 241 people.² During project construction, the proposed project would require the use of equipment and machinery and the storage, use, and handling of combustible and flammable materials such as diesel fuel, lubricants, and gas. This could result in a potential increase in calls for fire services beyond what is currently experienced at the project site.

The project applicant would be required to incorporate California Fire Code requirements into the project-design to address access and finished surfaces for firefighting equipment; fire hydrant placement and sufficiency of fire hydrants; and fire flow availability. In addition, the Sacramento City Code outlines fire prevention requirements to be incorporated into new high-rise development (Title 15, Chapter 15.100) that specify access arrangements, fire suppression equipment, smoke detection and removal systems, fire pumps, fire alarm and communications systems, standby power systems, and plan submittals for approvals. These requirements are designed to improve fire safety and ensure emergency access to accommodate new development, and are specifically designed to reduce fire risk for people and structures, including specific provisions for high-rise buildings. The SFD has retained a consultant to review the proposed project. This consultant has recommended conditions of approval related to compliance with existing Code requirements. The conditions relate to fire hydrants, maintenance and repair of fire protection systems, fire flow, fire access, sprinklers, and a fire control room (CSG Consultants 2015).

The proposed project site is located within the City limits and is currently served by the SFD. First-response service to the project site would be provided by Fire Station #4, which is located at 3145 Granada Way, less than one mile southeast of the project site. If necessary, additional fire services are available from fire stations located within the City Center, including fire Station #2, which is located at

² Please see Section 3.4.5 "Population and Housing" for further details on the estimated population created by the proposed project.

1229 I Street, approximately 1.15 mile northwest of the project site, and Fire Station #1, which is located at 624 Q Street, approximately 2 miles southwest of the project site. The City also has mutual aid agreements in place with neighboring fire departments, as well. All fire and emergency service providers in the County of Sacramento have entered into an agreement (JPA) in favor of a unified service area dispatch system. Under the JPA, all emergency calls are routed through a central dispatch center. The closest station to the emergency call location would provide services to that call, depending on capacity and availability.

According to the 2009 SFD Annual Report (the most recently available internal response time audit published by the SFD), the response time in the vicinity of the project site was between 3 to 5 minutes, which is within the range of the City's goal for its first-responding company to arrive within a 4-minute response time 90% of the time (SFD 2009). Citywide dispatched SFD medic units arrived within 8 minutes 80% of the time for all 9-1-1 calls in 2011 (the most recently available internal response time audit published by the SFD) which did not meet the goal for all medic units to arrive within 8 minutes 90% of the time (SFD 2011).

Development within the vicinity of the project site would increase the demand for higher levels of fire protection and emergency services, including additional staffing and vehicles, but would not necessitate the construction of a new facility or expansion of an existing facility. As noted above, the SFD measures the level of adequate service by the response time and not by the number or ratio of firefighters per 1,000 persons. The proposed project would be served by existing facilities during both project construction activities and operation and would not require additional fire protection facilities or equipment. The proposed project would not require the construction or expansion of fire protection facilities and would not generate significant adverse physical environmental effects. The impact is considered **less than significant**.

Police Protection

Less than Significant. Implementation of the proposed project would increase the demand for police protection facilities and services. The proposed project would have a total of 134 units. The proposed project would increase the resident population by approximately 198 to 241 people, which may require police protection services. During project construction there could be a temporary increase in demand for police protection services due to construction equipment stored on site that could be attractive for theft and vandalism.

First response to the project site would be provided by SPD Central Command, located approximately 3.0 miles northwest of the project site. Using SPD's internal goal of 2.0 to 2.5 sworn police officers per 1,000 residents and one civilian support staff member per two sworn officers, the proposed project could potentially require up to 1 officer and 1 civilian support staff members to serve this additional population in the Central City at project completion. Consistent with SPD's standard practice, the SPD will adjust staffing levels as appropriate in order to ensure adequate service is provided to the project site. Not only does SPD have staffing practices and facilities sufficient to service the project site, but the proposed project would also generate revenues, including property taxes and sales taxes paid by new residents purchasing goods and services in the City, which would contribute to funding for future SPD facilities and services.

The proposed project would not require the construction or expansion of police protection facilities that would generate significant adverse physical environmental effects. The impact is considered **less than significant**.

Schools

Less than Significant. The proposed project would increase the number of school-age children that may attend a SCUSD school. The proposed project would generate approximately 26 total elementary school students, 4 middle school students, and 5 high school students, for a total of approximately 35 students (Table 3.10-2).

Grade Level	Multi-family (Students per Dwelling Unit)	Total Students Generated under the Proposed Project ¹
Elementary (K–6)	0.19	26
Middle (7–8)	0.03	4
High (9–12)	0.04	5
Total Students	–	35

Notes:
¹ Total number of students based on 134 total units associated with the project site.
 Source: SCUSD 2012:7

Students residing at the project site would have the option to attend the local public schools – Theodore Judah Elementary School, Sutter Middle School, and C. K. McClatchy High School. In addition, there are private schools in and around the Central City area, and it is possible future residents of the proposed project could attend these schools. As shown in Table 3.10-1, all three public schools are currently operating below capacity and the addition of new students generated by the project could be accommodated if the project were constructed today.

As required by SB 50, the project applicant would pay applicable state-mandated school impact fees to SCUSD. As of June 30, 2015, SCUSD’s Level I fees are \$3.20 per square foot for residential construction and \$0.51 for commercial construction (SCUSD 2015). The applicable fee levels may change over time through implementation of the project. The California Legislature has declared that the school impact fee is adequate mitigation under CEQA (California Government Code Section 65996). The impact is considered **less than significant**.

Parks

Less than Significant. Implementation of the proposed project would increase the demand for parks and related facilities. The proposed project would add 134 housing units to the City and would increase the resident population of the project site by approximately 198 to 241 people.

The proposed project is located within a one mile radius of both neighborhood and community parks. As discussed under Section 3.11 “Recreation,” the closest public parks include James Marshall Park and Hart Senior Center (0.14 mile), Sutter’s Fort (0.15 mile), McKinley Park (0.45 mile), Winn Park (0.65 mile), Stanford Park (0.7 mile), Capitol Park (0.9 mile), and Sutter’s Landing Regional Park (1

mile). Including just City park facilities, the City currently provides 3.4 acres of neighborhood and community parkland on a citywide basis (City of Sacramento Parks and Recreation 2014; p. 3).

To address parkland impacts caused by projects that generate additional resident and employee populations within the City, the Sacramento City Code provides guidelines and formulas for the dedication of parkland and payment of in-lieu fees (Title 16, Chapter 16.64), and imposes a park development impact fee on new projects within the City (Title 18, Chapter 18.44) for both residential and non-residential development.

Pursuant to Chapter 16.64 of the City Code, the City's current Parkland Dedication Requirement requires proposed projects to dedicate land, provide in-lieu fees, or a combination thereof to provide the equivalent of 5 acres of parkland property for each one thousand (1,000) residents (City of Sacramento 2014). In-lieu fees collected pursuant to Chapter 16.64 may be used by the City to acquire parkland or renovate or rehabilitate existing parks that will serve the proposed project for which the fee is paid (City Code, § 16.64.040).

In addition to the City's Parkland Dedication Requirement, the City requires developers to comply with the City's Park Development Impact Fee requirements to finance the construction of park and recreational facilities, pursuant to Chapter 18.44 of the City Code. Together, the City's Parkland Dedication in-lieu fee requirements and Park Development Impact Fee requirements provide a level of funding to acquire, design, construct and install park facilities to meet the needs of, and address the impacts caused by, new residential and commercial development within the City.

The City does not anticipate that the proposed project would cause or accelerate the physical deterioration of existing park facilities or require the expansion of existing parks in the area. The proposed project would provide its fair-share contribution to meet the City's Parkland Dedication and Park Development Impact Fee requirements. The impact is considered **less than significant**.

Other Public Facilities

Less than Significant. The proposed project is located within an urban area of Sacramento, and is therefore afforded the benefits of nearby public facilities, such as the McKinley Library. The library and other public facilities would be expected to accommodate the new residents associated with implementation of the proposed project. The project would not generate demand for additional other public facilities, the impacts of which could be potentially significant. The impact is considered **less than significant**.

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3.11 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.11.1 ENVIRONMENTAL SETTING

A variety of recreational opportunities for residents of Midtown Sacramento are located in the vicinity of the project site. The Sacramento region contains approximately 921,655 acres of parks, recreation, and open space (SACOG 2011). These recreational opportunities range from small neighborhood parks featuring playground equipment and sports fields to vast expanses of wilderness with hiking trails, rafting, and camping. These lands are governed by a variety of agencies: dependent park districts, independent park districts, counties, cities, community service districts, and federal and state agencies.

Designed recreational facilities in the City are maintained and operated by the City’s Department of Parks and Recreation. Such facilities includes 88 miles of bike trails and 14 miles of jogging and walking paths within City-managed parks; and operates more than 17 aquatic facilities (swimming pools, play pools, and wading pools), nine dog parks, 13 skateboard parks, and 18 community centers and neighborhood centers (City of Sacramento 2014).

The *City of Sacramento Parks and Recreation Master Plan 2005–2010* (City of Sacramento Parks and Recreation 2009) and the City’s 2035 General Plan (City of Sacramento 2014) guide park development in the City; the City has established a park acreage service level goal of 5 acres of neighborhood and community parks per 1,000 residents (City of Sacramento 2014).

Midtown Sacramento Parks and Recreational Facilities

The Parks and Recreation Master Plan identifies 10 community plan areas in the City. The project site is within the *Central City Community Plan* area. City parks within the *Central City Community Plan* area and parks managed by the California Department of Parks and Recreation would serve future project residents (City of Sacramento Department of Parks and Recreation 2010; City of Sacramento 2015a-f; California State Parks 2016a,b):

- ▶ *James Marshall Park and Hart Senior Center (2.5 acres)*, located at 915 27th Street, approximately 0.14 mile southeast of the project site. This park provides a children's play area, horseshoe pit, adult fitness stations, and grass lawn for miscellaneous recreation (City of Sacramento 2015b).
- ▶ *Sutter's Fort (6 acres)*, located between K and L Streets and 26th and 28th Streets, approximately 0.15 from the project site, and operated by the California State Park's Department. Sutter's Fort is a California historical/cultural site which offers both public and private amenities; including hiking and biking trails, picnic areas, guided tours of the fort, and a museum (California State Parks 2016a).
- ▶ *McKinley Park (32 acres)*, located at 601 Alhambra Blvd., approximately 0.45 mile northeast from the project site. This park include a basketball court, community center, group picnic areas, jogging trail, play areas (climbing wall and tot lots), soccer field, softball field, swimming and wading pool, tennis courts and a volleyball court (City of Sacramento 2015c).
- ▶ *Winn Park (3 acres)*, located at 1616 28th Street, approximately 0.65 mile southeast of the project site. This park provides benches, picnic areas, a tot lot and walkways (City of Sacramento 2015d).
- ▶ *Stanford Park (2.74 acres)*, located at 205 27th Street, approximately 0.7 mile northeast of the project site. This park provides for a baseball field, grass area, and a picnic area with three tables (City of Sacramento 2015e).
- ▶ *Capitol Park (40 acres)*, located at 10th and L Streets, approximately 0.9 mile west of the project site. This park surrounds the State Capitol; it is managed by the State. The park includes a rose garden, hiking and biking trails, and guided tours of the State capitol (California State Parks 2016b).
- ▶ *Sutter's Landing Park (2.5 acres)*, located at 20 28th Street, approximately 1 mile northeast of the project site. This park provides basketball courts, bocce ball, a skate park, and walkways (City of Sacramento 2015f).

In addition, the American River Bike Trail, which extends more than 32 miles to Beal's Point at Folsom Lake and connects with several other bike trails in the region, can be accessed from approximately 2 miles northwest of the project site (ARPF 2009). The Sacramento River is also a nearby amenity for fishing and boating. River access and a boat ramp are provided at Miller Park, approximately 3.5 miles southwest of the project site.

City Parkland Dedication Requirements

The Sacramento City Code provides guidelines and formulas for the dedication of parkland and in-lieu fees (Title 16, Chapter 16.64) and imposes a park development impact fee on development within the City (Title 18, Chapter 18.44) for both residential and non-residential development. Fees collected pursuant to Chapter 18.44 are used primarily to finance the construction of park and recreational facilities.

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**
- b) **Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

Less than Significant. The proposed project includes a 134-unit, 14-story, mixed-use building with ground floor commercial/retail. Future residents associated with the proposed project would be expected to use parks in the vicinity (discussed above), and other recreational facilities and resources located within the Sacramento area. The proposed project provides private rooftop recreation space, as well as public courtyard gathering space.

As required by Title 18, Chapter 18.44 of the Sacramento City Code, the project applicant would be required to dedicate parkland and/or provide a payment of in-lieu fees pursuant to standards set forth in Title 16, Chapter 16.64. Chapter 16.64.030 of the Sacramento City Code describes a formula for determining the amount of buildable parkland required for subdivision approvals in the City. According to this formula, the project would generate the need for approximately 1.4 acres of buildable parkland (134 new dwelling units multiplied by 0.0105 for each multiple-family dwelling unit). This formula was developed, based on information from the U.S. Census Bureau, to produce 5 acres of parkland for every thousand residents (see Section 16.14.030 [B][3] of the City Code). According to the City Code, this requirement can be met through dedication of parkland, through payment of an in-lieu fee determined to be sufficient to purchase the same amount of parkland based on an appraisal, or through a combination of dedication and payment of an in-lieu fee.

