

Draft

Katherine Johnson Middle School Environmental Impact Report

Prepared for:



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AECOM



Draft

Katherine Johnson Middle School Draft Environmental Impact Report

Prepared for:

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ACRONYMS AND OTHER ABBREVIATIONS

°F	Fahrenheit
2018 SIP Updates	2018 Updates to the California State Implementation Plan
AB	Assembly Bill
ADT	average daily traffic
AEP	annual exceedance probability
AFY	acre feet per year
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ALUCP	Airport Land Use Compatibility Plan
amsl	above mean sea level
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
ASLHA	American Speech-Language-Hearing Association
B.P.	Before Present
BACT	best available control technology
Basin Plan	Sacramento and San Joaquin River Basin Plan
BERD	Built Environment Resources Directory
BIA	Bureau of Indian Affairs
BMPs	best management practices
BSA	biological survey area
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CaRFG	California Reformulated Gasoline
CBC	California Building Standards Code
CCAA	California CAA
CCR	California Code of Regulations
CDE	California Department of Education
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guide	CEQA Guide to Air Quality Assessment in Sacramento County
CFCs	Chlorofluorocarbons
CFGC	California Fish and Game Commission
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resource Information System
CLOMR	Conditional Letters of Map Revision
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society

CO	carbon monoxide
CO ₂	Carbon Dioxide
County General Plan	Sacramento County General Plan of 2005–2030
CRHR	California Register of Historical Resources
CVFPB	Central Valley Flood Protection Board
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound levels
DEIR	Draft EIR
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
Drainage Manual	Sacramento City/County Drainage Manual Volume 2: Hydrology Standards
DSA	Division of the State Architect
DTSC	California Department of Toxic Substances Control
DWMR	Department of Waste Management & Recycling
DWR	California Department of Water Resources
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESL	English as a Second Language
EV	electric vehicle
FDC	Flow Duration Control
FEIR	Final EIR
FEMA	Federal Emergency Management Agency
FHA	Federal Highway Administration
FWHA	Federal Highway Administration
FWHA RD 77–108	FWHA Highway Traffic Noise Prediction Model
FHZ	Flood Hazard Zone
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gas
GSAs	groundwater sustainability agencies
GSP	Groundwater Sustainability Plan
Handbook	CARB’s Air Quality and Land Use Handbook: A Community Health Perspective
HAPs	hazardous air pollutants
HCFCs	Hydrochlorofluorocarbons
HCM	Highway Capacity Manual
HFCs	Hydrofluorocarbons
High GWP	High Global Warming Potential
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
K-12	kindergarten through grade 12
lb/day	pounds per day

LCFS	Low Carbon Fuel Standard
L _{dn}	Day-Night Noise Level
LED	light-emitting diode
L _{eq}	Equivalent Noise Level
LID	Low Impact Development
L _{max}	Maximum Noise Level
L _{min}	Minimum Noise Level
Ln	Statistical Descriptor
LOMR	Letters of Map Revision
LOS	level of service
LTA	Local Transportation Analysis
MACT	maximum available control technology
mgd	million gallons per day
mph	miles per hour
MPOs	metropolitan planning organizations
MRZ	Mineral Resource Zone
MT	metric tons
MUN	Municipal and Domestic Supply
MWEO	Model Water Efficient Landscape Ordinance
N ₂ O	Nitrous Oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NCSS	National Cooperative Soil Survey
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPDES Municipal Permit	National Pollutant Discharge Elimination System Municipal Stormwater Permit
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	Ozone
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHRI	Occupational Safety and Health Research Institute
PA	public address
Park District	Fulton-El Camino Recreation and Park District
Parkway	American River Parkway
PCBs	Polychlorinated biphenyls
PFCs	Perfluorinated Chemicals
PG&E	Pacific Gas and Electric Company
Pioneer	Pioneer Community Energy
PM	particulate matter
PM ₁₀	particulate matter equal to or less than 10 micrometers in diameter

PM _{2.5}	particulate matter equal to or less than 2.5 micrometers in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	Katherine Johnson Middle School project
PV	photovoltaic
Regional San	Sacramento Regional County Sanitation District
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RT	Regional Transit District
RWD	Reports of Waste Discharge
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAQMD	Sacramento Air Quality Management District
SASD	Sacramento Area Sewer District
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009
SCAQMD	South Coast Air Quality Management District
SEL	Sound Exposure Level
SF6	Sulfur hexafluoride
SFNA	Sacramento Federal Nonattainment Area
SGMA	Sustainable Groundwater Management Act
SHS	State Highway System
SIP	state implementation plan
SJUSD	San Juan Unified School District
SLF	Sacred Lands File
Small MS4s	Small Municipal Separate Storm Sewer Systems
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMUD	Sacramento Municipal Utility District
SO ₂	sulfur dioxide
SQIP	stormwater quality improvement plan
SSQP	Sacramento Stormwater Quality Partnership
SSWD	Sacramento Suburban Water District
State SIP Strategy	2016 State Strategy for the State Implementation Plan
Stormwater Quality Design Manual	Stormwater Quality Design Manual for the Sacramento and South Placer Regions
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TCR	Tribal Cultural Resources
TMDLs	total maximum daily loads
tons/yr	tons per year
Tribe	Wilton Rancheria

U.S.C.	United States Code
UAIC	United Auburn Indian Community
UCMP	U.C. Berkeley Museum of Paleontology
ULOP	Urban Levee of Flood Protection
USACE	U.S. Army Corps of Engineer
USFS	U.S. Forest Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration velocity level
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDRs	waste discharge requirements
WHO	World Health Organization
WWTP	Wastewater Treatment Plant
ZEV	zero emission vehicles
μin/sec	microinch per second

EXECUTIVE SUMMARY

This Environmental Impact Report (EIR) evaluates the physical environmental impacts of implementing the proposed Katherine Johnson Middle School project (the proposed project) as required by the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 *et seq.*).

ES.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The San Juan Unified School District (SJUSD) is proposing to redevelop approximately 9.75 acres of existing District property to accommodate the relocation of Katherine Johnson Middle School. The project site is located at 2641 Kent Drive, in unincorporated Sacramento County, in the Arden-Arcade Community. The project site currently consists of buildings and outdoor play areas associated with the former Creekside Elementary School campus. The proposed project would include demolition of the existing on-site buildings, and redevelopment with a new campus including both indoor and outdoor learning opportunities, drought-tolerant landscaping, parking, and a drop-off and pick-up area to support approximately 650 middle school students (grades 6–8) and approximately 48 staff. The existing outdoor playfields would be refurbished, and a new outdoor track would be installed.

The proposed project also includes improvements to existing on-site infrastructure necessary to support the proposed redevelopment, including water supply, wastewater conveyance, stormwater detention and water quality treatment, and electricity. As part of the proposed project, the visual appearance of the existing community garden would be improved, and a new adjacent tot lot and a new public sidewalk would be installed on District-owned property on the southwestern side of the existing school campus to facilitate access to the new garden/tot lot and the existing nature trail along Chicken Ranch Slough administered by the Fulton-El Camino Recreation and Park District. Also, the new perimeter fence around the school would be set back further from the Creekside Nature Trail to provide additional width for improved Fulton-El Camino Recreation and Park District access and maintenance of the Creekside Nature Trail.

In addition, the proposed project includes installation of nine portable classrooms and a small portable restroom building (and associated on-site tie-ins to existing underground utilities) in the existing parking lot at SJUSD's Encina High School (located at 1400 Bell Street, in the Arden-Arcade Community, in unincorporated Sacramento County). The portable classrooms at Encina High School would accommodate the adult education students who are currently attending classes at the Creekside School campus.

ES.2 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

CEQA Guidelines Section 15123 suggests that an EIR include a summary of “areas of controversy known to the Lead Agency” and “[i]ssues to be resolved.” Topics addressed in response to the Notice of Preparation (NOP) represent the most comprehensive list of issues of interest for the proposed project and include the following:

- ▶ Continued public access to the Creekside Nature Trail, and expanded Fulton-El Camino Recreation and Park District access to the trail for maintenance and emergency access.

- ▶ Potential impacts to surface water and groundwater quality, and obtaining appropriate water quality-related permits.
- ▶ Potential impacts on biological resources (including birds and oak trees), water quality (including erosion), and preservation of the Chicken Ranch Slough floodplain.
- ▶ Appropriate access and circulation at the school site for students and emergency vehicles, and noise from school use.
- ▶ Potential impacts to cultural and/or tribal cultural resources.
- ▶ Air pollutants and greenhouse gas emissions.
- ▶ Potential impacts on humans and wildlife from light pollution.

SJUSD has reviewed and considered all of the comments submitted in response to the NOP during preparation of the Draft EIR.

ES.3 SUMMARY OF ALTERNATIVES

The CEQA Guidelines (Section 15126.6) require that an EIR describe a range of reasonable alternatives to the proposed project that could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Below is a summary of the alternatives to the proposed project, which are considered in Chapter 5, “Alternatives,” of this EIR.

ES.3.1 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

Under the No Project Alternative, the existing land uses, buildings, parking lots, and landscaping would remain unchanged, and the proposed site redevelopment for the Katherine Johnson Middle School would not occur. The existing Creekside Adult School would continue to operate on the existing campus as it does now. Education of the current Katherine Johnson Middle School students would continue to occur at the Encina High School campus as it does now. However, to account for projected future local increased population and demand for educational services within SJUSD’s service area, four new portable classrooms would be installed in the existing Encina High School parking lot to serve the projected increase in middle school students (which would otherwise be accommodated by redevelopment at the Creekside site as part of the proposed project). Because redevelopment at the Creekside School site for the proposed Kathleen Johnson Middle School would not occur, the SJUSD’s existing school perimeter fence would remain in place and would not be set back to provide additional width for improved Fulton-El Camino Recreation and Park District access and maintenance of the Creekside Nature Trail. Furthermore, the proposed sidewalk along Belport Lane to provide improved connectivity for trail users would not be installed, and the proposed new public tot lot adjacent to the existing community garden would not be installed.

**ES.3.2 ALTERNATIVE 2: REDUCED SIZE KATHERINE JOHNSON MIDDLE SCHOOL
ALTERNATIVE**

Under Alternative 2, the size of the proposed new buildings at the Katherine Johnson Middle School site would be reduced by 25 percent. A larger area of the site would be devoted to new landscaped bioswales for stormwater pre-treatment as a Low Impact Development (LID) technique. The proposed amphitheater within the interior quad would not be developed. Because the school buildings would be reduced by approximately 25 percent, the school capacity would also be reduced, with a projected capacity of approximately 400 students and 32 faculty and staff members. All other components of Alternative 2 would be the same as the proposed project, including demolition of all of the existing buildings, reconfiguration of parking lots and underground utilities, and removal of some of the existing on-site landscape trees. As with the proposed project, the new perimeter fence would be set back further from the Creekside Nature Trail allowing for improved Fulton-El Camino Recreation and Park District access and maintenance, a new public tot lot would be installed, and a new sidewalk would be constructed along the east side of Belport Lane on SJUSD school campus property to provide connectivity with the Creekside Nature Trail.

As with the proposed project, nine new portable classrooms and a portable restroom building would be installed in the existing parking lot at Encina High School to provide for continued education of the adult learning students who are currently located at the Creekside Adult School.

ES.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental topic areas evaluated for the proposed project. The table is intended to provide an overview, as required by the CEQA Guidelines Section 15123; narrative discussions for each topic area are included in the corresponding sections of Chapters 3 and 4 in this EIR.

Table ES-1. Summary of Project Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 AESTHETICS AND RECREATION			
3.1-1. Substantially Degrade the Existing Visual Character or Quality of the Project Site, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality.	LTS	No mitigation measures are required.	
3.1-2. Potential for Substantially Increased Light, Glare, or Skyglow Effects.	PS	<p>Mitigation Measure 3.1-2: Prepare and Implement a Lighting Plan and Avoid Glare</p> <p>To reduce impacts associated with light and glare, SJUSD shall prepare and implement a lighting plan for redevelopment of the proposed Katherine Johnson Middle School campus that includes the following elements:</p> <ul style="list-style-type: none"> • Shield or screen outdoor lighting fixtures to direct the light downward and prevent light spill on adjacent properties. • Place and shield or screen flood and area lighting needed for security so as not to disturb adjacent residential areas and passing motorists. • Light fixtures that are of unusually high intensity or brightness (e.g., harsh mercury vapor, low-pressure sodium, or fluorescent bulbs) or that blink or flash, shall not be used. LED lighting shall be used where feasible. • Motion-controlled exterior nighttime lighting, rather than lighting that is always on, shall be used where feasible. • Use appropriate building materials (such as low-glare glass, low-glare building glaze or finish, neutral, earth-toned colored paint and roofing materials), shielded or screened lighting, and appropriately shielded lighting for signage, to prevent light and glare from adversely affecting adjacent housing and motorists on nearby roadways. 	LTS
3.1-3. Increased Use of Existing Recreational Facilities Resulting in Substantial Physical Deterioration.	LTS	No mitigation measures are required.	LTS
3.1-4. Physical Impacts on the Environmental from Construction or Expansion of Recreational Facilities.	LTS	No mitigation measures are required.	LTS

NI = No Impact LTS = Less than Significant LTCC = Less than Cumulatively Considerable S = Significant PS = Potentially Significant SU = Significant and Unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.2 AIR QUALITY			
3.2-1. Conflict with or obstruct implementation of the applicable air quality plan.	PS	Mitigation Measure 3.2-1: Implement the SMAQMD Basic Construction Emission Control Practices.	LTS
		<p>The SJUSD shall require that the construction contractors for the Katherine Johnson Middle School and the Encina portable classrooms comply with Basic Construction Emission Control Practices identified by the SMAQMD and listed below or as they may be updated in the future:</p> <ul style="list-style-type: none"> • 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. • 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 track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered sweeping is prohibited. • Limit vehicle speeds on unpaved roads to 15 miles per hour (mph). • All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d) 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. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated. 	
3.2-2. 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.	PS	Implement Mitigation Measure 3.2-1.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.2-2. Exposure of Sensitive Receptors to Substantial Air Pollutant Concentrations.	LTS	No mitigation measures are required.	LTS
3.2-5. Exposure of Sensitive Receptors to Objectionable Odors.	LTS	No mitigation measures are required.	
3.3 BIOLOGICAL RESOURCES			
3.3-1. Loss of nesting habitat and temporary construction impacts on special-status nesting birds and common nesting bird species.	PS	<p>Mitigation Measure 3.3-1: Avoid Impacts on Special-Status and Common Nesting Migratory Birds</p> <ul style="list-style-type: none"> • SJUSD will require the selected contractor/s to implement the following measures during demolition and construction activities to avoid adverse effects to special-status nesting birds and common nesting birds. • Wherever feasible, the contractor will conduct construction activities that could potentially affect special-status nesting birds and common nesting birds during the nesting season. The nesting season for Swainson's hawk is March 1 to September 15 and the nesting season for common nesting birds (raptors, passerines) February 1 to August 31. If construction activities are completed outside of these nesting seasons, no additional measures are required to avoid adverse effects on nesting birds. • If construction activities that could affect suitable habitat for nesting birds cannot be conducted outside of the nesting seasons listed above, a qualified biologist shall complete pre-construction surveys for nesting birds (including raptor and passerine nest surveys). Surveys will be conducted by a qualified biologist within suitable nesting habitat that could be affected by construction activities (e.g., staging areas, access routes) and will include a 500-foot buffer area (or larger area if required by established survey protocol) surrounding these areas. Surveys for Swainson's hawk nests will extend 0.25 miles beyond the project boundaries to the extent that access is available. The qualified biologist will complete preconstruction surveys within 1 week of the start of construction activities, and will be repeated if construction activities lapse for more than 1 week. If no nesting birds are detected during preconstruction surveys, no additional measures are required. 	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> Buffers will be marked on plans and specifications and in the field by a qualified biologist using temporary fencing, high-visibility flagging, or other means that are equally effective in clearly delineating the buffers. 	
		<ul style="list-style-type: none"> Construction activities will not occur within the buffer unless the qualified biologist determines that such construction activities would not adversely affect nesting activities. Construction activities that may impact special-status nesting birds occurring within the avoidance buffer indicated in Table 2 will be monitored by a qualified biologist either continuously or periodically during work, as determined by the qualified biologist. The qualified biologist will be empowered to stop construction activities that, in the biologist's opinion, threaten to cause unanticipated and/or unpermitted adverse effects on nesting birds (e.g., nest abandonment). Buffers will be maintained until there is no longer a threat of disturbance to the nesting bird (e.g., young have fledged, individuals have moved out of the area), as determined by a qualified biologist. 	
3.3-2. Have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LTS	No mitigation measures are required.	LTS
3.3-3. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	PS	<p>Mitigation Measure 3.3-2: Avoid Impacts on Protected Trees</p> <p>Prior to project construction, the San Juan Unified School District (District) shall contact the County of Sacramento's tree administrator to discuss the proposed activity and if deemed necessary, the tree administrator will inspect the site of the proposed activity. After consultation between the District and the tree administrator, if the tree administrator determines that a permit is required, the District shall apply for a permit and comply with relevant permit conditions, including permit conditions that may be met through on-site replanting and the landscaping plan. The application for a tree permit would contain the following information:</p> <ol style="list-style-type: none"> Location, size and species of the tree(s); The type of activity for which the permit is sought; A statement of the reasons for the activity; and Funds for an arborist report, if applicable. 	LTS
3.4 CULTURAL RESOURCES			