Because existing regulations would require dedication of parkland and/or payment of fees to satisfy park needs and avoid adverse effects related to demand for parks, this impact would be **less than significant**.

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3.12 TRANSPORTATION AND TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. TRANSPORTATION AND TRAFFIC. Would the project:				
a) Result in significant impacts to study intersections, specifically: <ul style="list-style-type: none"> i. The traffic generated by the project degrades LOS from an acceptable LOS (without the project) to an unacceptable LOS (with the project); or ii. The LOS (without project) is unacceptable and project generated traffic increases the average vehicle delay by 5 seconds or more? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in significant impacts to transit, specifically: <ul style="list-style-type: none"> i. Adversely affect public transit operations; or ii. Fail to adequately provide access to transit? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in significant impacts to bicycle facilities or pedestrian circulation, specifically: <ul style="list-style-type: none"> i. Adversely affect existing or planned bicycle or pedestrian facilities; or ii. Fail to adequately provide for access by bicycles and pedestrians? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in significant construction-related traffic impacts, specifically: <ul style="list-style-type: none"> i. Degrade an intersection or roadway to an unacceptable level of service; ii. Cause inconveniences to motorists due to prolonged road closures; or iii. Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section summarizes the analysis of transportation and traffic impacts associated with implementation of the proposed Yamanee project, as presented in the traffic impact study prepared by Kimley Horn, attached as Appendix H. Consistent with guidance from the City Department of Public Works, the analysis includes the following categories:

- ▶ Intersections
- ▶ Transit
- ▶ Bicycle facilities
- ▶ Pedestrian circulation
- ▶ Construction-related traffic impacts

ANALYSIS SCENARIOS

The following scenarios are analyzed in this section:

- ▶ **Existing Conditions** – represents the baseline condition upon which project impacts are measured. The baseline condition represents conditions in fall 2015 (traffic counts were conducted in November 2015).
- ▶ **Existing Plus Project Conditions** – reflects changes in traffic and circulation conditions associated with implementation of the proposed project.

3.12.1 ENVIRONMENTAL SETTING

This section describes the environmental setting, which is the baseline scenario against which project-specific impacts are evaluated. The baseline for this study represents conditions based on field observations conducted in November 2015. The environmental setting for transportation includes baseline descriptions for the roadway, bicycle, pedestrian, and transit facilities that serve the vicinity of the project site.

STUDY AREA

In urban environments, such as the study area, the operation of intersections (rather than roadway segments) governs roadway capacity. For this reason and because roadway segments were included in the traffic analysis for the 2035 General Plan, the City of Sacramento determines impacts on the roadway system based upon the operations of intersections.

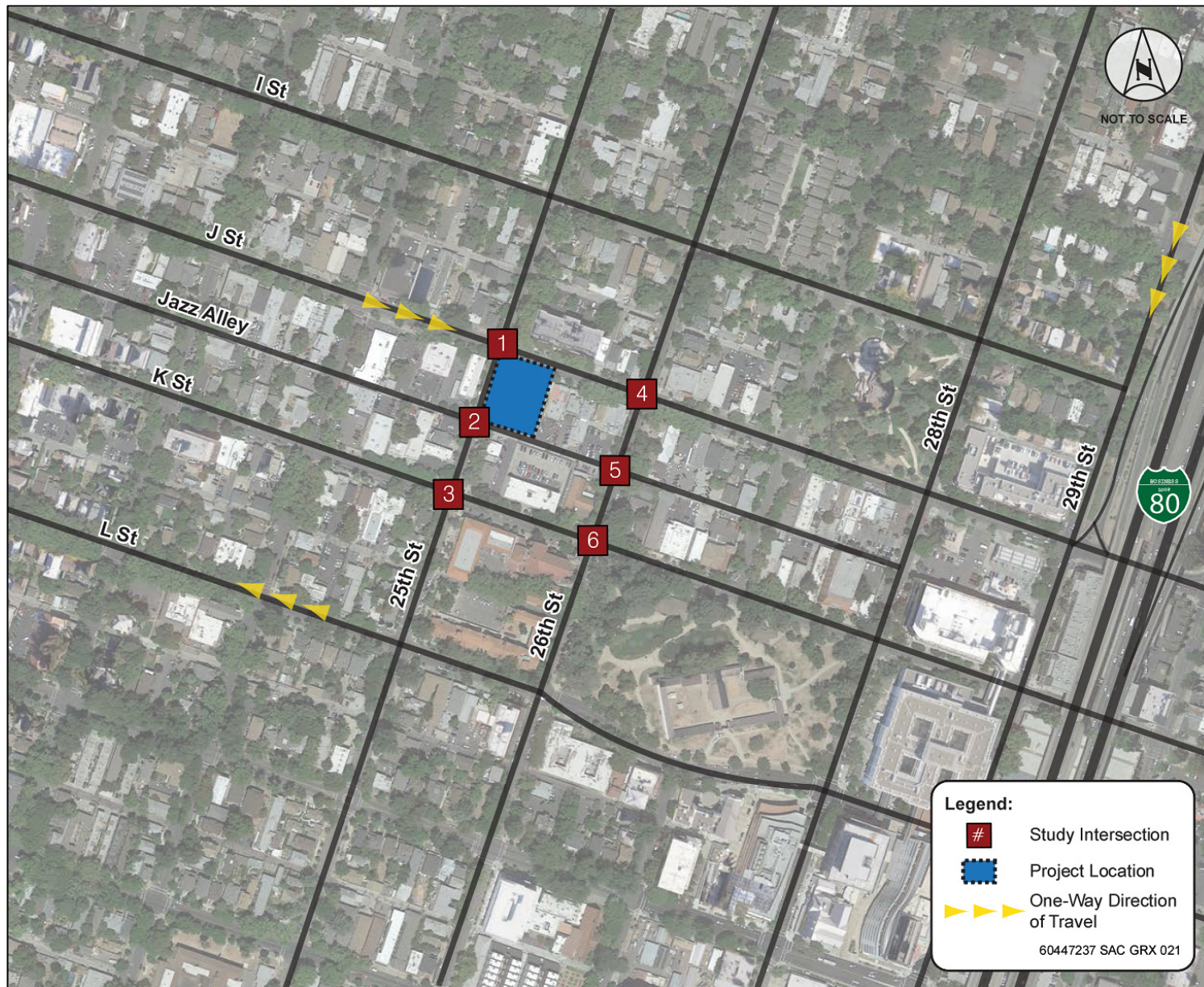
The study area includes six intersections identified below that are located in the vicinity of the proposed project site. The study area also includes bicycle, pedestrian, and transit facilities within the vicinity of the proposed project site. The project vicinity is shown on Exhibit 3.12-1. The intersections analyzed were selected based on their proximity to the project site, expected use by project traffic, and susceptibility for being impacted.¹

The following intersections are included in this evaluation:

1. 25th Street at J Street
2. 25th Street at Jazz Alley
3. 25th Street at K Street
4. 26th Street at J Street
5. 26th Street at Jazz Alley
6. 26th Street at K Street

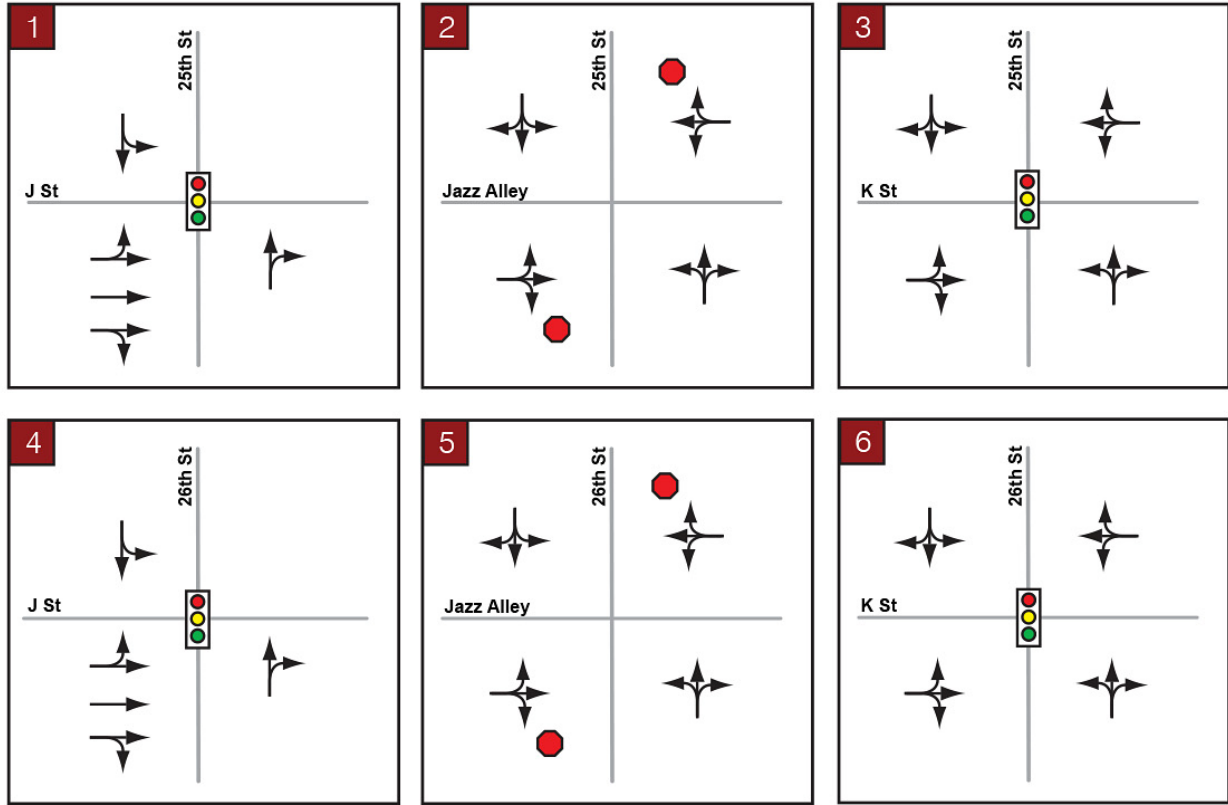
The study intersections, traffic control, and lane geometries are shown on Exhibit 3.12-2.

¹ Output from the Sacramento Regional Travel Demand Model (SACMET) was used to assist with the determination of the study area and the selection of study intersections. The resulting list was reviewed and approved by the City's Department of Public Works.



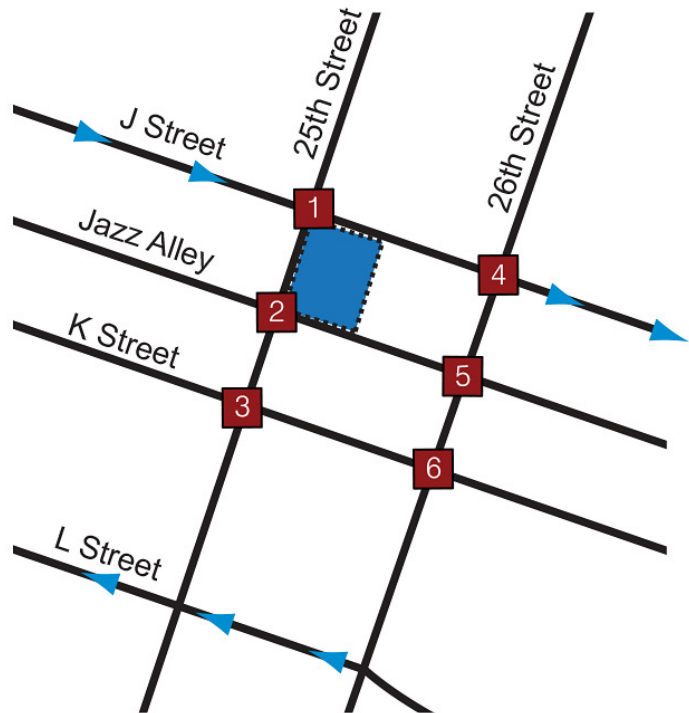
Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-1. Project Vicinity Map



NOT TO SCALE

LEGEND	
#	Study Intersection
Red Octagon	Stop Controlled Approach
Signal Light	Signalized Study Intersection
Blue Arrow	One-Way Direction of Travel
Blue Dashed Box	Project Location



60447237 SAC GRX 024

Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-2. Study Intersections, Traffic Control, and Lane Geometries