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.4-1. Substantial adverse change in the significance of a historical resource.	NI	No mitigation measures are required.	NI
3.4-2. Substantial adverse change in the significance of an archeological resource.	PS	Mitigation Measure 3.4-2: Avoid Potential Effects on Archaeological Resources	LTS
		In the event that archaeological cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are discovered during project ground-disturbing activities, all ground disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can access the significance of the find. If it is a precontact archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the project applicant to avoid disturbance to the resources and, if complete avoidance is not possible, follow accepted professional standards in recording any find including submittal of the standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project site (the North Central Information Center [NCIC]).	
3.4-3. Disturbance of human remains including those interred outside of dedicated cemeteries.	PS	<p>Mitigation Measure 3.4-3: Stop Work If Human Skeletal Remains Are Uncovered, and Follow the Procedures Set Forth in CEQA Guidelines Section 15064.5(e)(1).</p> <p>SJUSD shall require the following steps to be taken as a part of contracts related to construction of the project in the event of the accidental discovery or recognition of any human remains:</p> <ul style="list-style-type: none"> • (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: <ul style="list-style-type: none"> (1) the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours (pursuant to Health and Safety Code Section 7050[c]); (2) the NAHC shall identify the person or persons it believes to be the most likely descendant from the deceased Native American pursuant to the provisions of Public Resources Code Section 5097.98; and 	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		(3) the most likely descendant may make recommendations to the SJUSD/contractors, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resources Code Section 5097.98; or	
		(2) Where the following conditions occur, SJUSD/contractors shall assist the most likely descendant with repatriation of Native American remains and associated grave goods, as directed by the mostly likely descendant, with appropriate dignity on the property in a location not subject to further subsurface disturbance: (A) the NAHC 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 NAHC; (B) the most likely descendant identified fails to make a recommendation; or (C) SJUSD rejects the recommendation of the most likely descendant, and mediation by the NAHC fails to provide measures acceptable to SJUSD.	
3.5 GEOLOGY AND PALEONTOLOGICAL RESOURCES			
3.5-1. Potential Risks to People and Structures Caused by Strong Seismic Ground Shaking.	LTS	No mitigation measures are required.	LTS (Beneficial)
3.5-2. Potential for Short-Term Temporary Construction-Related Soil Erosion.	LTS	No mitigation measures are required.	LTS
3.5-3. Damage to or Destruction of Unique Paleontological Resources During Earthmoving Activities.	PS	<p>Mitigation Measure 3.5-3: 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.</p> <p>To minimize the potential for destruction of, or damage to potentially unique, scientifically important paleontological resources during earth-moving activities at the proposed Katherine Johnson Middle School site, the District shall implement the measures described below.</p> <ul style="list-style-type: none"> Prior to the start of earthmoving activities at the proposed Katherine Johnson Middle School site, the District shall require training to inform all construction personnel involved with earthmoving activities 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. This worker training may either be prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources, or prepared and presented separately by a qualified paleontologist. 	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> If paleontological resources are discovered during earthmoving activities, the construction contractor shall immediately cease work in the vicinity of the find and notify the District. The District shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan based on Society of Vertebrate Paleontology Guidelines (SVP 2010). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the District to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. 	
3.6 GREENHOUSE GAS EMISSIONS			
3.6-1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTCC		LTCC
3.7 HYDROLOGY AND WATER QUALITY			
3.7-1. Violate Water Quality Standards or Substantially Degrade Surface or Groundwater Quality.	LTS	No mitigation measures are required.	LTS
3.7-2. Impede Sustainable Groundwater Management of the Basin by Substantially Decreasing Groundwater Supplies or Interfering with Groundwater Recharge.	LTS	No mitigation measures are required.	LTS
3.7-3. Substantially Alter Drainage Patterns or Add Impervious Surfaces Resulting in Increased Erosion or Siltation.	LTS	No mitigation measures are required.	LTS
3.7-4. Substantially Alter Drainage Patterns or Add Impervious Surfaces that would Exceed Storm Drainage Systems or Result in Increased Flooding.	PS	Mitigation Measure 3.7-4: Prepare a Drainage Plan for the Proposed Katherine Johnson Middle School, and Implement Requirements Contained in the Plan.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>SJUSD shall prepare a final drainage plan that incorporates Central Valley RWQCB requirements to appropriately convey off-site upstream runoff through the Katherine Johnson Middle School project site that demonstrates how project-related on-site runoff would be appropriately detained and managed with through other improvements (e.g., source controls) to reduce flooding and hydromodification impacts, as required by the Sacramento Areawide NPDES MS4 Permit. The drainage plan shall include, but is not limited to, the following items:</p> <ul style="list-style-type: none"> • an accurate calculation of pre-project and post-project runoff scenarios, obtained using appropriate engineering methods (which may consist of those contained in the <i>Sacramento City/County Drainage Manual Volume 2: Hydrology Standards</i>), that accurately evaluates potential changes to runoff, including increased surface runoff; • runoff calculations for the 10-year, 100-year (0.01 AEP), and 200-year (0.005 AEP) storm events (and other, smaller storm events as required) shall be performed and the drainage pipeline sizes confirmed based on alignments and detention facility locations finalized in the design phase; • a description of the proposed ongoing maintenance program for the on-site drainage system; • project-specific standards for installing drainage systems; • a description of on-site features designed to treat stormwater and maintain stormwater quality before it is discharged from the project site (e.g., vegetated swales, infiltration trenches, and constructed wetland filter strips); and • stormwater management BMPs that are designed to limit hydromodification and maintain current stream geomorphology. These may include, but are not limited to, the following: <ul style="list-style-type: none"> - use of LID techniques to limit increases in stormwater runoff at the point of origination (these may include, but are not limited to: surface swales; replacement of conventional impervious surfaces with pervious surfaces [e.g., porous pavement]; impervious surfaces disconnection; and trees planted to intercept stormwater); - minimize slope differences between any stormwater or detention facility outfall channel with the existing receiving channel gradient to reduce flow velocity; and - minimize to the extent possible detention basin sizes, embankments, culverts, and other encroachments into the channel and floodplain corridor, and utilize open bottom box culverts to allow sediment passage on smaller drainage courses. 	
3.7-5. Impede or Redirect Flood Flows.	PS	Mitigation Measure 3.7-5: Prepare a Hydraulic Study for the Encina High School Portable Classrooms, Incorporate Flood Control Features as Necessary.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> SJUSD shall prepare a hydraulic study that includes hydraulic modeling related to placement of the portable classrooms and portable restroom building. The study shall calculate the project's effects on the base water surface elevation, the potential increase or decrease in flood water velocities, and the potential scour depth. Modeling shall extend off site both upstream and downstream to determine impacts to surrounding properties (if any). Based on modeling results, the study shall identify recommendations, such as raised foundations, and any recommended facilities (as necessary) that provide for flood control (including any controls necessary to reduce off-site increases that may be caused by the proposed on-site development), and identify the floodproofing that is required for the proposed portable classrooms and the associated underground utilities in compliance with all relevant requirements, including those directed by the Division of the State Architect. 	
3.7-6. Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan.	LTS	No mitigation measures are required.	LTS
3.8 NOISE AND VIBRATION			
3.8-1. Short-Term Noise Levels from Construction Activities.	PS	<p>Mitigation Measure 3.8-1: Use Noise-Suppression Devices on Construction Equipment, Limit Construction to Daytime Hours, and Locate Stationary Equipment Away from Sensitive Noise Receptors to Reduce Noise Levels During Construction.</p> <p>SJUSD will require the selected contractor to implement the following noise-reduction and noise-control measures during construction activities:</p> <ul style="list-style-type: none"> Construction equipment will be properly maintained per manufacturers' specifications and fitted with feasible noise suppression devices (e.g., mufflers, silencers, wraps). All impact tools will be shrouded or shielded, and all intake and exhaust ports on power equipment will be muffled or shielded. Prohibit the start-up of machines or equipment between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Construction equipment will be shut down when not in use and will not idle for extended periods of time near noise-sensitive receptors. 	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> Fixed/stationary equipment (e.g., generators, compressors, cement mixers) will be located as far as practicable from noise-sensitive receptors. Restrict the use of bells, whistles, alarms, and horns for safety-warning purposes. Residences within 500 feet of the proposed Katherine Johnson Middle school site shall be notified of the construction schedule in writing prior to the beginning of construction. Designate a “construction liaison” that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site. Construction worker trips and truck trips shall be distributed between El Camino to Kent and El Camino to Morse Avenue to Miramar Road to minimize impacts along each entry to the proposed Katherine Johnson Middle School site. 	
3.8-2. Short-Term Groundborne Vibration from Construction.	LTS	No mitigation measure is required.	LTS
3.8-3. Long-Term Operational (Traffic) Noise.	LTS	No mitigation measure is required.	LTS
3.8-4. Long-Term Operational (School Site) Noise Levels.	LTS	Mitigation Measure 3.8-5: Public Address System Design	SU
		<p>The SJUSD will require the public address system for the Katherine Johnson Middle School to be designed to avoid noise impacts, as experienced by residents in the vicinity through the below or similar and equally effective means:</p> <ul style="list-style-type: none"> Public address speakers will be placed and directed away from nearby residents. No public address speaker will be placed within 100 feet of an adjacent occupied residential property. No public address speaker will be placed north, south, or east of the proposed multi-purpose building. No public address speaker will be placed in the hardcourt area. Public address speakers will be mounted relatively low and will not be placed on poles or other structures greater than 10 feet in height. 	
3.9 TRANSPORTATION			