ROADWAYS

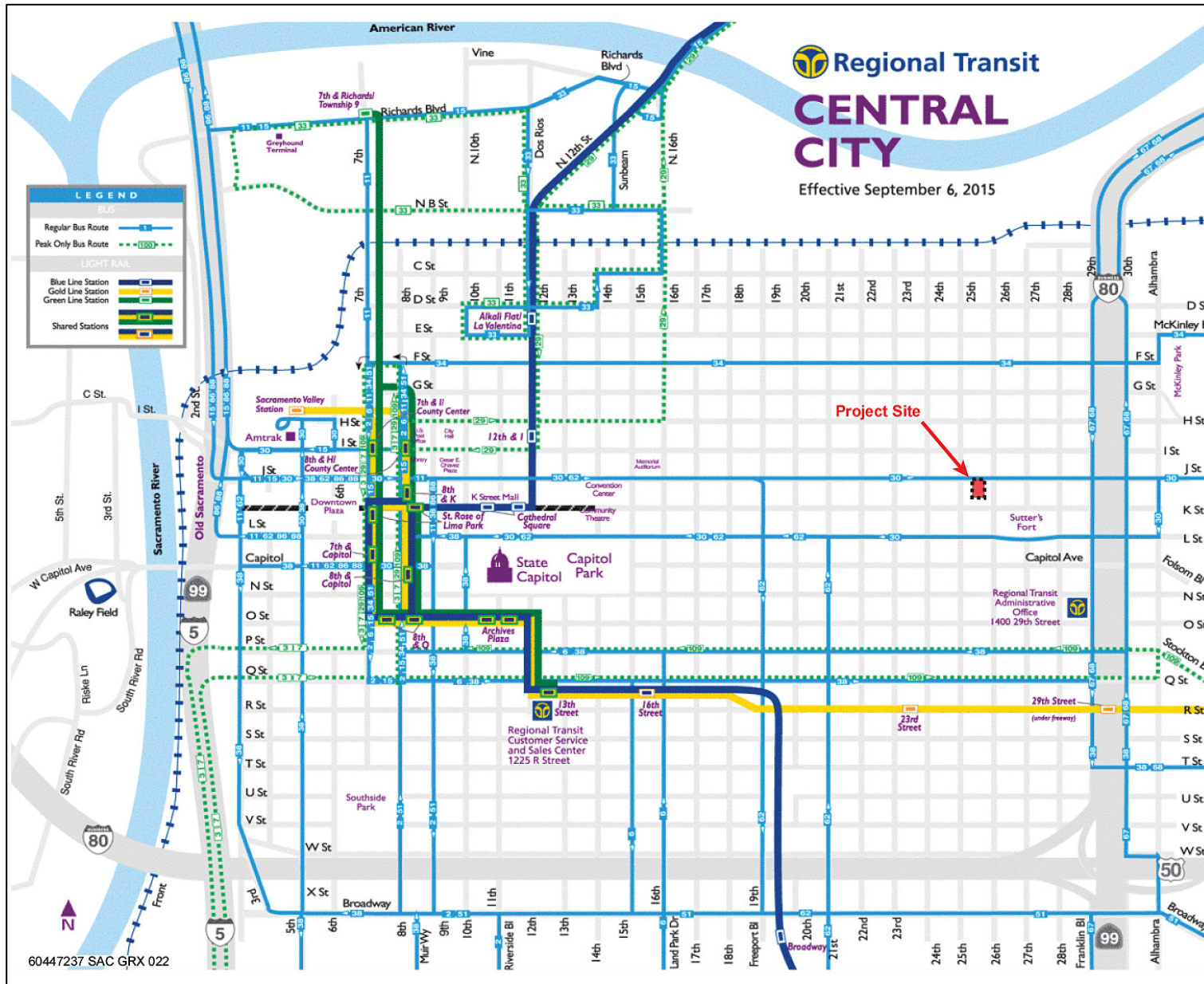
The study area is served by a system of gridded streets comprised of numbered north-south streets and lettered east-west streets. The street grid surrounding the proposed project site has lettered and numbered streets spaced approximately every 400 feet. Most portions of the street grid feature alleys oriented east to west, 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 include the following:

- ▶ **J Street** is an eastbound, one-way arterial roadway bordering the project on the north side. J Street is a three-lane roadway in the vicinity of the proposed project site. This roadway provides west-east connectivity through the Central City Area by connecting Interstate 5 (I-5) with Interstate 80 Business. On-street parking and sidewalks are provided on both sides of the street in the vicinity of the proposed project site.
- ▶ **K Street** is a two-way minor collector roadway located south of the project site. K Street is a two-lane roadway in the vicinity of the proposed project site, providing one travel lane in each direction. This roadway terminates at Alhambra Boulevard to the east of the project site, just east of Interstate 80 Business. On-street parking, sidewalks, and Class II bike lanes are provided on both sides of the street.
- ▶ **25th Street** is a two-way, two-lane local roadway that borders the west side of the project. Sidewalks and on-street parking are provided on both sides of the street.
- ▶ **26th Street** is a two-lane, bidirectional local roadway located east of the project site. Sidewalks and on-street parking are provided on both sides of the street.
- ▶ **Jazz Alley**, which borders the south side of the site, would provide vehicular access to the proposed project. This two-way alley extends from 20th Street to 28th Street and, in the vicinity of the project site, links 25th Street with 26th Street.

PUBLIC TRANSIT

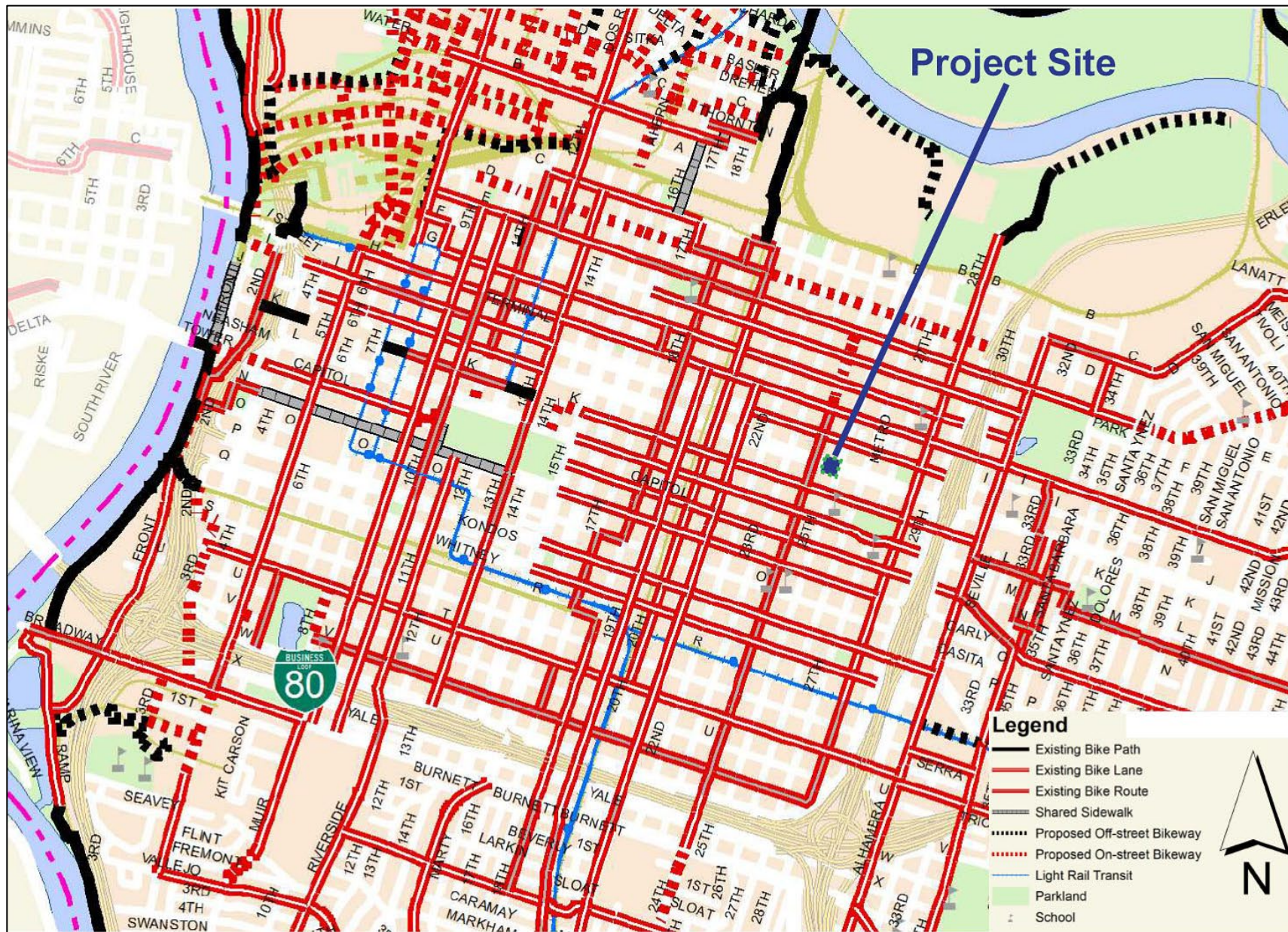
Sacramento Regional Transit District (RT) provides transit service in the greater Sacramento metropolitan area. Three routes provide bus service to the project area, as shown on Exhibit 3.12-3. As depicted in RT's Central City system map, fixed route 30 (traversing J Street and L Street) is the closest route (Sacramento Regional Transit District 2015). Buses operate daily from 5:00 a.m. to 10:00 p.m. with 12-75 minute headways, depending on the route and time of day. During peak commute periods, this route provides 15-minute headways.

RT's Light Rail service provides daily service at Gold Line stations along R Street at 23rd Street (approximately 0.65 miles from site) and 29th Street (approximately 0.7 miles from site). The Gold Line provides service from areas east and west of the project site (extending from the city of Folsom to the Sacramento Valley Station in Downtown Sacramento). Light rail service is operational from 4:00 a.m. to 12:30 a.m., with 15-minute headways during the day and 30-minute headways in the evenings and on weekends.



Source: Sacramento Regional Transit District, adapted by AECOM 2016

Exhibit 3.12-3. Sacramento RT Transit System Map



Source: Bikeway Master Plan, City of Sacramento Department of Transportation, March 2015, adapted by AECOM 2016

Exhibit 3.12-4. Sacramento City's Bikeway Master Plan

BICYCLE AND PEDESTRIAN FACILITIES

The proposed project site is within a developed area with a comprehensive bicycle and pedestrian network. All streets in the vicinity of the project site provide sidewalks on both sides of the street and on-street Class II bike lanes. Class II bike lanes exist on both sides of K Street while all three streets adjacent to the project site (J Street, K Street, and 25th Street) have sidewalks on both sides of the streets. Exhibit 3.12-4 depicts the City's existing and proposed bicycle facilities (City of Sacramento 2015a).

The City has identified the project vicinity as a high-demand pedestrian area, as desirable shopping, recreational, and other community destinations are located in a relatively dense area (City of Sacramento 2006). The City's Pedestrian Master Plan prioritizes development of safe, effective pedestrian networks in areas of high pedestrian demand, such as the project area.

EXISTING TRAFFIC VOLUMES

The analysis of transportation impacts is based on the concept of Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade is assigned to represent the perspective of drivers to indicate the comfort and convenience associated with driving. LOS ranges from A (best), which represents free-flow conditions with minimal delay, to LOS F (worst), which represents severe congestion and delay under stop-and-go conditions (the average control delay ranges for each LOS can be found in Appendix H). LOS F indicates that a facility is operating at or near its functional capacity.

A field review of the immediate project vicinity and study facilities was completed to observe existing operations and lane configurations, vehicle storage lengths, existing traffic control, speed limits, lane utilization, and adjacent land uses. Weekday peak-hour conditions were used as the time period during which to assess the transportation facilities' operations under both existing and existing plus project conditions.²

Traffic Counts

Traffic counts for the weekday AM and PM peak-period turn movements were conducted on Tuesday, November 3, 2015 at the study intersections. These counts were conducted between the hours of 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. 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. Existing (2015) peak hour turn movement volumes range from 0 to 794 in the AM peak-hour and 1 to 1369 in the PM peak-hour. Generally, the highest traffic counts for both peak-hours occur at the intersections of J Street and 25th Street and J Street and 26th Street. The

² Traffic operations at the study intersections were analyzed using procedures and methodologies contained in the Highway Capacity Manual 2010 (Transportation Research Board, 2010). These methodologies were applied using the Synchro software package. The HCM includes procedures for analyzing side-street stop controlled (SSSC), all-way stop controlled (AWSC), and signalized intersections. The SSSC procedure defines LOS as a function of average control delay for each minor street approach movement. The procedures for AWSC and signalized intersections define LOS as a function of average control delay for the intersection as a whole.

lowest traffic counts for both peak-hours occur at the intersections of Jazz Alley and 25th Street and Jazz Alley and 26th Street. Full traffic counts are presented in Appendix H.

Existing Levels of Service

Appendix H presents the peak-hour intersection operating conditions for existing conditions. As indicated therein, study intersections operate from LOS A to LOS C during the AM and PM peak hours, indicating overall efficiency in the operation of the existing roadway system.

Trip Generation

The primary basis for estimating automobile trips in preparing transportation impact analyses is the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The majority of the data included in the ITE Trip Generation Manual are from traffic counts conducted at single-use, suburban sites with limited pedestrian, bike, and transit opportunities. Although the application of this data is accepted as valid for suburban sites primarily consisting of automobile users, it is problematic for urban areas sites with moderate to extensive availability of non-automobile modes of transportation. Urban and suburban places have significant differences in trip generation given contrasts in development density, street networks, parking, and availability of transportation options.

In 2013, the Transportation Research Board of the National Academies (TRB) published the *National Cooperative Highway Research Program (NCHRP) Report 758* to review methods being applied as well as to propose and conduct research on applicable methods (TRB 2012). It is anticipated that research from *NCHRP Report 758* will soon be incorporated into best practice recommendations in the ITE *Trip Generation Manual*. *NCHRP Report 758* provides significant discussion on the application of a proxy method for estimating trip generation for urban sites, as well as the application of Household Travel Survey (HTS) data and Travel Demand Model (TDM) data for estimating trip generation.

Based on a review of available options to determine trip generation for this proposed development, and in consideration of guidance provided in *NCHRP Report 758*, it was determined that the use of data from SACOG's SACSIM TDM would yield reasonable mode split information for use in estimating trip generation. SACSIM's platform is based on the application of an activity-based model which includes significant modal detail for each of its resulting hourly tours. This activity-based model makes it possible to determine reasonable estimates for the reduced number of motorists traveling to and from the site in consideration of the availability of other modes of transit that would be likely to be used in the downtown core (i.e., mass transit, bicycle facilities, and pedestrian facilities). Specifically, it was decided to use mode split estimates resulting from SACSIM as estimated for the planned Ice Blocks project (DKS Associates 2015), which is also located within the Central City Area and includes a similar mix of land uses, as is anticipated for the proposed project. The resultant trip generation characteristics for the proposed project are depicted in Table 3.12-1.

As shown in Table 3.12-1, the proposed project is estimated to generate 720 new external daily trips, with 19 new external trips occurring during the AM peak hour and 60 new external trips occurring during the PM peak hour.

Table 3.12-1. Proposed Project Trip Generation												
Land Use (ITE+ Land Use Code)	Size	Total Daily Trips**	AM Peak-Hour					PM Peak-Hour				
			Total Trips	IN		OUT		Total Trips	IN		OUT	
				%	Trips	%	Trips		%	Trips	%	Trips
Existing												
Health/Fitness Club (492)	2.7-ksf	90	4	50%	2	50%	2	10	57%	6	43%	4
General Office Building (710)*	2.7-ksf	30	4	88%	4	12%	0	4	17%	1	83%	3
Shopping Center (820)*	6.087-ksf	260	6	62%	4	38%	2	23	48%	11	52%	12
High-Turnover (Sit-Down) Restaurant (932)	1.2-ksf	154	13	55%	7	45%	6	12	60%	7	40%	5
<i>Existing Unadjusted Vehicular Trips:</i>		534	27		17		10	49		25		24
SACSIM Mode Split Trip Adjustment++												
Retail	30%	-124	-6		-3		-2	-11		-5		-5
Existing Adjusted Vehicular Trips:		410	21		14		8	39		20		19
Proposed (New)												
Residential Condominium / Townhouse (230)	134-units	830	65	17%	11	83%	54	76	67%	51	33%	25
Shopping Center (820)*	4.792-ksf	206	5	62%	3	38%	2	18	48%	9	52%	9
Quality Restaurant (931)	9.702-ksf	874	8	82%	7	18%	1	73	67%	49	33%	24
<i>New Unadjusted Vehicular Trips:</i>		1,910	78		21		57	167		109		58
SACSIM Mode Split Trip Adjustment++												
Apartment	55%	-457	-36		-6		-30	-42		-28		-14
Retail	30%	-324	-4		-3		-1	-27		-17		-10
New Adjusted Vehicular Trips:		1,130	38		12		27	98		64		35
Net New Adjusted Vehicular Trips ** :		720	19		0		19	60		44		16
<p>* Source: Trip Generation Manual, 9th Edition, ITE, 2012.</p> <p>* Due to limited sample size, General Office Building (710) and Shopping Center (820) trip generation are based on average rates, rather than regression equations.</p> <p>** AM peak-hour trips were manually adjusted due to methodology resulting in negative net new trips.</p> <p>** Source: The Ice Blocks Transportation Analysis Technical Report, Table 3 and Table 5, DKS Associates, February 6, 2015.</p>												

Trip Distribution

Project traffic was distributed and assigned to the local roadway network based on a select link analysis performed using the iteration of the SACOG SACMET TDM provided by the City for use in this analysis. The project trip distribution percentages and trip assignment for the local streets are illustrated in Exhibit 3.12-5 and Exhibit 3.12-6, respectively.

3.12.2 DISCUSSION

a) Would the project result in significant impacts to intersections?

Less than Significant. Project trips were assigned to the study facilities in accordance with the trip generation and distribution calculations presented above. Project trips were then added to the existing traffic volumes. Exhibit 3.12-7 displays the AM and PM peak-hour traffic volumes at the study intersections for the existing (2015) plus proposed project conditions. Exhibit 3.12-7 also shows the existing (2015) plus proposed project intersection geometry and the number of approach lanes. As shown, the proposed project would not result in changes to existing traffic control or lane configurations at any of the study intersections.

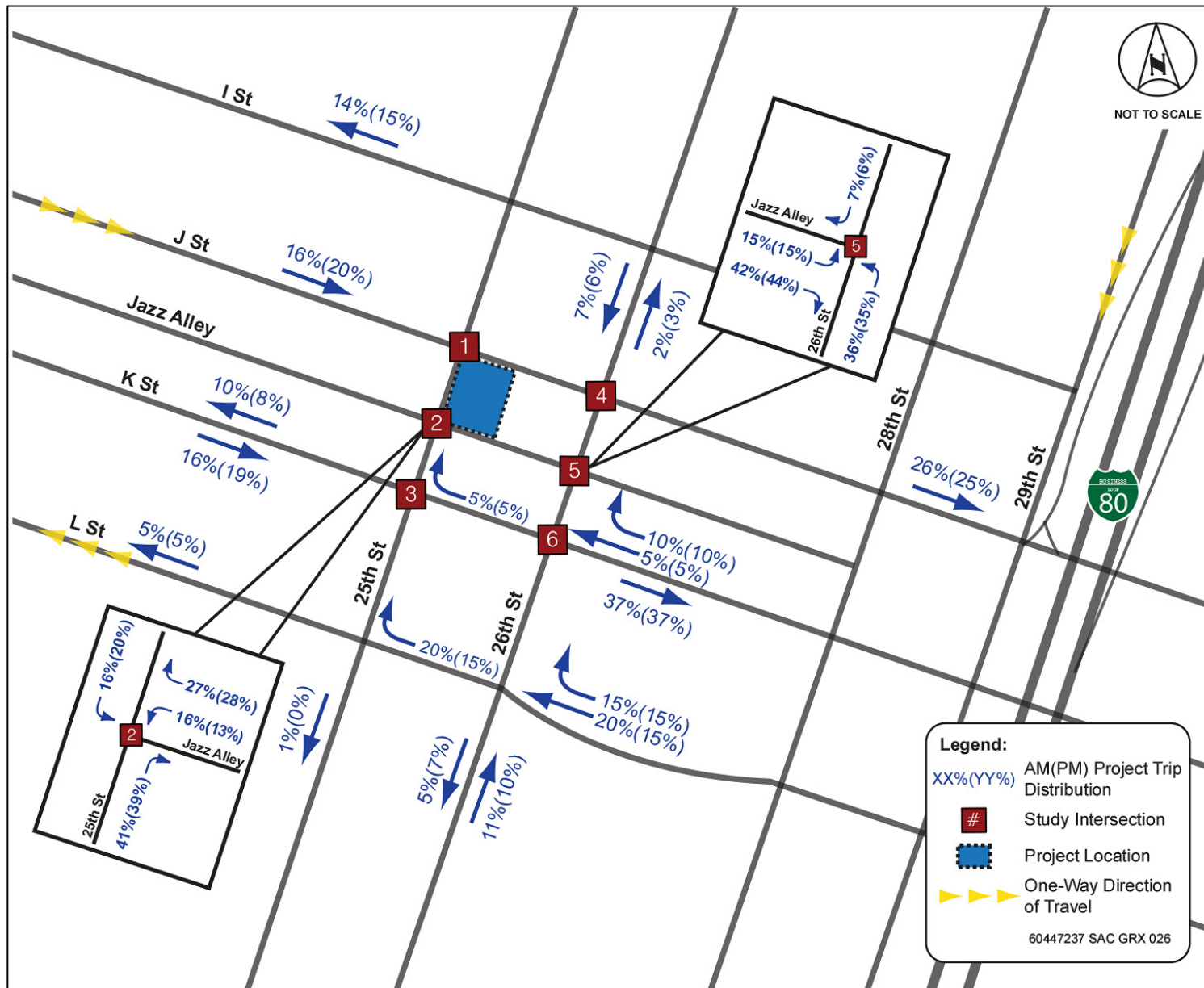
Table 3.12-2 provides a summary of the intersection analysis. As shown in Table 3.12-2, the study intersections operate from LOS A to LOS B with the addition of project traffic during the AM and PM peak-hours. Detailed analysis worksheets for the existing (2015) plus project condition can be found in Appendix H.

General Plan Mobility Element Policy M 1.2.2 sets forth definitions for what is considered an acceptable LOS. Policy M 1.2.2 applies to the study area roadway facilities as follows:

All study intersections are located in the Core Area and are governed by Policy M 1.2.2 (A). LOS F is acceptable at these locations during peak hours, providing that the proposed project provides improvements to other parts of the citywide transportation system within the area affected by the project's vehicular traffic impacts; promotes non-vehicular transportation; and/or implements vehicle trip reduction measures. Road widening or other improvements to road segments are not required.

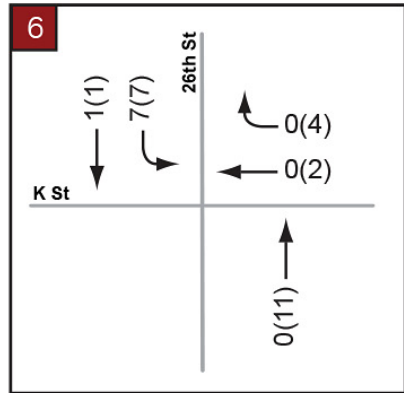
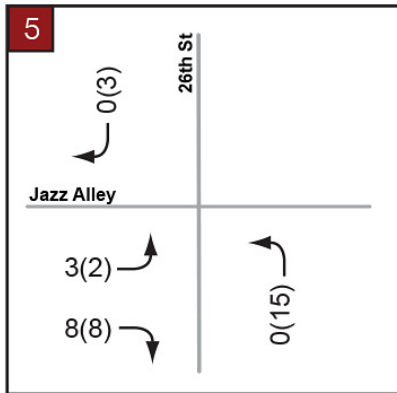
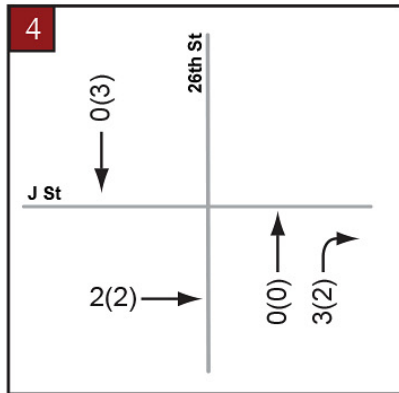
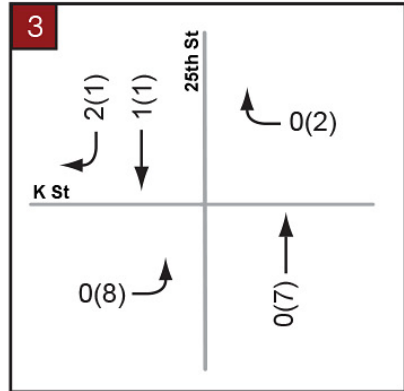
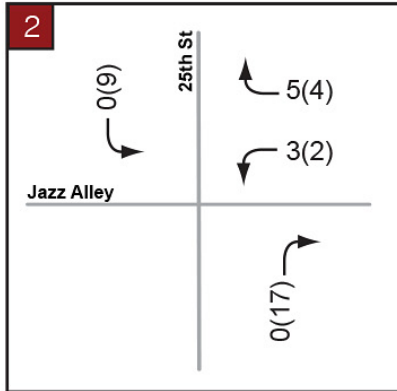
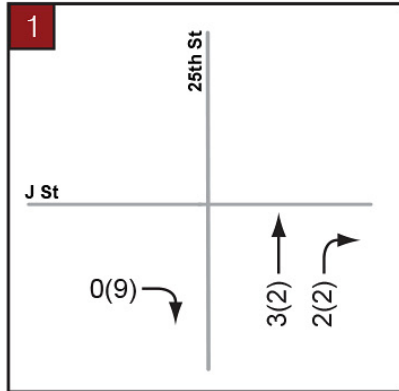
As shown in Table 3.12-2, all study intersections are anticipated to satisfy the City's LOS requirement for the study area by operating at LOS B or better during the weekday commute peak-hours. As a result, the project's impact to the study intersections would be **less than significant**.

As presented in the I-5 Subregional Corridor Mitigation Program, a project's impacts to a freeway segment must be fully analyzed and, if necessary, mitigated, if the project would result in at least 100 AM or PM peak-hour trip-ends. Alternatively, project impacts on a facility likely to be on a main route used by project traffic that is already operating at LOS D, E, or F need to be analyzed and potentially mitigated if the project would result in at least 50 AM or PM peak-hour trip ends. The number of trips that the proposed project contributes to the surrounding freeways (including I-5, US-50, SR-99, and Business 80) are reflected in Exhibit 3.12-8 and Exhibit 3.12-9. As shown, the proposed project would result in 9 AM peak-hour trips and 28 PM peak-hour trips to the local freeway network. Therefore, the proposed project would not result in a level of traffic that requires detailed freeway operational analyses.