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.9-1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	LTS	No mitigation measure is required.	LTS
3.9-2. Conflict or Inconsistency with CEQA Guidelines section 15064.3.	LTS	No mitigation measure is required.	LTS
3.9-3. Potential for Creation of Substantial Traffic-Related Hazards due to a Design Feature.	LTS	No mitigation measure is required.	NI
3.9-4. Interference with Emergency Access.	PS	<p>Mitigation Measure 3.9-4: Prepare and Implement a Construction Traffic Control Plan.</p> <p>The SJUSD and/or contractor/s, in collaboration with Sacramento County, shall prepare and implement a traffic control plan for construction activities that may affect road rights-of-way, in order to facilitate travel of emergency vehicles on affected roadways. The traffic control plan must 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 any 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. Measures typically used in traffic control plans include advertising of planned lane closures, warning signage, and a flag person to direct traffic flows when needed. During construction, access to the existing surrounding land uses shall be maintained at all times, with detours used, as necessary, during road closures. The plan may be modified by to eliminate or avoid traffic conditions that are hazardous to the safety of the public.</p>	PS
3.10 TRIBAL CULTURAL RESOURCES			
3.10-1. Substantial adverse change in the significance of a tribal cultural resource.	PS	<p>Mitigation Measure 3.10-1a: Inadvertent/Unanticipated TCR Discoveries</p> <p>Although TCRs have not been identified for this project, the following mitigation measure is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential TCRs, archaeological, or cultural resources during a project's ground disturbing activities. SJUSD shall require the following steps to be taken as a part of contracts related to construction of the project:</p>	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> • If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or a distance less than 100 feet agreed to by a Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with the area. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (Public Resources Code §21074). The Tribal Representative will make recommendations for further evaluation and treatment as necessary. • When avoidance is infeasible, preservation in place is the preferred option and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. • If preservation in place is not feasible, culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of TCRs will not take place unless approved in writing by the California Native American Tribe that is traditionally and culturally affiliated with the project area. • The contractor shall implement any measures deemed by the SJUSD to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a TCR may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. • Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of CEQA and AB 52 have been satisfied. 	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>Mitigation Measure 3.10-1b: Notification, Inspection, and Native American TCR Construction Monitoring</p> <p>SJUSD will provide Wilton Rancheria, which is traditionally and culturally affiliated with resources in the project area, with a schedule for ground-disturbance activities and extend an invitation for a Wilton Rancheria Tribal Representative or Tribal Monitor to observe on-site ground disturbance work contingent on compliance with construction safety measures. SJUSD will compensate a Wilton Rancheria Tribal Representative or Tribal Monitor for up to 16 (16) hours using the established hourly rate for on-site monitoring, which may be distributed among multiple days as coordinated between SJUSD and Wilton Rancheria. The Wilton Rancheria Tribal Representative or Tribal Monitor shall also be able to observe on-site during additional ground-disturbing activities, without compensation from SJUSD.</p> <p>To minimize the potential for destruction of or damage to previously undiscovered TCRs and to identify any such resources at the earliest possible time during project-related ground-disturbing activities, SJUSD/contractors shall require the following steps to be taken as a part of contracts related to construction of the project:</p> <ul style="list-style-type: none"> • A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, the SJUSD/contractor shall contact Wilton Rancheria with the proposed earthwork start date. Wilton Rancheria Tribal Representatives or Tribal Monitors shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of groundbreaking activity. During this inspection, Wilton Rancheria Tribal Representatives or Tribal Monitors shall be provided the opportunity to offer a worker awareness meeting for on-site construction personnel and to distribute worker awareness information. • If any TCRs are encountered during this initial inspection, or during any subsequent construction activities, work shall be suspended within 100 feet of the find and the measures included in Mitigation Measure 3.10-1a, Inadvertent/Unanticipated Discoveries, shall be implemented. • Native American Monitors from Wilton Rancheria will be invited to monitor the vegetation grubbing, stripping, grading, or other ground-disturbing activities in the project area to determine the presence or absence of any TCRs. 	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> Wilton Rancheria Tribal Representatives and Native American Monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted, or slowed if such sites or objects are identified within the direct impact area; however, only a Native American Representative can recommend appropriate treatment of such sites or objects. 	
4 TOPIC AREAS DISMISSED FROM DETAILED ANALYSIS			
4.1 Agriculture and Forestry Resources	NI	1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	
	NI	2. Conflict with existing zoning for agricultural use or a Williamson Act contract?	
	NI	3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	
	NI	4. Result in the loss of forest land or conversion of forest land to non-forest use?	
	NI	5. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	
4.2 Energy	LTS	1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	
	LTS	2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	
4.3 Hazards and Hazardous Materials	LTS	1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	
	PS	2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	
	PS	<p>Mitigation Measure 4.3-1: Perform Soil Vapor Testing, Prepare a Report of Findings, and Implement Remedial Actions as Necessary.</p> <p>To minimize the potential for adverse human health and environmental effects, the District shall implement the measures listed below.</p> <ul style="list-style-type: none"> Prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to conduct soil vapor sampling on-site to assess potential for vapor encroachment conditions associated with the historical cleaner to the south on El Camino Avenue. 	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> Although not a recognized environmental concern, prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to collect and analyze soil sample(s) in the area of the Sacramento Municipal Utility District (SMUD) pad on the south side of the mechanical room. Although not a recognized environmental concern, prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to collect and analyze soil samples throughout the subject property for asbestos, lead-based paint, and pesticide (termiticide). If any constituents of concern exceed the applicable environmental screening levels, the report shall include recommendations for remediation, which may include excavation of contaminated soil and replacement with clean fill dirt. The San Juan Unified School District shall consult with the California Department of Toxic Substances Control, and shall implement the selected remedy for soil cleanup. 	
	NI	3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	
	NI	4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	
	NI	5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	
	NI	6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	
	NI	7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	
4.4 Land Use and Planning	NI	1. Physically divide an established community?	
	NI	2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	
4.5 Mineral Resources	NI	1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	
	NI	2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	

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4.6 Population and Housing	NI	1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	
	NI	2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	
4.7 Public Services		1. 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:	
	NI	Fire protection	
	NI	Police protection	
	LTS	Schools	
		Parks	
	NI	Other public facilities	
4.8 Utilities and Service Systems	LTS	1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	
	LTS	2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	
	LTS	3. 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?	
	LTS	4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	
	NI	5. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	
4.9 Wildland Fire Hazards	NI		

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NI = No Impact LTS = Less than Significant LTCC = Less than Cumulatively Considerable S = Significant PS = Potentially Significant SU = Significant and Unavoidable

1 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the impacts of the Katherine Johnson Middle School project (the proposed project) as required by the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 *et seq.*).

1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The San Juan Unified School District (SJUSD) is proposing to redevelop approximately 9.75 acres of existing District school property to accommodate the relocation of Katherine Johnson Middle School from the Encina High School campus to the proposed project site. The project site is in unincorporated Sacramento County – within the Arden-Arcade Community. The project site currently consists of buildings and outdoor play areas associated with the former Creekside Elementary School campus. The existing facilities are now used for the Creekside Adult Center.

The proposed project would include demolition of the existing on-site buildings and construction and operation of a new, modern campus including both indoor and outdoor learning opportunities, drought-tolerant landscaping, parking, and circulation to support up to 650 middle school students (grades 6–8) and approximately 48 staff. The existing outdoor playfields would be refurbished. The proposed project also includes modifications to the existing on-site infrastructure necessary to support the proposed redevelopment, including water supply, wastewater conveyance, stormwater detention and water quality treatment, and electricity. As part of the proposed project, the visual appearance of the existing community garden would be improved, and a new adjacent tot lot would be constructed. In addition, a new public sidewalk and small paved parking area would be installed on District-owned property on the west side of the existing school campus to facilitate access to the garden/tot lot and the existing nature trail along Chicken Ranch Slough administered by the Fulton-El Camino Recreation and Parks District. In addition, the proposed project includes installation of nine portable classrooms and a small temporary restroom building in the parking lot at the Encina High School (located at 1400 Bell Street, in the Arden-Arcade Community, in unincorporated Sacramento County). The portable classrooms at Encina High School would accommodate the adult education students who are currently attending classes at the Creekside Adult Center, the proposed project site for the Katherine Johnson Middle School.

1.2 PROJECT BACKGROUND AND HISTORY

The project site was developed in 1953 as the Creekside Elementary School. The District now uses the existing Creekside school site for adult education. Known as the Creekside Adult Center, this site is used in conjunction with the Sunrise Tech Center to provide ongoing educational opportunities. Current average attendance at the Creekside Adult Center is 300–500, and there is a total of 24 staff and faculty. The Creekside Adult Center operates five days a week from September 6th to June 30th, Monday through Friday, from 8 AM–3:00 PM.

The District has been planning to redevelop the former Creekside school campus with new, modernized school facilities once sufficient funding became available. The campus currently contains a variety of older existing school buildings that have been used for classrooms, administration, and library, and a multi-purpose building with a stage and food service/dining area. The campus also contains hardcourt play areas (i.e., basketball and tennis courts) and a turf soccer field in the northern portion of the project site. The project site includes large

shade trees around the buildings and around the northern site perimeter adjacent to Chicken Ranch Slough. Minimal on-site parking stalls are present inside the current campus entrance from Kent Drive, adjacent to the existing school buildings. The campus is surrounded by chain link fencing and the main entrance is gated and locked. A portion of the approximately 1.5-acre Creekside Nature Area, administered by the Fulton-El Camino Recreation and Park District, is adjacent to the project site's northern boundary. An existing 0.5-mile-long nature trail, administered by the Park District, is present within the Creekside Nature Area along the south side of Chicken Ranch Slough. The slough is adjacent to, and runs through a small portion of, the project site's northern boundary.

1.3 INTENDED USES AND PURPOSE OF THE EIR

The SJUSD, as the CEQA lead agency, has prepared this EIR to evaluate the environmental impacts of implementing the proposed relocation of Katherine Johnson Middle School. The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

To move forward with the proposed project, SJUSD must prepare and certify an EIR that analyzes the potential environmental impacts of the proposed project; identifies feasible mitigation measures that could avoid or minimize significant environmental impacts (where necessary); describes and analyzes feasible alternatives; adopt findings with regard each significant effect; adopt a Statement of Overriding Considerations for all environmental impacts that cannot be mitigated to a less-than-significant level; and adopt a Mitigation Monitoring and Reporting Program to ensure that all required mitigation measures are implemented

1.4 ENVIRONMENTAL REVIEW PROCESS

The purpose of an EIR is not to recommend approval or denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, identifies potentially feasible measures to mitigate significant impacts, and describes potentially feasible alternatives to the project that can reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its environmental effects in deciding whether to carry out a project.

A Notice of Preparation (NOP) for this Draft EIR (DEIR) was circulated to inform agencies and the general public that an EIR was being prepared and invite comments on the scope and content of the document. The SJUSD considered comments submitted in response to the NOP during preparation of this DEIR.