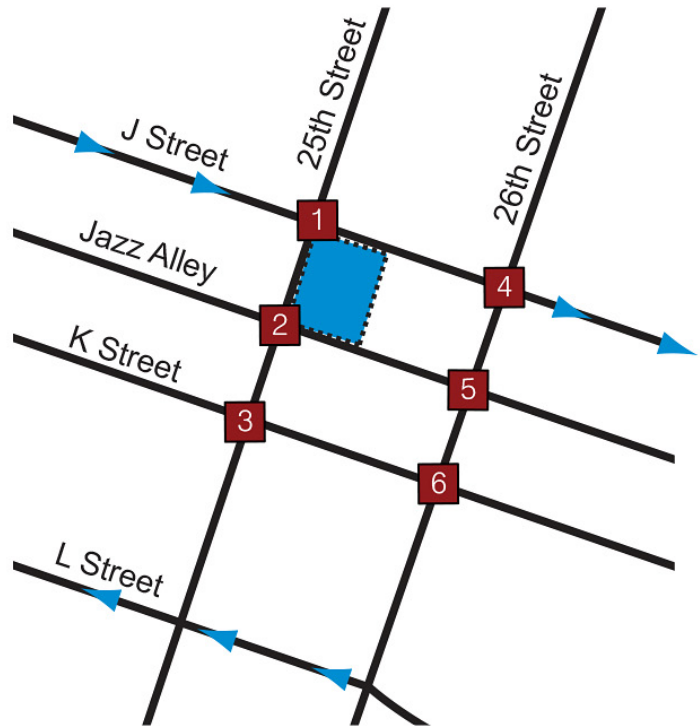
Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-5. Project Trip Distribution (Local Streets)



NOT TO SCALE

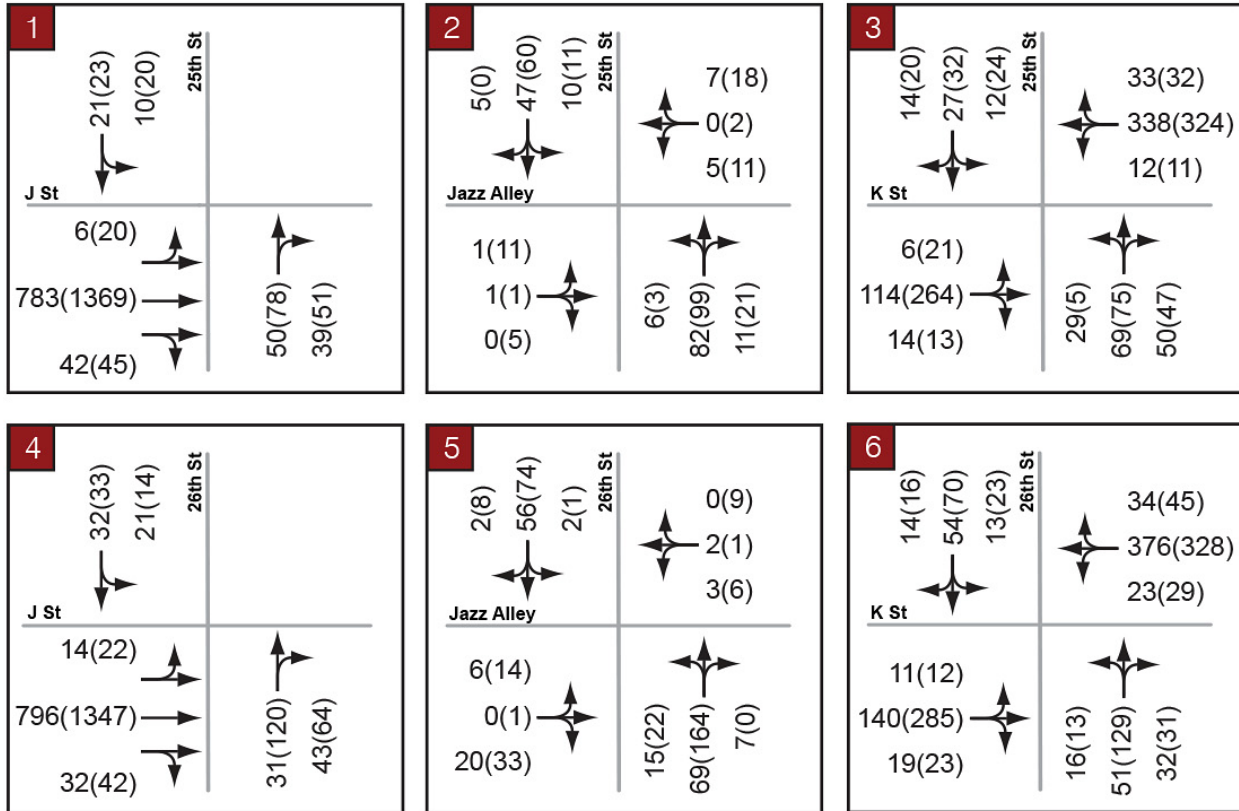
LEGEND	
#	Study Intersection
▶	One-Way Direction of Travel
■	Project Location
XX(YY)	AM(PM) Peak-Hour Volumes



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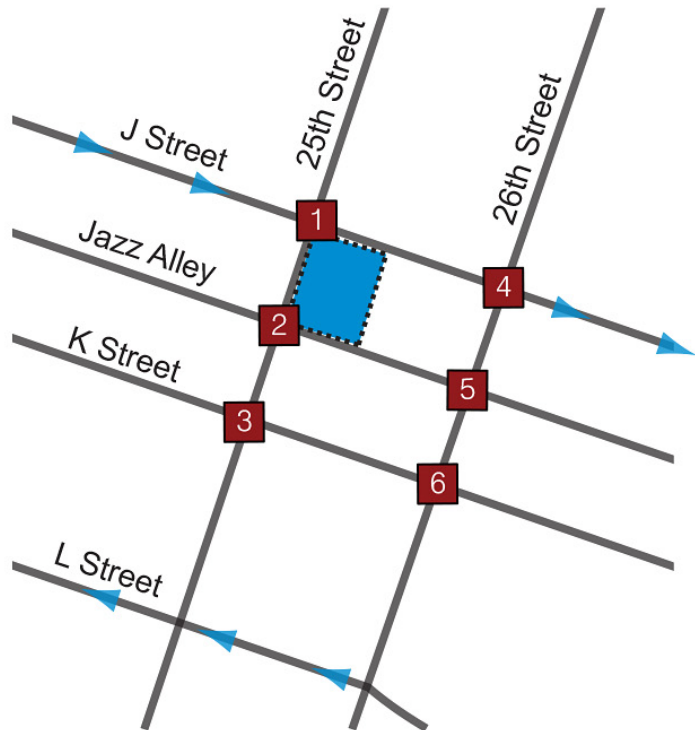
Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-6. Project Trip Assignment (Local Streets)



NOT TO SCALE

LEGEND	
#	Study Intersection
▶	One-Way Direction of Travel
■	Project Location
XX(YY)	AM(PM) Peak-Hour Volumes



60447237 SAC GRX 028

Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-7. Existing (2015) Plus Proposed Project Peak-Hour Traffic Volumes

Intersection	AM Peak Hour				PM Peak Hour			
	Existing		Existing + Project		Existing		Existing + Project	
	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
25 th and J Streets	8.8	A	8.9	A	10.4	B	10.9	B
25 th Street and Jazz Alley	1	A	1.4	A	2	A	2.3	A
25 th and K Streets	11.8	B	11.8	B	11.6	B	11.7	B
26 th and J Streets	16.2	B	16.2	B	19.3	B	19.4	B
26 th Street and Jazz Alley	1.8	A	2.2	A	1.9	A	2.4	A
26 th and K Streets	6.7	A	6.7	A	7.5	A	7.6	A

Source: Kimley-Horn 2016. See Appendix H for details.

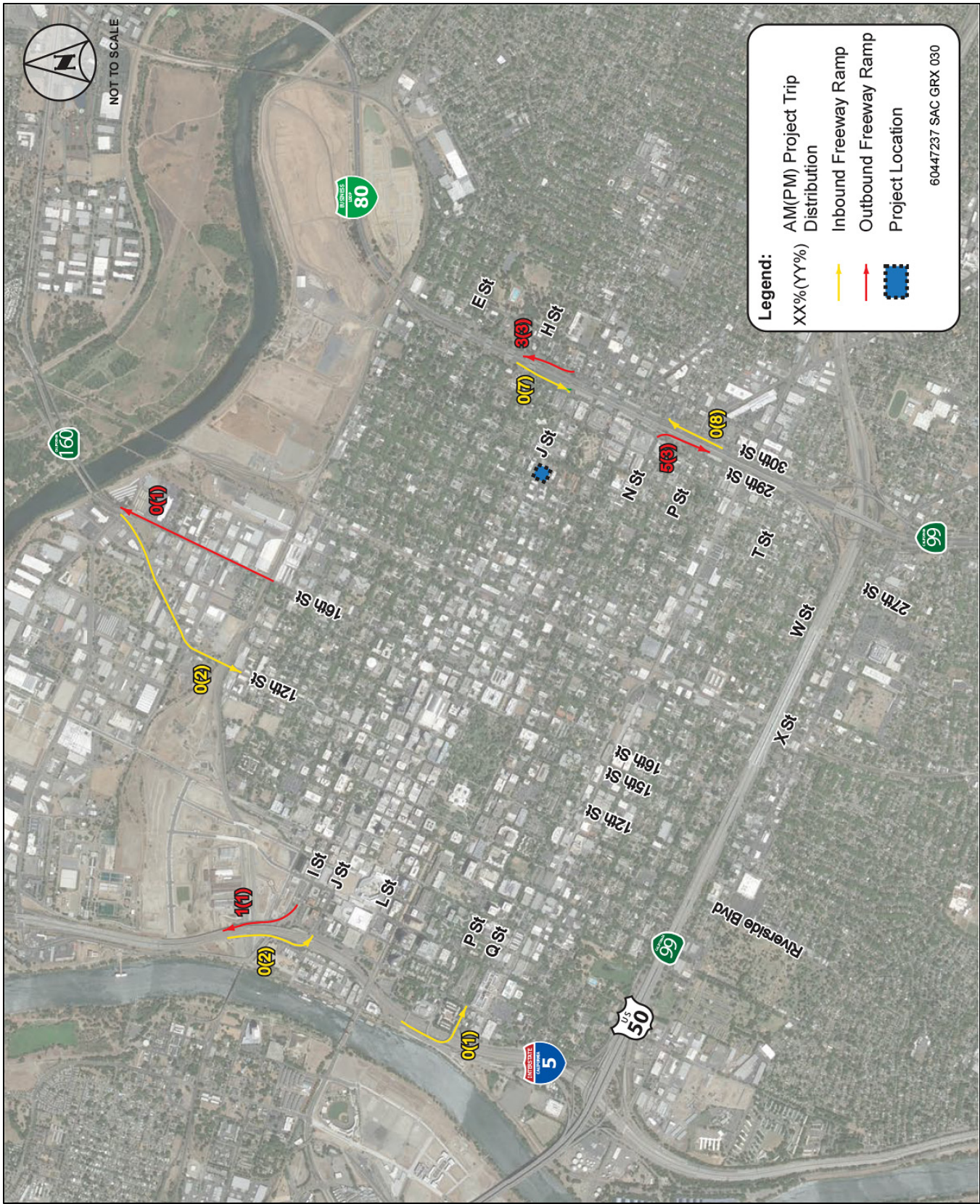
b) Would the project result in significant impacts to the transit system?

Less than Significant. The proposed project would not adversely affect the existing (as shown on Exhibit 3.12-3) or planned transit operations. As previously discussed, transit access, both bus and light rail, is provided within the vicinity of the project site. While the proposed project would increase demand for transit services, the existing and planned transit system would be able to accommodate the proposed project's demand. The applicant team has been meeting with Regional Transit regarding the need to temporarily relocate the transit stop in front of the project site from just east of 25th and J Streets to just west of 25th and J Streets during construction. The transit stop would be returned to the existing location after project construction. The project applicant will continue to coordinate with Regional Transit regarding the design of the new transit stop and the scheduling of the temporary relocation. Therefore, the proposed project's impact on the transit system would be **less than significant**.

c) Would the project result in significant impacts to bicycle facilities or pedestrian circulation?

Less than Significant. The proposed project is located within Sacramento's Central City Area. As previously discussed, bicycle and pedestrian infrastructure in the project area is fairly comprehensive.

The proposed project would not result in the removal of any existing or planned pedestrian facility or bikeway/bike lane. While the proposed project would add pedestrian and bicycle demand within the vicinity of the project site, the existing facilities are expected to support the increase in bicyclists and pedestrians associated with the proposed project. The project would include pedestrian and bicycle access to the proposed project site via the 25th Street entrance. There would be no vehicle accessibility at this entrance, which would prevent conflicts between motorists and bicyclists and pedestrians. The proposed project would also provide pedestrian and bicycle passage on the east side of the project site and in the vicinity of the 25th Street intersection with J Street. Because the proposed project would provide adequate facilities to serve bicyclists and pedestrians, impacts on bicycle facilities and pedestrian circulation would be **less than significant**.



Source: Kimley Horn 2015, adapted by AECOM 2016

Exhibit 3.12-9. Project Trip Assignment (Freeways)

d) Would the project result in significant construction-related traffic impacts?

Less than Significant. Construction of the proposed project would generate a variety of truck and employee trips during demolition of existing structures on the project site, and construction of the proposed project. Since 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 plus project operations would not be significant.

Construction-related activity has the potential to disrupt the existing transportation network in the project area. Possible temporary lane closures, street closures, sidewalk closure, and bikeway closures during construction could potentially impact pedestrian, bicycle, and transit accessibility. Heavy vehicles would access the site and may need to be staged for construction. As a result of these activities, project construction could potentially adversely affect existing roadway operation conditions.

The City Code (City Code 12.20.030) requires that a construction traffic control plan is prepared and approved prior to the beginning of project construction, to the satisfaction of the City Traffic Engineer and subject to review by all affected agencies. All work performed during construction must conform to the conditions and requirements of the approved plan. The plan shall ensure that safe and efficient movement of traffic through the construction work zone(s) is maintained. At a minimum, the plan shall include the following components:

- ▶ Time and day of street closures
- ▶ Proper advance warning and posted signage regarding street closures
- ▶ Provision of driveway access plan to ensure safe vehicular, pedestrian, and bicycle movements
- ▶ Safe and efficient access routes for emergency vehicles
- ▶ Provisions for pedestrian safety
- ▶ Use of manual traffic control when necessary
- ▶ Number of anticipated truck trips, and time of day of arrival and departure of trucks
- ▶ Provision of a truck circulation pattern and staging area with a limitation on the number of trucks that can be waiting and any limitations on the size and type of trucks appropriate for the surrounding transportation network

The plan must be available at the proposed project site during all work for inspection by a City representative. With the implementation of the traffic control plan, construction of the proposed project would have a **less-than-significant impact** on local traffic.

3.12.3 SITE ACCESS EVALUATION AND RECOMMENDATIONS

Off-site vehicle queuing was considered for the critical movements at Intersection #2 (25th Street at Jazz Alley) and Intersection #5 (26th Street at Jazz Alley). The calculated vehicle queues were compared to actual vehicle storage/segment lengths. As presented in Appendix H, the addition of the proposed project would result in queuing of approximately one vehicle (25 feet) in length along the westbound approach to Intersection #2 during the PM peak-hour and along the eastbound approach to Intersection #5 during both peak-hours.. Ninety-five percent of the time during peak-hours, the vehicle queuing would be less than or equal to this one vehicle length.

The addition of the proposed project is not anticipated to create peak-hour conditions that result in queuing between the 25th Street intersections with J Street (Intersection #1) and K Street (Intersection #3). Neither the southbound left-turns entering Jazz Alley from 25th Street (Intersection #2) or the northbound approach at J Street (Intersection #1) are anticipated to queue such that they adversely affect the adjacent intersections during the peak-hours. Analysis sheets that include the anticipated vehicle queues are presented in Appendix H.

As reflected in Exhibit 3.12-10, the project's Jazz Alley garage will have two ingress lanes and two egress lanes, all of which are anticipated to be gate access controlled. During the higher peak-hour (PM), approximately 100 trips (64 entering, 35 exiting) are anticipated to use this gated access point. Assuming fairly uniform arrivals, this level of volume equates to approximately 2 vehicles total per minute at this location, with one vehicle entering and one vehicle exiting. Given these relatively low volumes, any inefficiencies created by the project's gated access are not anticipated to adversely affect Jazz Alley safety or operations.

Because the project's Jazz Alley garage will have two ingress lanes and two egress lanes, it is recommended that appropriate signing and striping be used to clearly show the directionality of the ramps to minimize the potential for wrong way movements and for additional queuing or delay along Jazz Alley. More specifically, the following signs should be considered for installation at the garage access location along Jazz Alley:

- ▶ Ingress Lanes
 - R6-1 (ONE WAY)

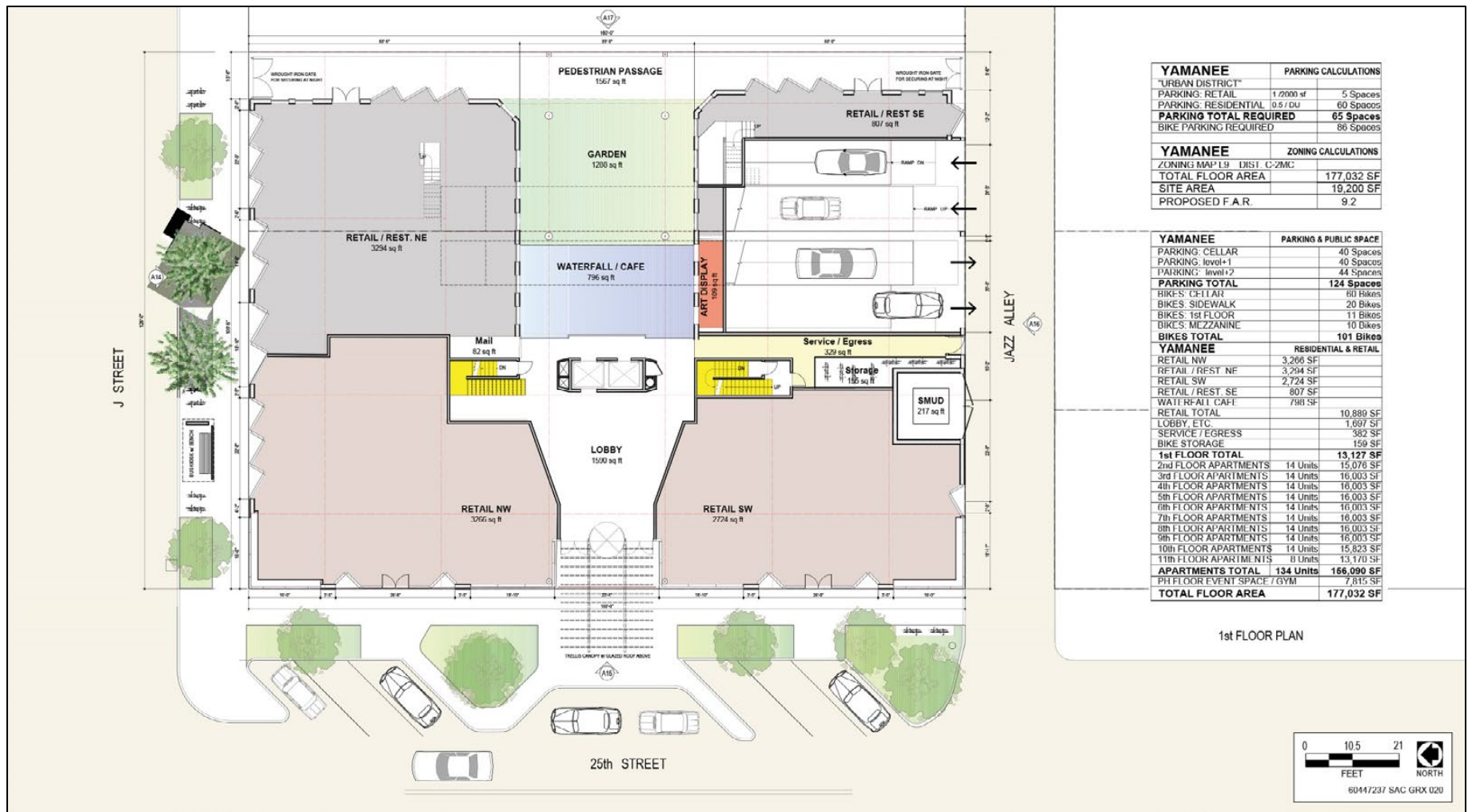
- ▶ Egress Lanes
 - R6-1 (ONE WAY)
 - R5-1 (DO NOT ENTER)

All signs should be installed in a manner consistent with City of Sacramento standards and the requirements of the *California Manual on Uniform Traffic Control Devices (CMUTCD)* (2014, with December 2015 revisions).

3.12.4 VEHICLE MILES TRAVELED

There is extensive literature showing that VMT can be reduced with density, land use mix, a connected transportation network, access to employment and regional destinations, and transit-supportive development patterns, among other factors (see work by Reid Ewing, Robert Cervero, Susan Handy, Lawrence Frank, and Gary Pivo, among others).³ The project offers benefits in relation to vehicle miles

³ Reid Ewing and Robert Cervero. 2001. "Travel and the Built Environment" Transportation Research Record, 1780, Paper No. 01-3515. Robert Schneider, Kevan Shafizadeh, and Susan Handy. 2012 (December). "Methodology for Adjusting ITE Trip Generation Estimates for Smart-Growth Projects. California Smart-Growth Trip Generation Rates Study. University of California, Davis. U.S. Environmental Protection Agency. 2013 (June). Our Built and Natural Environments: A Technical Review of the Interactions among Land Use, Transportation, and Environmental Quality. Second Edition. UC Davis Institute of Transportation Studies. Richard Lee, Joshua Miller, Rachel Maiss, Mary Campbell, Kevan Shafizadeh, Deb Niemeier, and Susan Handy. 2011 (September). Evaluation of the Operation and Accuracy of Five Available Smart Growth Trip Generation Methodologies. Research Report – UCD-ITS-RR-11-12.



Source: CMS Architecture + Design 2015, adapted by AECOM 2016

Exhibit 3.12-10. Project Site Access Plan

traveled (VMT) by proposing compact, infill, and mixed-use development that would place residents within close proximity to jobs, retail, entertainment, commercial services, parks, health care, cultural / historic facilities, and other community amenities, which would facilitate walking and biking trips, thereby eliminating some vehicle trips. In addition, the project site's transit-oriented location would make using public transit feasible to reach jobs and other destinations in both the Central City area and the region. The project site is within ¼ to ½ mile of 4 bus routes (30, 62, 67, and 68) with headways of 15 – 30 minutes. The distances of vehicle trips generated by the proposed project would also be reduced on average and the project site's proximity to amenities and jobs would further reduce vehicle miles traveled (VMT) in the region.

The reduction in VMT associated with the location of the project site and the built environment in the vicinity of the project site has been demonstrated through the travel demand analysis that SACOG performed to support the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The regional VMT per capita in 2008 was estimated to be 26 miles per day. For the traffic analysis zone that includes the project site, the average per-capita VMT in 2008 was approximately 9 miles per day. In 2035, forecast regional average per-capita VMT is 24 miles per day, whereas the project site and vicinity would have an average of approximately 7 miles per day. Therefore, the project site and vicinity is estimated to have per capita VMT rates of approximately 66 percent less than the regional average in 2008 and 71 percent less than the regional average in 2035 (SACOG 2012).

The City's 2012 Climate Action Plan presented VMT reduction goal of 35%, compared to statewide averages (City of Sacramento 2012). While the proposed project would be consistent with the CAP, this discussion of VMT is provided for informational purposes.

Using the iteration of the SACOG SACMET TDM provided by the City, it was determined that the proposed project would result in an average trip length of 5.94 miles, which equates to a total VMT per day of 6,712 (1,130 daily trips x 5.94 miles/trip). Because project-level VMT calculations are different from the methodology typically incorporated in region-wide analyses, comparison of these VMT results to regional averages must be completed cautiously. Nevertheless, due to its location and proximity to high-quality alternate travel modes (lower percentage of trips by vehicle), it can be concluded that the project VMT would be substantially lower than a typical project in the region.

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3.13 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.13.1 ENVIRONMENTAL SETTING

Water Supply

The City of Sacramento is the water purveyor for the proposed project. The City's water supply is obtained from three sources:

- ▶ surface water from the American River,
- ▶ surface water from the Sacramento River, and
- ▶ groundwater from the North American and South American Sub-basins.

Under its permits to divert water from the Sacramento River, the City may divert up to 225 cubic feet per second (cfs), or an annual limit of 81,800 acre-feet per year (afy) (City of Sacramento 2011:4-3). In 1957, the City entered into a water rights settlement agreement with the U.S. Bureau of Reclamation regarding diversions from the American River (City of Sacramento 2011:4-4). Under the settlement

agreement, the City agreed to limit its diversions from the American River and scale up to the maximum diversion of 245,000 afy by the year 2030 (City of Sacramento 2011:4-5). The City had a total of 227,500 afy of potable water supplies in 2010; this total is anticipated to increase to 326,800 afy by 2035.

Most of the water supplied to the city is surface water; the balance is obtained from groundwater extracted from the North American and South American Subbasins of the Sacramento Valley Groundwater Basin (see Section 3.9, "Hydrology and Water Quality," for further discussion). The City operates 25 municipal supply wells and five irrigation supply wells north of the American River, and two municipal supply wells and nine irrigation supply wells south of the American River (City of Sacramento 2011:4-8). Total well pumping capacity is 16,010 gallons per minute, or 23.1 million gallons per day (mgd) (City of Sacramento 2011:4-10). Although the City maintains pumps in both the North American and South American Subbasins, approximately 95% of the amount pumped by the City is from the North American Subbasin (City of Sacramento 2011:4-8).

Water Conveyance and Treatment Facilities

The City's water distribution system is a pipeline network in which surface water and groundwater are mixed. The City Department of Utilities operates and maintains the City's two water treatment plants. Water diverted from the Sacramento River is treated at the Sacramento River Water Treatment Plant (SRWTP), located along the Sacramento River just downstream of its confluence with the American River. The capacity of the SRWTP is 135 mgd; design is under way for a project to rehabilitate the older facilities at the SRWTP to bring the capacity back to 160 mgd by 2016 (City of Sacramento 2014a:4-21).