The DEIR is being circulated for a 45-day public review period, during which public comment and input from agencies and organizations is welcomed. At the close of the public review period, SJUSD will prepare a Final EIR (FEIR) that will include copies of any comments submitted on the DEIR, responses to the comments, and any changes to the text of the DEIR.

If significant environmental effects are identified, SJUSD will adopt "findings" indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the environmental impacts are identified as significant and unavoidable, SJUSD may still approve the project if it determines that social, economic, legal, technological, or other factors override the unavoidable impacts. The SJUSD will then be

required to prepare a “Statement of Overriding Considerations” that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record. In making its decision whether or not to approve the project, SJUSD will consider “the whole of record,” which includes the information in the Draft EIR, comments received on the Draft EIR and responses to those comments, and the Final EIR.

1.5 REQUIRED APPROVALS AND PERMITS

The proposed project would be reviewed by the Office of Public School Construction of the California Department of General Services, Division of the State Architect, and by the California Department of Education (CDE). The CDE is responsible for approving the proposed site of any public school in California (Education Code Section 17213) to ensure that the location meets certain specific standards for public health and safety.

In accordance with the CEQA Guidelines Section 15051(b)(1), SJUSD is the lead agency with primary authority for approval of the project. Approvals for the project include, but are not limited to:

- ▶ SJUSD certification of the EIR and adoption of a Mitigation Monitoring and Reporting Program; and
- ▶ SJUSD adoption of the Katherine Johnson Middle School project.

Other approvals required for the proposed project may include, but are not necessarily limited to:

- ▶ Central Valley Regional Water Quality Control Board—Clean Water Act Section 402 National Pollutant Discharge Elimination System, Stormwater General Permit.
- ▶ Sacramento Metropolitan Fire District—site plan review for emergency access and water availability.
- ▶ Sacramento Metropolitan Air Quality Management District—Authority to Construct, permit to operate.
- ▶ Sacramento Suburban Water District—domestic water supply and fire flow.
- ▶ Sacramento Area Sewer District—sewer connections and conveyance.
- ▶ Sacramento County—storm drain connection and stormwater runoff treatment, approval of a grading permit, encroachment permit for changes to site access.
- ▶ Fulton-El Camino Recreation and Park District—collaboration on design, maintenance, and operation of the nature trail along Chicken Ranch Slough.

These agencies will have the opportunity to review this EIR during the public review period, and may use the information contained therein as part of consideration and issuance of any permits required for the project.

1.6 PUBLIC INVOLVEMENT PROCESS

1.6.1 SCOPING COMMENT PERIOD

To initiate preparation of this EIR, in accordance with the CEQA Guidelines (14 CCR 15082[a], 15103, and 15375), SJUSD circulated an NOP for the proposed project (see the District’s website for more details: <https://www.sanjuan.edu/buildkjms>). The NOP was circulated to the public; State Clearinghouse; responsible,

trustee, and other relevant local, State, and Federal agencies; and to the Sacramento County Clerk. The scoping period began on June 10, 2022, and ended on July 11, 2022.

CEQA provides for a lead agency to facilitate one or more scoping meetings, which provide opportunity for determining the scope and content of the EIR. The SJUSD hosted one scoping meeting to provide opportunities to learn about the project and provide input during the NOP comment period. The public scoping meeting was held on June 30, 2022.

The NOP and scoping meeting provided opportunity for comment from public agencies, stakeholders, organizations, and interested individuals on the scope of the environmental analysis addressing the potential effects of the proposed project (see <https://www.sanjuan.edu/buildkjms>). The SJUSD reviewed and considered all public comments in preparing this DEIR.

WRITTEN COMMENTS

Written comments or questions concerning this DEIR must be submitted within the 45-day review period. When submitting a comment, please include the name of a contact person in your agency or organization. Responsible and trustee agencies should focus their comments on environmental information germane to each agency's statutory responsibility (CEQA Guidelines Section 15204[d]). All comments must be directed to the name and address listed below, either via postal mail or email:

Nicholas Arps, Director of Facilities Construction & Modernization
San Juan Unified School District
3738 Walnut Avenue
Carmichael, CA 95608
(916) 971-7700
construction@sanjuan.edu

A copy of the DEIR is also available for review on the SJUSD's website at: <https://www.sanjuan.edu/buildkjms>.

1.7 TYPE OF EIR AND ORGANIZATION

Consistent with the CEQA Guidelines Section 15126.2, Chapter 3 of this EIR provides a detailed evaluation of topic areas where significant impacts on the physical environment associated with the proposed Katherine Johnson Middle School project may occur, and identifies feasible mitigation for those impacts where necessary. Chapter 4 of this EIR contains brief discussion, at a lesser level of detail, of topic areas where impacts on the physical environment from implementing the proposed project are clearly less than significant or no impact would occur.

This DEIR is organized as follows:

- ▶ **Chapter ES, "Executive Summary,"** provides an overview of the findings, conclusions, and any recommended mitigation measures in the DEIR; a summary of the issues to be resolved and areas of controversy; and a summary of the alternatives considered in the DEIR.

- ▶ **Chapter 1, “Introduction,”** describes the project history and background, intended uses and purposes of this EIR, environmental review process, project approvals and permits, public involvement process, and the type of EIR and EIR organization.
- ▶ **Chapter 2, “Project Description,”** describes the project location and surrounding land uses, project characteristics, supporting infrastructure, project schedule, demolition and construction staging, required approvals and entitlements, and project objectives.
- ▶ **Chapter 3, “Detailed Environmental Impact Analysis,”** presents a detailed analysis of topic areas where the proposed project may result in significant physical environmental impacts, and identifies mitigation measures where necessary.
- ▶ **Chapter 4, “Topics Dismissed from Detailed Analysis,”** presents a brief discussion, at a lesser level of detail, of topics areas where the proposed project would clearly result in less-than-significant impacts or where no impact would occur.
- ▶ **Chapter 5, “Alternatives,”** provides a comparative analysis between the significant impacts of the proposed project and alternatives to the project. The Alternatives chapter provides a summary of the relative environmental impacts of the project alternatives, including the No Project Alternative. This chapter also identifies the “environmentally superior” alternative.
- ▶ **Chapter 6, “Cumulative Impacts and Other CEQA Considerations,”** describes the significant impacts of implementing the proposed project in combination with the impacts of related past, present, and reasonably foreseeable future projects, as well as the project’s growth inducement potential, and any significant and unavoidable effects of the proposed project.
- ▶ **Chapter 7, “References,”** lists the sources of information cited throughout the DEIR.
- ▶ **Chapter 8, “List of Preparers,”** lists the individuals who contributed to preparation of the DEIR.
- ▶ **Appendices** provide background and technical information.

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2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SURROUNDING LAND USES

2.1.1 REGIONAL AND LOCAL PROJECT LOCATION

The approximately 9.75-acre project site proposed for the relocation of Katherine Johnson Middle School (the existing Creekside school site), and the approximately 0.30-acre Encina High School portable classroom site are situated in unincorporated Sacramento County, east of the Sacramento City limits, in the urbanized Arden-Arcade Community (Exhibit 2-1).

The project site proposed for the relocation of Katherine Johnson Middle School is located at 2641 Kent Drive (Assessor's Parcel Number [APN] 268-0290-001-0000), and is bounded by Miramar Road on the south, Belpoint Lane on the west, private residences adjacent to Lacy Lane on the north, and private residences adjacent to Creekside Lane and Crest Haven Drive on the east (Exhibit 2-2).

The Encina High School portable classroom site, where the Creekside Adult Center would be relocated, is located at 1400 Bell Street (APN 285-0110-002-0000) and is bounded by Encina High School buildings and the school's tennis courts and outdoor sports track to the north and east, Greer Elementary School to the south, and Bell Street to the west (Exhibit 2-2).

2.1.2 PROJECT BACKGROUND AND EXISTING LAND USES AND ZONING

The Katherine Johnson Middle School project site was developed in 1953 as the Creekside Elementary School. The District now uses the Creekside school site for adult education. Known as the Creekside Adult Center, this site is used in conjunction with the Sunrise Tech Center to provide ongoing educational opportunities. Current average attendance at the Creekside Adult Center is 300-500, and there is a total of 24 staff and faculty. The Creekside Adult Center operates five days a week from September 6th to June 30th, Monday through Friday, from 8 am – 3:00 pm.

The existing Creekside School campus currently contains a variety of older existing school buildings including classrooms, administration, and library, and a multi-purpose building with a stage and food service/dining area. The campus also contains hardcourt play areas (i.e., basketball and tennis courts) and a turf soccer/baseball field in the northern portion of the project site. The campus includes a number of large shade trees around the buildings, as well as around the northern site perimeter adjacent to Chicken Ranch Slough. Minimal on-site parking stalls are present inside the current campus entrance from Kent Drive, adjacent to the existing school buildings. The campus is surrounded by chain link fencing and the main entrance is gated and locked.

The proposed Encina High School portable classroom site consists of the southwestern portion of the school's paved asphalt parking area, and a narrow strip of grass immediately adjacent to the south. High-mast light standards are present in the parking lot to accommodate nighttime school sporting events.