Water diverted from the American River is treated at the E. A. Fairbairn Water Treatment Plant (FWTP), located along the American River approximately 7 miles upstream of the confluence of the Sacramento and American Rivers. The design capacity of the FWTP is 200 mgd, but the current permitted capacity at the FWTP is 160 mgd and the City is restricted to diversions up to 100 mgd under low-flow river flow conditions (City of Sacramento 2014a:4-21).

The City maintains 18 high-lift service pumps at the SRWTP and FWTP, 10 storage reservoirs located throughout the city, and a transmission and distribution system that includes more than 1,760 miles of system mains ranging in size from 4 to 60 inches in diameter (City of Sacramento 2011:2-6; City of Sacramento 2014a:4-21). The Central City area in general is supplied by several transmission lines that range up to 42 inches in diameter, and by distribution mains that range in size from 6 inches to 12 inches in diameter (City of Sacramento 2014a:4-21).

The project site is served by a system of looped water mains surrounding the project site. An existing 6-inch water transmission main is located in Jazz Alley, 12-inch water transmission mains are located in 23rd and in 26th Street, and a 30-inch water transmission main is located in H Street. Existing average dry-weather flow for the project site is shown in Table 3.13-1, below. Existing development generates demand of approximately 2,300 gallons per day of wastewater.

Table 3.13-1. Average Dry-Weather Flow for Existing Uses				
Land Use Type and Amount		ESD Rate ¹	Total (ESD) ²	Gallons per Day
Retail (Birkenstock)	1,887 SQ FT	0.2 per 1,000 SQ FT	0.38	150
Retail (salon, shoe store, vape shop)	4,200 SQ FT	0.2 per 1000 SQ FT	0.84	340
Restaurant (Coconut)	1,200 SQ FT	1.9 per 1000 SQ FT	2.28	900
Fitness studio	2,700 SQ FT	0.3 per 1000 SQ FT	0.81	320
Office, 2nd floor	1,500 SQ FT	0.2 per 1000 SQ FT	0.30	120
Law office, 2nd floor	1,200 SQ FT	0.2 per 1000 SQ FT	0.24	100
Residential structure, behind 2508 J Street	1,500 SQ FT (1 dwelling unit)	0.75 per unit	0.75	400
Total	-	-	-	2,300

Notes:
¹ ESD Rates are based on City of Sacramento Sewer Design Standards
² ESD – 400 gpd
Source: City of Sacramento 2003; Compiled by AECOM 2016

In 2005, the City of Sacramento began a project to install water meters on more than 80% of the City's water service connections by 2025 and transition customers to a metered rate, as required by a state mandate (AB2572). Among the key objectives of the project is to replace aging and leaking water main pipelines, which will assist the City's efforts to reduce per capita potable water demand and allow for better tracking of water usage. The City's goal is to install about 89,000 meters by 2016. Since the City had already committed to replacing its aging water main pipelines located in customers' back yards before the metering law passed, the City is now conducting joint main pipeline replacement and meter installation projects, which will further aid the City's efforts to reduce per capita water use (City of Sacramento 2015a).

Combined Sewer/Storm Drain System

The Sacramento Central City, with the exception of most of downtown Sacramento, east of 10th Street, is served by a combined sewer/ storm drain system (Combined Sewer System, or CSS) (City of Sacramento 2014b). The City Department of Utilities provides separate wastewater collection and conveyance to approximately 2/3 of the area within the City limits that is not served by the combined sewer system (CSS), while the Sacramento Area Sewer District (formerly County Services District 1) provides wastewater collection to the remaining portions of the city (City of Sacramento 2014a:4-1).

The City originally used a CSS to provide both sewage and drainage services to more than 24,000 parcels in downtown, midtown, Land Park, and East Sacramento. The City's CSS consists of four main facilities to manage the collected combined sewage: Sumps 1/1A, Sumps 2/2A, the Pioneer Reservoir Treatment Plant, and the Combined Wastewater Treatment Plant (CWTP). During dry weather and small storms, flows are conveyed from the pumping stations to the Sacramento Regional County Sanitation District's (SRCSD's) Sacramento Regional Wastewater Treatment Plant (SRWWTP) for secondary treatment prior to discharge to the Sacramento River. During heavy storms, flows are also routed to the CWTP and Pioneer Reservoir (City of Sacramento 2014a:4-2)

During dry weather and small storm events, the CSS is able to handle the combined sewer and storm flows. During larger storm events, flows may be routed to the Combined Wastewater Treatment Plant (CWTP) and Pioneer Reservoir for temporary storage. Flows that exceed the capacity of these facilities may be released directly into the Sacramento River. To address impacts to the system from development, the City Council approved an ordinance on March 15, 2005 amending Chapter 13.05 of the City Code that established a Combined System Development Fee to fund improvements that mitigate downstream impacts and provide funds to construct projects to mitigate downstream impacts. Many of these improvements have been completed, others are in design or under study as part of an on-going process to improve the CSS system and update the CSSIP. These projects are a mix of large regional storage vaults and large diameter pipes which serve as both conveyance and inline storage.

The project site is served by the City's CSS for wastewater and sewer and an existing 42-inch sewer main is located within 25th Street and an 18-inch sewer main is located within Jazz Alley.

Wastewater Treatment Facilities

Wastewater flows collected from SRCSD interceptors (sanitary sewers that are designed to carry flows in excess of 10 mgd) are ultimately transported into the Sacramento Regional Wastewater Treatment Plant (SRWWTP). The SRWWTP is located in Elk Grove and is owned and managed by SRCSD. Currently, the SRWWTP has a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) for discharge of up to 181 mgd of treated effluent into the Sacramento River. As of 2014, the SRWWTP receives and treats an average of 150 mgd each day and the SRWWTP discharge constituents are below permitted discharge limits specified in the NPDES permit (SRCSD 2014).

The SRCSD has a program in place to continually evaluate demand/capacity needs and implements a master planning effort that provides the flexibility to respond to changes in demand that can be anticipated in advance of planned improvements so that capacity issues are addressed in a timely and cost-effective manner. Master planning efforts that would identify necessary improvement in capacity to accommodate city growth beyond the existing SRCSD's 2020 Master Plan timeframe would be initiated well in advance of buildout of the City's current General Plan (by 2035) (City of Sacramento 2014c:4.11-15).

Solid Waste

Solid waste collection services in Sacramento, including residential and a small portion of commercial garbage pickup, recycling, and yard waste hauling, are provided by the City's Recycling and Solid Waste Division. In 2013, the City disposed of a total of 439,275 tons of solid waste (CalRecycle 2013). CalRecycle estimates that in 2013 the annual per capita disposal rate was 5.1 pounds per resident per day and 8.1 pounds per employee per day (CalRecycle 2013).

Refuse from the south region of the city is transported to the Sacramento South Recycling and Transfer Station and refuse collected in the north region is transported to the Sacramento County North Area Recovery Station.

Waste from the project site would be transported to the Sacramento South Recycling and Transfer Station. Residential solid waste is then hauled from both locations to the Sacramento County Kiefer Landfill.

Sacramento County owns and operates the Kiefer Landfill, and the landfill is the primary solid waste disposal facility in the county. The Kiefer Landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris. According to CalRecycle, the Kiefer Landfill has a maximum permitted throughput of 10,815 tons per day (tpd), a total maximum permitted capacity of 147.4 million cubic yards, a remaining capacity of approximately 4.1 million cubic yards, and an anticipated closure date of January 1, 2064 (CalRecycle 2015a).

Commercial solid waste is collected by private franchised haulers and disposed of at various facilities including the Sacramento Recycling and Transfer Station, Kiefer Landfill, the Yolo County Landfill, L and D Landfill, Elder Creek Transfer Station, and the Sacramento County North Area Recovery Station (City of Sacramento 2014a:4-44).

3.13.2 DISCUSSION

Items a) through g) from the checklist above are addressed below, organized in a way that pairs related items.

- a) **Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

- e) **Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?**

Less than Significant. Wastewater flows collected from the project site would ultimately be transported to the SRWWTP for treatment and disposal. Currently, the SRWWTP's discharge constituents are below permitted discharge limits specified in the Central Valley RWQCB's NPDES permit (SRCSD 2014).

Existing uses at the project site generate approximately 2,300 gallons per day based on City estimates of wastewater demand for infill projects. Estimated Average dry-weather flow for the proposed project is shown in Table 3.13-2, below. The project, at buildout, would be anticipated to generate between approximately 5,800 to 8,400 gallons per day for the planned non-residential uses. Depending on the mix of retail versus restaurant uses, the wastewater generation rate could be different. Restaurants, for example, typically generate higher amounts of wastewater, as compared with retail uses. Residential uses proposed on-site are estimated to generate another 40,200 gallons per day of wastewater, using City generation rates. In total, the project at buildout could generate between approximately 46,000 and 49,000 gallons per day of wastewater. This is an increase of approximately 44,000 and 46,000 gallons per day over existing conditions.

Table 3.13-2. Average Dry-Weather Flow for Proposed Project				
Proposed	Square Footage/Dwelling Units	Equivalent Single Family Dwelling Unit Rate (ESD)²	Total (ESD)	Gallons per Day
Retail/Restaurant Dwelling Units	14,949 ¹	0.2 - 2	14-21	5,800-8,400
Total	-	-	-	51,800-57,100

Notes:
N/A = Not Applicable
¹ This figure is based on an earlier iteration of the project and the wastewater generation presents a conservative estimate of demand.
² ESD – 400 gpd. Based on wastewater generation rates for similar City infill projects, it is assumed that each multi-family dwelling unit generates demand of 170 gallons per day per unit (see City of Sacramento 2015b). With 134 units (170 gallons per day per unit x 134 units), the proposed project would generate 22,780 gallons per day. Converted to MGD, this total would equal 33.77 MGD.
Source: City of Sacramento 2003; 2015; Compiled by AECOM 2016

The SRWWTP has current design capacity of 181 mgd average dry-weather flow, and the plant currently treats 150 mgd average dry-weather flow (as of 2014). Proposed project-related wastewater flows (0.04-0.05 mgd), combined with the current average dry-weather flow (150 mgd) at the SRWWTP, would not result in an increase in wastewater flows that would exceed the treatment plant's current design capacity of 181 mgd average dry-weather flow. As stated above, the SRCSD has a program in place to continually evaluate demand/capacity needs and implements a master planning effort that provides the flexibility to respond to changes in demand that can be anticipated in advance of planned improvements so that capacity issues are addressed in a timely and cost-effective manner (City of Sacramento 2014c:4.11-15).

Because the proposed project would not generate wastewater discharges that would exceed the Central Valley RWQCB's requirements and the SRWWTP would have sufficient capacity to treat wastewater flows generated by the proposed project in addition to existing commitments, this impact would be **less than significant**.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant. Implementation of the proposed project would not create the need for new water or wastewater facilities or the expansion of existing facilities. The City's existing surface water treatment plants maintain a total treatment capacity of 335 mgd or 375,495 afy. The City currently treats less than 150,000 afy of surface water; thus, the City maintains more than 200,000 afy in available treatment capacity. As discussed further under item d), the total projected water demand would not increase demand for water treatment facilities such that the expansion of existing or construction of new water treatment facilities would be required.

The proposed project consists of redevelopment of an existing developed site. Currently, a network of on-site water transmission lines is located on-site. There is an existing 6-inch water main in Jazz Alley, a 12-inch line in 26th Street, a 12-inch line in 23rd Street and a 30-inch line in H Street. The 6-inch line in Jazz Alley is not large enough to provide fire flows for a building of this size. Based on fire flow tests,

the existing water line in Jazz Alley will be adequate for domestic service, but an off-site connection is needed for fire flow. In order to achieve adequate fire flows, the project proposes to install a 12-inch loop water main in 25th Street and J Street from the 6-inch line in Jazz Alley to the existing 12-inch main in 26th Street. The City requires the water systems to be looped. Flows are so strong that this 12-inch loop connection to the existing 12-inch main in 26th Street will likely be more than adequate. If this loop connection is not robust enough, the project would propose to extend a 12-inch main in 25th Street from the proposed 12-inch loop connection to the existing 12-inch main in I Street (Chavez, pers. comm. 2016).

Existing City regulations require submittal, review, and compliance with City standards for water conveyance. The project applicant would be required to submit a water conveyance infrastructure improvement plan that depicts the locations and appropriate sizes of all required conveyance infrastructure, in conjunction with other site-specific improvement plans. Proposed on-site water facilities would be required to be designed and sized to provide adequate service to the project site for the amount and type of proposed development, based on the City's Standards and Specifications for Public Construction (June 2007), and the Standards and Specifications for Public Construction Addendum No. 2 (April 2012), or the most current versions of this plan. A final water conveyance infrastructure improvement plan must be approved by the Department of Utilities before approval of the final subdivision map and issuance of building permits. In addition, the project is required to pay applicable water connection fees based on tap and meter size, as determined by the Department of Utilities, before building permits are issued.

Based on existing City standards, the water conveyance infrastructure would be required to be designed to satisfy the more critical of the two following conditions, as determined by the City's Department of Utilities: (1) at maximum-day peak-hour demand, the operating or "residual" pressure at all water service connections shall be at least 30 pounds per square inch; or (2) at average maximum-day demand plus fire flow, the operating or "residual" pressure in the area of the fire shall not be less than 20 pounds per square inch. The project is required to demonstrate there are adequate fire flow demands for the project, based on a water supply test that measures pounds per square inch of pressure at the final point of connection.