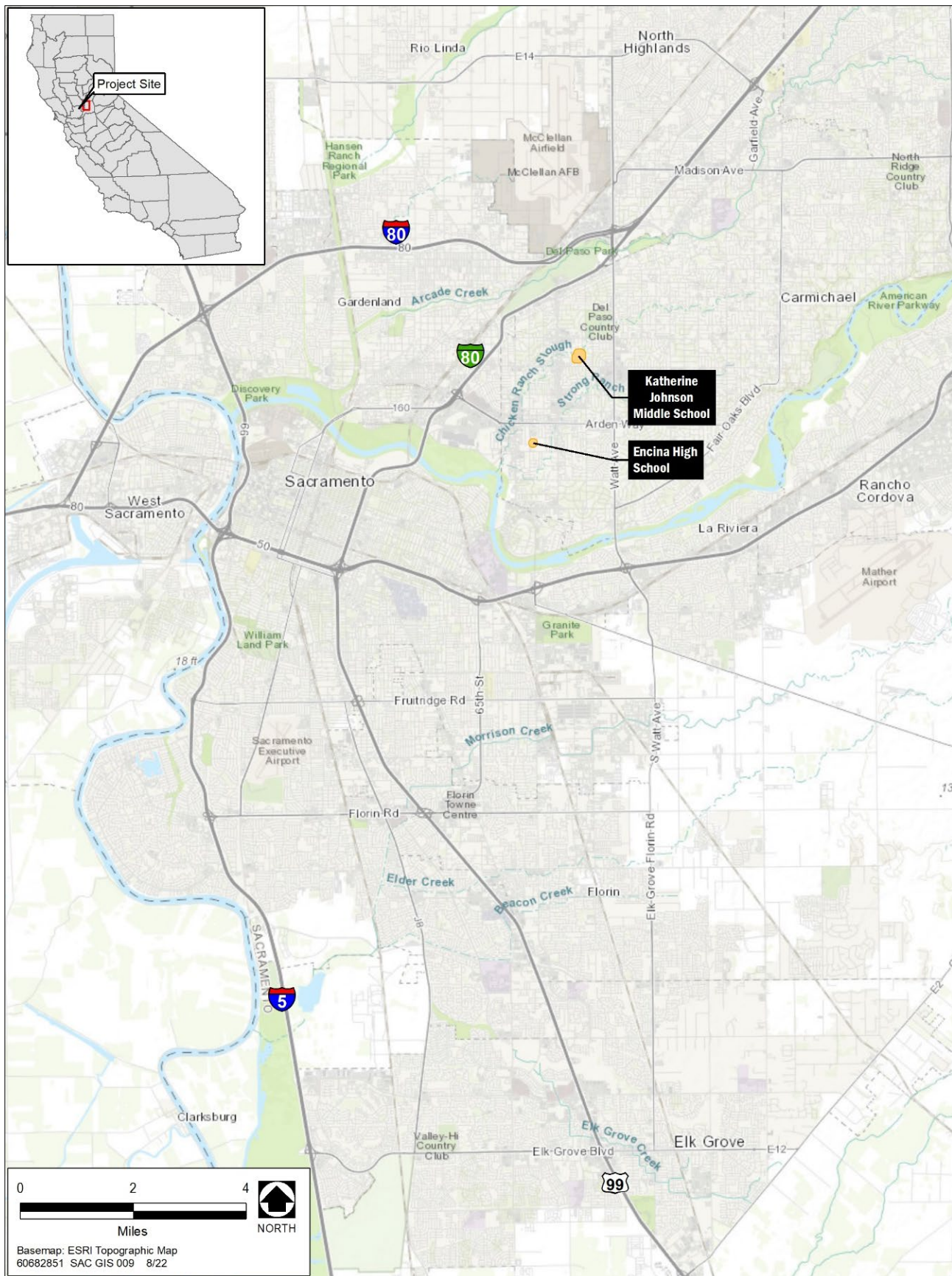
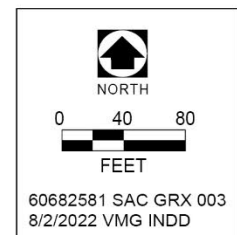


Exhibit 2-1. Regional Project Location



- A. Administration and Student Services
- B. Classroom Building
- C. Classroom Building
- D. Science, Art, Maker, and SPED Classrooms
- M. Multi-Purpose, Food Service, Music Classroom, Locker Rooms and PE Classroom

- 02. Automobile and Bus Student Drop-off
- 03. Front Entry Gateway
- 05. Outdoor Student Quad Area
- 08. Amphitheater
- 09. Outdoor Dining Canopy
- 10. Hardcourt
- 11. Field with Surrounding Track
- 13. Student Waiting Area
- 15. Science Outdoor Learning
- 16. Community Garden/Tot Lot
- 17. Stepped Outdoor Learning Zone
- 18. Existing Nature Trail
- 19. Campus Perimeter Decorative Fencing



Sources: Lionakis 2022, adapted by AECOM in 2022

Exhibit 2-2. Proposed Katherine Johnson Middle School Conceptual Site Plan

The proposed Katherine Johnson Middle School project site and Encina High School portable classroom site are zoned RD-5 Residential. The Sacramento County General Plan land use designation for both school campuses is Low Density Residential (Sacramento County 2022), and the Arden-Arcade Community Plan land use designation is RD-5/Public-Quasi Public (Sacramento County 1980). Public schools are a permitted, primary use under the current Sacramento County Zoning Code in areas zoned RD-5 (Sacramento County 2021: Table 3.1).

The proposed Katherine Johnson Middle School project site is surrounded on all sides by single-family and multi-family residential development, with the exception of the Town & Country Pre-School and Daycare facility (at 2550 Belport Lane), which is immediately adjacent to and south of the project site's southwestern boundary. Two paved local streets—Miramar Road on the east and Elvyra Way on the west—dead-end on either side of the southern portion of the project site.

The Encina High School portable classroom site is surrounded by high school classroom buildings north of the parking lot, and the school's tennis courts and outdoor track are present to the east of the parking lot. The Encina High School perimeter fence is immediately south of the proposed portable classroom site, and the Greer Elementary School is south of the proposed classroom site. Bell Street is immediately adjacent to Encina High School and the paved parking lot to the west.

A portion of the approximately 1.5-acre Creekside Nature Area, administered by the Fulton-El Camino Recreation and Park District, is adjacent to the proposed Katherine Johnson Middle School project site's northern boundary. Chicken Ranch Slough is adjacent to, and also runs through a small portion of, the project site's northern boundary. An existing 0.5-mile-long nature trail, administered by the Park District, is present along the southern bank of the slough on the project site's northern boundary. A community garden is present on the southwest side of the proposed Katherine Johnson Middle School project site.

2.2 PROPOSED PROJECT CHARACTERISTICS

SJUSD is proposing to redevelop its District-owned property in the Arden-Arcade Community, at the former Creekside Elementary School campus located at 2641 Kent Drive. All of the existing buildings and facilities associated with the former Creekside Elementary School, which was constructed in 1953, would be demolished and removed. A new middle school would be developed in place of the existing elementary school facilities.

The proposed Katherine Johnson Middle School would consist of the following facilities. Several buildings would be constructed in the central part of the campus, including administration, library, and student services; general classrooms; science, art, maker, and special education classrooms; and a multi-purpose building including food service, music, gymnasium, and locker rooms (Exhibit 2-2). Building exteriors would incorporate modern design features such as cantilevered roofs and covered walkways, architectural coatings designed to reduce glare, and connectivity between indoor and outdoor learning environments. An outdoor science learning area would be provided adjacent to the science education classrooms. An outdoor dining area with a shade trellis would be provided adjacent to the food service area. The school buildings would be oriented around a central interior quad (gathering space), which would include an outdoor amphitheater. Communications would be facilitated by a public address (PA) system that may be used outdoors around the campus buildings, when necessary. The existing outdoor playfields would be refurbished and redeveloped to include a hardcourt basketball area, and a soccer/baseball field and a track in the northern open turf area of the campus.

Existing chain link fencing around the property would be removed and replaced. New landscaping, including shade trees and drought-tolerant shrubs, groundcover, and flowering plants, would be installed around the campus buildings, outdoor learning and gathering areas, and the parking area. The new campus perimeter fence would be set back further from the existing trail along Chicken Ranch Slough, to provide space for vehicular access by the Park District for trail maintenance.

The visual appearance of the existing community garden would be improved, and an adjacent tot lot would be installed on the west side of the campus, south of the existing nature trail, on District-owned property. A sidewalk would be constructed on District property on the east side of Belport Lane to provide trail/garden/tot lot connectivity, also on the east side of Belport Lane on District-owned property, for use by the public.

Limited outdoor security lighting would be provided on the new school buildings. All nighttime lighting fixtures would be shielded and directed downward to prevent light spillover, consistent with current design practices. The outdoor playfields and the walking path would not be lighted at night.

All project-related facilities would be designed to meet the requirements of the Division of the State Architect (DSA) and would be constructed in accordance with current building codes.

The proposed Katherine Johnson Middle School (at the Creekside School campus) would include construction of approximately 60,114 square feet of school building space (as compared to the current 25,928 square feet of existing school buildings, which would be demolished). The proposed project would allow for an increase in the maximum student capacity. The existing capacity of Katherine Johnson Middle School, which is currently co-located with Encina High School, is 550 students. The proposed school's capacity would accommodate up to 650 students. Approximately 48 staff are projected for the new middle school.

The operations at the Creekside Adult Center would be moved to the Encina High School campus at 1400 Bell Street (approximately 1.5 miles southwest of the Creekside School campus). This would involve installation of three double-wide and six single-wide portables and a small portable restroom building; no permanent buildings would be constructed at the Encina campus. One of the double-wide portables would provide daycare services for the adult learners when classes are in session. As shown in Exhibit 2-3, the portable classrooms would be installed at the southwest corner of the Encina High School parking lot, east of Bell Street and west of the tennis courts and outdoor track. The new portable classrooms at the Encina High School campus would provide for a capacity of up to 30 adult education students per class (300 students total).

2.2.1 SUPPORTING INFRASTRUCTURE

STORMWATER DRAINAGE

The existing Creekside School campus includes a stormwater drainage system, which would be modified to serve the needs of the new middle school. Proposed improvements to serve the proposed Katherine Johnson Middle School may include an upgrade to the existing storm drainage system to increase pipe size from 18 to 36 inches, to be confirmed through further design work. The modified stormwater drainage system would be designed to protect local creeks (such as Chicken Ranch Slough) and rivers by reducing the discharge of pollutants found in stormwater resulting from redevelopment of this school site to the maximum extent practicable, and by mitigating increased flows from impervious surfaces that could cause erosion and degrade habitat. SJUSD would implement improvements to stormwater drainage that are designed to limit the volume of post-development flows to a level

that is no greater than existing conditions. Water quality protection and hydromodification reduction would be achieved using methodologies such as Low Impact Development (LID) techniques consistent with the Sacramento Region Stormwater Quality Design Manual (Sacramento Stormwater Quality Partnership 2021).

The Encina High School campus also has an existing stormwater drainage system. A new tie-in from the portable classrooms to the existing on-site drainage system would be provided. No off-site stormwater drainage improvements would be necessary.

WATER

The existing Creekside School campus is currently supplied with water for potable use, landscape irrigation, and fire protection by the Sacramento Suburban Water District. The on-site water supply system would be modified as necessary to serve the proposed Katherine Johnson Middle School.

The Encina High School campus is supplied with water by the California American Water Company. A new tie-in from the portable classrooms to the existing on-site water system would be provided. No off-site water improvements would be necessary.

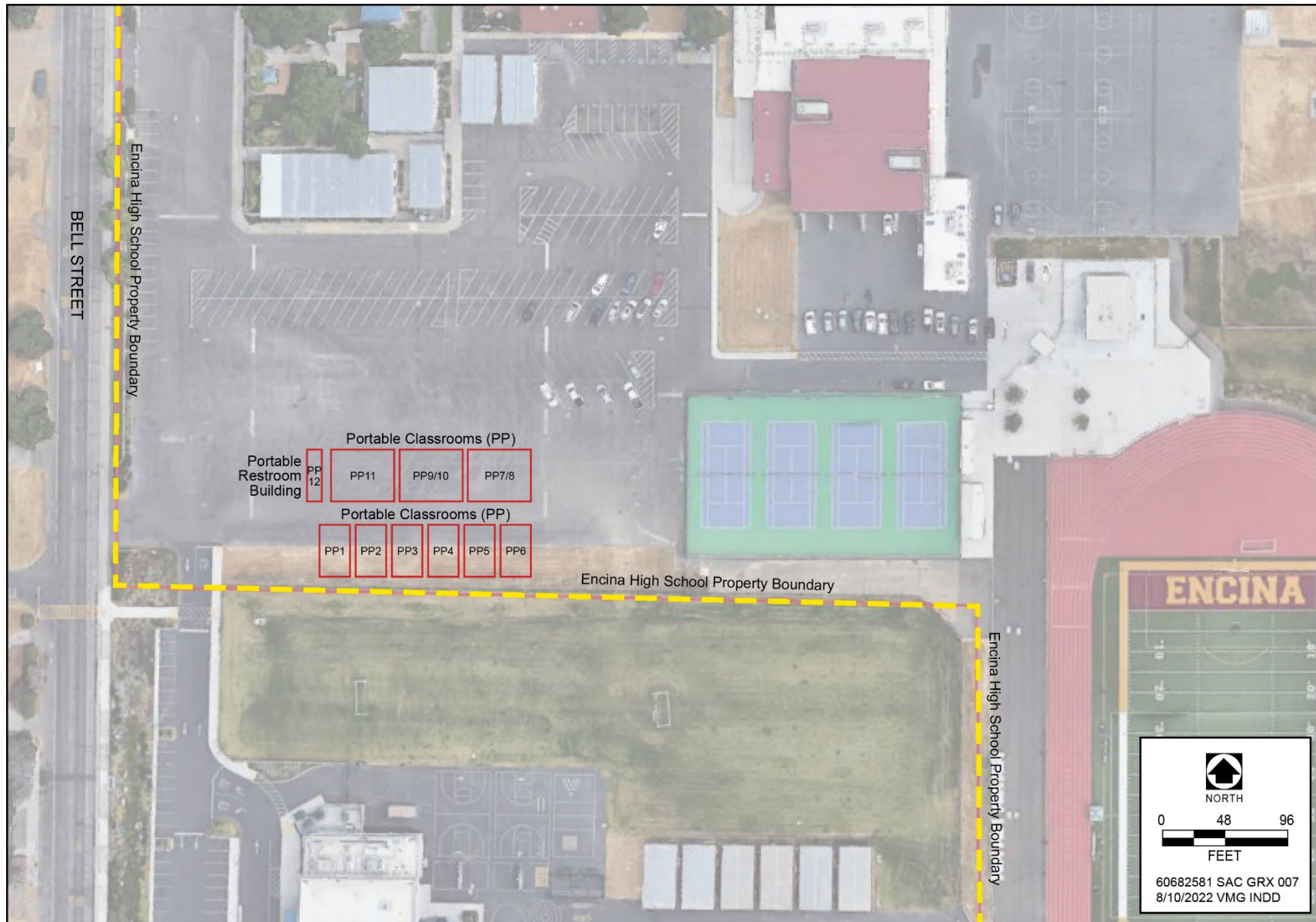
The Division of the State Architect, as part of California Green Building Standards Code (CALGreen), requires all schools to “self certify” new landscape subject to Outdoor Water Use regulations based on the Model Water Efficient Landscape Ordinance (MWELo). The intent is water savings and to promote use of drought tolerant planting and efficient irrigation, especially in areas that do not require turf for educational purposes.

WASTEWATER

Wastewater conveyance service from the existing Creekside and Encina High School campuses is currently provided by the Sacramento Area Sewer District (SASD). SASD’s conveyance facilities connect to the Sacramento Regional County Sanitation District’s (Regional San) larger conveyance facilities and the regional wastewater treatment plant near Elk Grove. The on-site wastewater conveyance system at the Creekside School campus would be modified as necessary to serve the new Katherine Johnson Middle School. At Encina High School, a new tie-in from the portable classrooms to the existing on-site wastewater conveyance system would be provided. No off-site wastewater improvements would be necessary to serve either of the school campuses.

ELECTRICITY

The existing Creekside and Encina High School campuses are currently provided with electricity by the Sacramento Municipal Utility District (SMUD). The on-site electrical system would be modified as necessary to serve the new Katherine Johnson Middle School. At Encina High School, a new tie-in from the portable classrooms to the existing on-site electrical system would be provided. No off-site electrical improvements would be necessary to serve either of the school campuses. Katherine Johnson Middle School will be an all-electric campus, and the District has no plan to provide natural gas service to the site as a part of the proposed project.



Sources: Data provided by Nacht & Lewis 2022, adapted by AECOM in 2022

Exhibit 2-3. Encina High School Portable Classrooms Conceptual Layout

2.2.2 TRANSPORTATION AND CIRCULATION

The proposed project involves changing the Creekside School project site access as compared to existing conditions, to better serve the new Katherine Johnson Middle School students and staff. A new student drop-off and pick-up area would be created as a 90-degree curve in the southeastern portion of the project site near the intersection of Kent Drive and Miramar Road (see Exhibit 2-2). A new interior drive aisle would extend to the west, with a new staff parking area along the project site's southern boundary. The northern portion of Kent Drive that currently extends past Miramar Road (approximately 100 feet) would be abandoned as a public roadway and ceded to the District; this would allow the District to move the existing locked security gate further to the south, to reduce ongoing issues with illegal public parking and loitering along this piece of roadway.

Emergency access would be similar to existing conditions, with a travel route for equipment northward from Kent Drive, eastward around the new multi-purpose building, westward around the back of the basketball courts and classroom buildings, and then southward around the science buildings to Belport Lane. Sidewalk, curb, and gutter work associated with the new drive aisle west of Miramar Road and the east side of Belport Lane would be conducted in accordance with Sacramento County Improvement Standards (Sacramento County 2018). New emergency access would be provided, as well, from the west from Belport Lane and Elvyra Way.

No changes related to transportation or circulation would be necessary for the proposed portable classrooms at the Encina High School.

2.3 DEMOLITION AND CONSTRUCTION

All construction equipment and vehicles would be staged on the existing school campuses.

Demolition and grading would occur on the southern portion of the Creekside School property as an initial stage of construction in order to accommodate an all-weather area for construction staging and parking for construction worker vehicles. Construction staging (including trailers, equipment, and materials) would not be located within the area mapped by the Federal Emergency Management Agency as Zone X, shaded (see Exhibit 3.7-1 in Section 3.7, "Hydrology and Water Quality" of this EIR). Project-related staging would be established in the southeastern portion of the project site near Kent Drive and Miramar Road. This location is as far as feasible from Chicken Ranch Slough, to protect water quality from accidental spills. Project-related demolition and construction is anticipated to take 20 months, starting in January of 2023.

At Encina High School, demolition of the existing asphalt pavement, trenching to accommodate new tie-ins to existing on-site underground utilities, and installation of the portable classrooms, would be located within the existing paved school parking lot. Construction for the portable classrooms part of the project starts in approximately October 2022 with completion in approximately December 2022 and occupancy in January 2023.

Construction activities at both school campuses would be limited to the less-sensitive daytime hours between 7 am and 8 pm, Monday through Friday. Occasional daytime construction work on Saturdays and Sundays may be necessary and if this occurs, construction would be limited to the hours between 7 am and 8 pm, consistent with Sacramento County's Noise Ordinance.