For the reasons described above, impacts associated with construction of on-site water supply infrastructure would be **less than significant**. The impacts of constructing on-site water supply infrastructure as part of the proposed project (e.g., noise, air emissions, water quality, biological resources, and cultural resources) are addressed throughout this SCEA in connection with impacts of overall site development.

WASTEWATER TREATMENT, COLLECTION, AND CONVEYANCE FACILITIES

As discussed above in items a) and e), the SRWWTP would have sufficient capacity to treat wastewater flows generated by the proposed; therefore, implementation of the proposed project would not result in the expansion of existing or construction of new wastewater treatment facilities.

The proposed project consists of redevelopment of an existing developed site. A network of on-site conveyance pipelines will be required to carry the project's wastewater to the city's CSS through the

existing 42-inch sewer main, located within 25th Street and/or the 18-inch sewer main, located within Jazz Alley.

Existing City regulations require submittal, review, and compliance with City standards for wastewater conveyance facilities on-site. The project applicant will be required to submit a wastewater infrastructure improvement plan that depicts the locations and appropriate sizes of all required conveyance infrastructure in conjunction with other site-specific improvement plans. Proposed on-site wastewater facilities are required to be designed and sized to provide adequate service to the project site for the amount and type of proposed development, based on City design standards. A final wastewater infrastructure improvement plan is also required to be approved by the Department of Utilities before approval of the final subdivision map and issuance of building permits. In addition, the project applicant would be required to, as applicable, mitigate CSS impacts pursuant to the Combined Sewer System Development Fee Program, as verified by the Department of Utilities, before building permits are issued. Chapter 13.08 of the City Code regulates discharges to the sewer service system; establishes standards and review requirements for sewer and storm drain facilities; 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. To support ongoing maintenance and upgrade efforts designed to ensure ongoing capacity with infill development throughout the Central City area, the City has adopted the Combined Sewer System Development Fee. This fee is designed to address costs associated with an increase in wastewater flows. This fee is based on the proposed project use and the calculated dwelling units that would be generated. Since the project site is served with utilities already and would not require new or expanded facilities off-site, this impact would be **less than significant**.

The impacts of constructing on-site wastewater conveyance infrastructure as part of the proposed project (e.g., noise, air emissions, water quality, biological resources, and cultural resources) are addressed throughout this SCEA in connection with impacts of overall site development.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant. The proposed project consists of redevelopment of an existing developed site. A network of on-site conveyance pipelines will be required to carry the project's stormwater drainage to the city's CSS either in Jazz Alley or 25th Street. After implementation of the proposed project, the amount of impervious surfaces on site would be similar to existing conditions on the project site (e.g., rooftops, sidewalks, driveways, streets, parking lots). The existing properties consist primarily of impervious surfaces (i.e., buildings, rooftops, and pavement). The approximately 0.44-acre project site contains approximately 18,589 square feet of buildings, pavement, and other impervious surfaces. Planters within the parking lot and internal to the site comprise of approximately 757 square feet of existing pervious surfaces. (See Section 3.9, "Hydrology and Water Quality," for further discussion).

No net increase in impervious area is proposed. The project proposes a net increase of pervious surfaces of approximately 740 square feet (Keasling, pers. comm. 2016). The proposed project would *increase* the amount of *pervious* material on-site, but projects that would increase *impervious* surfaces are required to comply with the City Department of Utilities' "Do No Harm" policy per section 11 (Storm

Drainage Design Standards) of the City's Design and Procedures Manual. This policy requires infill areas to fully mitigate any potential increase in flows leaving the project site. Projects are required to construct sufficient on-site detention to ensure that there would be no increase in storm runoff leaving the project site.

Existing City regulations require submittal, review, and compliance with City standards for stormwater facilities. The project applicant is required to prepare a stormwater drainage study that depicts the locations and appropriate sizes of all required facilities in conjunction with other site-specific improvement plans. A final stormwater drainage study is required to be approved by the Department of Utilities before approval of the final subdivision map and issuance of building permits.

For the reasons described above, impacts associated with construction of on-site stormwater drainage facilities would be **less than significant**. The impacts of constructing on-site stormwater drainage facilities as part of the proposed project (e.g., noise, air emissions, water quality, biological resources, and cultural resources) are addressed throughout this SCEA in connection with impacts of overall site development.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant. Implementation of the proposed project would result in an increased demand for water supplies. The City of Sacramento is the water purveyor for the proposed project, and water supply for the proposed project would be provided by the American and Sacramento Rivers. Using the City's water supply assessment worksheet, the total projected water demand based on proposed land uses is approximately 21.5 to 22.38 afy.¹

The City's UWMP addressed water supply and demand and water supply reliability for the areas within the City's service area. Future water demands were calculated based on projected water demands for all of the development projected and analyzed in the 2035 General Plan and the 2035 General Plan Master EIR. The City's water supplies are expected to exceed water demands during normal, single-dry, and multiple-dry years through 2035. Based on the number of new residential units, and the square footage of additional nonresidential uses, the proposed project does not meet the definition of a project from Section 10912 of the California Water Code. Therefore, no Water Supply Assessment is required.

According to the City 2035 General Plan, the project site is designated as Urban Corridor Low. The Urban Corridor Low designation includes street corridors that have multi-story structures and more-intense uses at major intersections. The proposed project is consistent with this designation. Development in the Urban Corridor Low designated areas was contemplated and evaluated in the 2035 General Plan Master EIR and determined to be a less-than-significant impact (City of Sacramento 2014c:4.11-6).

¹ Using the City's Water Supply Assessment worksheet, the proposed project could generate water demand of approximately 21.5 to 22.38 afy. The project proposes 134 dwelling units and the City's water demand estimate is 0.15 afy per dwelling unit for mixed-use development in the Urban Corridor Low land use designation areas. The retail, office, and restaurant uses could generate a maximum of approximately 36 to 57 employees (based on the City's estimate of up to 250 to 400 employees per square foot) (City of Sacramento 2005). The City estimates water demand for non-residential uses of approximately 0.04 afy per employee.

Current building codes have provisions that require water conservation for both indoor and outdoor use and therefore development anticipated under the proposed project would be anticipated to be more water efficient compared to existing development on the project site. The project applicant would be required to comply with the City's Water Efficient Landscape Ordinance and the 2013 CALGreen Code, which requires a 20% reduction of indoor demand for potable water and a 50% reduction of landscape water usage, which would further reduce water demand. Compliance with City ordinances set forth in the City Code will be required as a condition of project approval. The impact is considered **less than significant**.

- f) **Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**
- g) **Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

Less than Significant. Implementation of the proposed project would generate temporary and short-term debris and waste during construction. Construction of the proposed project would remove the existing retail, office, and fitness studio uses, along with surface parking spaces, and some existing trees and landscaping, as well as the one-story masonry building and two-story wooden residence east of the project site. Demolition would include concrete, metal, wood, plastics, and various other demolition-related materials. It is estimated that demolition would result in 355 cubic yards of waste and 18,600 cubic yards of soil would be exported from the project site. After demolition and site clearing, construction of the proposed project would result in the generation of various construction-period wastes, including scrap lumber, scrap finishing materials, scrap metals, and other recyclable and non-recyclable construction-related wastes.

The 2013 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires all construction contractors to reduce construction waste and demolition debris by 50 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both (California Building Standards Commission 2013). In addition, the 2013 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

The City requires all contractors to comply with the Construction and Demolition Debris Recycling Ordinance (Title 8, Chapter 8.124 of the Sacramento City Code) by reducing project waste entering landfill facilities by 50 percent by weight through recycling. The City requires contractors to prepare a waste management plan that identifies the sources of recyclable materials, outlines a recycling method (i.e., self-separation or mixed recovery), and identifies a self-haul or franchise waste hauler (City of Sacramento 2014d). The waste management plan must be submitted to and approved by City Solid Waste Services before the City's Community Development Department may issue a building permit.

Adhering to these requirements would minimize the total volume of demolition and construction waste that would be sent to a landfill, but would not avoid sending such waste to landfills entirely. The majority

of landfilled waste would be delivered to the Kiefer Landfill; however, construction and demolition waste could also potentially be delivered to L and D Landfill or the Yolo County Central Landfill. Combined, these landfills have a large volume of landfill capacity (27.8 million cubic yards) available to serve the proposed project during construction (CalRecycle 2015b, 2015c).

Implementation of the proposed project would result in increased long-term generation of solid waste during operation. The City provides recycling programs, such as curbside recycling of paper, plastics, and bottles, to reduce the volume of solid waste transported to landfills. In addition, Sacramento Regional Solid Waste Authority recycling Ordinance No. 20, Title IV, reduce wastes further by requiring businesses and multi-family residential uses to recycle designated recyclable materials.

Residential and some commercial solid waste in the City of Sacramento is disposed of at the Kiefer Landfill, which is permitted to accept municipal solid waste, construction and demolition debris, green materials, and other nonhazardous designated debris. The residential uses on the project site would generate between approximately 0.5 to 0.6 tpd of solid waste.² The Kiefer Landfill has a permitted throughput of 10,815 tpd, a remaining capacity of approximately 4.1 million cubic yards, and an expected closure date of 2064. Therefore, sufficient landfill capacity would be available to accommodate solid-waste disposal needs for the proposed project.

Commercial solid waste is collected by private franchised haulers and disposed of at various facilities including the Sacramento Recycling and Transfer Station, Kiefer Landfill, the Yolo County Landfill, L and D Landfill, Florin Perkins Landfill, Elder Creek Transfer Station, and the Sacramento County North Area Recovery Station. The retail, office, and restaurant uses would generate between approximately 51.8 and 84.3 tons of solid waste per year, or 0.1 and 0.2 tpd of solid waste.³ As stated previously, these landfills have a large volume of combined landfill capacity available to serve the proposed project.

The proposed project does not include any components that would violate any applicable federal, state, or local solid waste regulations. The proposed project would comply with all statutes and regulations related to solid waste. Compliance with the CalGreen Code, the City's the Construction and Demolition Debris Recycling Ordinance, SWA recycling ordinances, and other City recycling programs would ensure that sufficient landfill capacity would be available to accommodate solid-waste disposal needs for the proposed project. Therefore, this operational impact would be **less than significant**.

² Based on CalRecycle's estimated 2013 annual per capita disposal rate of 5.1 pounds per resident per day, the estimated total population for the proposed project (198 - 241 persons) would generate between approximately 1,010 – 1,229 pounds per day of solid waste (5.1×198 and $5.1 \times 1,229$), which equates to between 0.5 to 0.6tpd (CalRecycle 2013).

³ Based on CalRecycle's estimated 2013 annual per capita disposal rate of 8.1 pounds per employee per day and an estimated 35 - 57 employees for the proposed project, between approximately 284 and 462 pounds per day of solid waste would be generated per day (8.1×35 and 8.1×57), which equates to between 0.1 and 0.2 tpd (CalRecycle 2013).

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3.14 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The project site is in Midtown Sacramento, an area with a mix of single- and multi-family residential development; retail and commercial services; restaurants and bars; medical, dental, and other types of offices; parks, museums, places of worship, and other civic uses; and other complementary uses. The project site is completely covered in impervious surfaces with the exception of small landscape beds along the J Street and 25th Street sidewalks. There are no native plant communities or natural habitats on the project site and the only vegetation present is ornamental street trees, shrubs, vines, and turf grass in the landscaped beds. A records search for the project failed to indicate any previously identified cultural resources within the project area and only one previously recorded archaeological resource within the 0.5-mile study area. AECOM archaeological staff conducted a cursory site visit in order to ensure that any visible, non-paved ground surfaces (such as near tree plantings and ornamental vegetation) were visually inspected. The survey identified no cultural resources. The impact is considered **less than significant**.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Construction of the proposed project would result in temporary impacts that would be limited primarily to the project site and direct vicinity. Operation of the project would involve some criteria air pollutant emissions, greenhouse gas emissions, noise, use of energy, demand for services and utilities, and traffic, but these impacts are all less than significant or less than significant with mitigation. To the extent that these impacts would contribute to any significant cumulative impact, such as air pollutant nonattainment designations and climate change, the contribution of this project is **less than cumulatively considerable**.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed throughout this SCEA, neither construction nor operation of the proposed project would cause any substantial adverse effects on human beings, either directly or indirectly. The project proposes a new multi-story, mixed-use building on an existing developed 0.44-acre property located southeast of the intersection of 25th and J Streets. The project would accommodate approximately 10,889 square feet of ground-floor retail and restaurant space and up to 134 for-sale residential units. The project would include demolition of existing structures on-site, but compliance with existing hazardous materials regulations would avoid any substantial adverse effect. Construction and operation of the proposed project would implement and comply with existing hazardous material regulations and mitigation outlined in Section 3.7 of this SCEA. Each of the referenced regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a coordinated, quicker response to emergencies. Please see Section 3.7 of this SCEA for more detail.

The project would involve short-term construction noise and minor operational noise, but incorporation of mitigation would reduce construction noise impacts to a less-than-significant level. The project would involve traffic during construction, but the City's Code requires a construction traffic control plan, designed to ensure that safe and efficient movement of traffic through the construction work zone(s) is maintained. The project would generate and attract vehicular, pedestrian, bicycle, and public transit trips, but this would not involve any significant impact related to the social inconvenience of traffic congestion or other significant adverse effect on human beings. **The impact is less than significant with mitigation.**

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