Construction equipment and activities at the Creekside School campus would primarily involve the use of Kent Drive to access El Camino Avenue. Demolition material could be removed using Belport Lane to El Camino

Avenue or Kent Drive to El Camino Avenue. Kent Drive would be the main access route for grading and concrete work. Construction equipment and vehicle access at the Encina High School campus would utilize Bell Street, from Arden Way.

The construction contractor would be responsible for erecting a chain-link fence with fabric screening or webbing around the construction area at both school campuses, to ensure that only authorized construction personnel and District representatives are allowed entry. In addition, warning signs indicating that the construction site poses a hazard to non-authorized personnel along with signs stating “No Admittance” would be posted on the fencing around the site.

Due to the age of the on-site structures at the Creekside School campus, abatement of hazardous materials including asbestos-containing materials, lead-based paint, electrical equipment containing polychlorinated biphenyls, and fluorescent tubes containing mercury vapors and lights may be necessary as part of the demolition activities. Construction worker health and safety regulations and hazardous materials removal and disposal protocols would be implemented in accordance with applicable federal and state standards, including the California Division of Occupational Safety and Health and the Sacramento Air Quality Management District (SAQMD) regulations (Rule 902, for example). The abatement contractor would be appropriately licensed and certified, and is required by law to comply with all local, state, and federal requirements regarding hazardous materials. Hazardous materials would be disposed of in an approved, off-site Class I or Class II landfill.

Demolition would be performed in a manner that maximizes salvage and recycling of materials. A minimum of 50 percent, by weight, of the solid waste generated would be diverted from landfill disposal through re-use and recycling as required by the most current version of the CALGreen code. Materials to be recycled or re-used would be stored onsite in non-combustible containers. All demolition materials, waste, and debris that are not designated to be salvaged would become the project contractor’s property and would be removed and disposed of in compliance with all local, state, and federal regulations.

Prior to the start of construction activities at the Creekside School campus, all on-site trees to be retained would be flagged with exclusionary fencing around the dripline. Exclusionary fencing would also be erected along the northern site perimeter to maintain an appropriate setback from the bed and bank of Chicken Ranch Slough. No trees would be removed at the Encina High School campus to accommodate the relocation of Creekside Adult Center activities to the proposed portable classrooms.

2.4 PROJECT APPROVALS AND INTENDED USES OF THE EIR

The requirements of CEQA, which are defined in Public Resources Code sections 21000 et seq., charges lead agencies with the responsibility to consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. This EIR has been prepared to satisfy CEQA and the CEQA Guidelines, Title 14 of the California Code of Regulations, Chapter 3, Section 15000 et seq.

An EIR is a public informational document designed to provide decision makers and the public with an analysis of the environmental effects of a proposed project, to indicate possible ways to reduce or avoid significant effects, and to describe reasonable alternatives to a project. An EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts associated with past, present, and reasonably foreseeable probable future projects.

Approval of the proposed project requires discretionary action by SJUSD. As the CEQA lead agency, SJUSD has the responsibility for, among other things, preparing and certifying an EIR that analyzes the potential environmental impacts of the proposed project; identifying feasible mitigation measures that could avoid or minimize significant environmental impacts; describing and analyzing feasible alternatives; adopting findings with regard each significant effect; providing a Statement of Overriding Considerations for all environmental impacts that cannot be mitigated to a less-than-significant level; and adopting a Mitigation Monitoring and Reporting Program to ensure that all required mitigation measures are implemented.

The proposed project would be reviewed by the Office of Public School Construction of the California Department of General Services, DSA, and by the California Department of Education (CDE). The CDE is responsible for approving the proposed site of any public school in California (Education Code Section 17213) to ensure that the location meets certain specific standards for public health and safety.

Approvals required for the proposed project may include, but are not necessarily limited to:

- ▶ California Department of Education/Division of State Architect—final school site and design approval (per California Education Code Section 17213).
- ▶ Central Valley Regional Water Quality Control Board—Clean Water Act Section 402 National Pollutant Discharge Elimination System, Stormwater General Permit.
- ▶ Sacramento Metropolitan Fire District—site plan review for emergency access and water availability.
- ▶ Sacramento Metropolitan Air Quality Management District—Authority to Construct, permit to operate.
- ▶ Sacramento Suburban Water District—domestic water supply and fire flow at the proposed new location for the Katherine Johnson Middle School (also known as the Creekside School site).
- ▶ California American Water Company—domestic water supply and fire flow at the Encina High School portable classroom site.
- ▶ Sacramento Area Sewer District—sewer connections and conveyance.
- ▶ Sacramento County—storm drain connection and stormwater runoff treatment, approval of a grading permit, approval of encroachment permit for changes to site access.

Other local, State, or federal approvals or permits may be necessary, pursuant to applicable laws and regulations.

2.5 PROJECT OBJECTIVES

SJUSD has identified the following Project Objectives to guide planning for the project site, as well as the analysis included within the EIR:

- ▶ Implement SJUSD educational facility requirements in a manner that provides a learning environment that meets the needs of today's student body.

- ▶ Provide for the educational needs of up to approximately 650 middle school (grades 6–8) students and approximately 300 adult education students within the Arden-Arcade area.
- ▶ Meet SJUSD geographical needs for school facilities within its service boundary and the surrounding community, based on the District’s demographic studies.
- ▶ Provide school capacity in a central location relative to the anticipated student body to facilitate and promote walking and bicycling to school.
- ▶ Provide safe and efficient school site access for students and SJUSD staff.

The location and capacity for the Katherine Johnson Middle School is related to the District’s medium- and long-term demographics forecasting and facilities master planning. In particular, the District is focused on creating a better match in the western portion of the District service area between middle school capacities and student generation.

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3 ENVIRONMENTAL IMPACT ANALYSIS

3.0 APPROACH TO THE ANALYSIS

3.0.1 INTRODUCTION

Consistent with the CEQA Guidelines Section 15126.2, Chapter 3 of this EIR is focused on an evaluation of topic areas where significant impacts on the physical environment associated with the proposed Katherine Johnson Middle School project may occur, and identifies feasible mitigation for those impacts, where necessary. These topics areas consist of the following: aesthetics and recreation, air quality, biological resources, cultural and tribal cultural resources, geology and paleontology, greenhouse gas emissions, hydrology and water quality, noise and vibration, and transportation.¹

The following discussion addresses the affected environment, regulatory background, environmental consequences, and mitigation measures for each of the environmental issue areas in Chapter 3; and explains the terminology used in the analysis in Chapters 3 and 4. The reader is referred to the individual topic area sections regarding specific assumptions, methodology, and significance criteria (thresholds of significance) used in the analysis and determination of significance of impacts.

3.0.2 FORMAT AND CONTENT

Topic area analyses in Sections 3.1 through 3.10 are organized in the following format:

1. The **Environmental Setting** subsection provides an overview of the current (2022) baseline physical environmental conditions (i.e., the environmental baseline), in accordance with the CEQA Guidelines (14 CCR Section 15125[a][1]).
2. The **Regulatory Framework** subsection identifies the plans, policies, laws, regulations, and ordinances that are relevant to each topical section based on current (2022) conditions.
3. The **Environmental Impacts and Mitigation Measures** subsection identifies the adverse physical environmental impacts of the proposed redevelopment of the existing school campus in accordance with the CEQA Guidelines (CCR Sections 15125 and 15143). This subsection is organized as follows:
 - The **Thresholds of Significance** provide criteria established by SJUSD to define at what level an impact would be considered significant in accordance with CEQA. Thresholds may be quantitative or qualitative; they may be based on examples found in CEQA regulations or the CEQA Guidelines; scientific and factual data relative to SJUSD's jurisdiction; legislative or regulatory performance standards of federal, state, regional, or local agencies relevant to the impact analysis; or other factors. Generally, however, the thresholds of significance used are derived from Appendix G of the CEQA Guidelines, as amended;

¹ Chapter 4 of this EIR contains brief discussion, at a lesser level of detail, of topic areas where impacts on the physical environment from implementing the proposed project are clearly less than significant or no impact would occur. The following topic areas are discussed in Chapter 4: agriculture and forestry resources, energy, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, utilities and service systems, and wildfire.

factual or scientific information and data; and applicable regulatory standards of federal, state, regional, and local agencies.

- The **Impact Analysis** describes potential adverse physical environmental effects associated with implementation of the proposed redevelopment of the existing school campus. The Impact Analysis specifies why impacts are found to be significant and unavoidable, significant or potentially significant, or less than significant, or why there is no environmental impact, based on the identified thresholds of significance. The impacts are listed numerically and sequentially throughout each section.
- **Mitigation Measures** to avoid, minimize, rectify, reduce, or compensate for significant and potentially significant impacts of the proposed project, in accordance with the CEQA Guidelines (14 CCR Sections 15370, 15002[a][3], 15021[a][2], and 15091[a][1]), where feasible, are recommended for each significant and potentially significant impact. If implementation of feasible mitigation measures is not sufficient to reduce an impact to a “less-than-significant” level, or no feasible mitigation measures are available, the impacts are described as “significant and unavoidable.”

3.0.3 TERMINOLOGY USED TO DESCRIBE IMPACTS

IMPACT LEVELS

This EIR uses the following terminology to denote the significance of each identified environmental impact in Chapters 3 and 4.

- ▶ **No impact** indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.
- ▶ A **less-than-significant impact** is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.
- ▶ A **significant impact** is defined by CEQA Section 21068 as one that would cause “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.” Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the proposed project must be provided, where feasible, to reduce the magnitude of significant impacts.
- ▶ A **potentially significant impact** is one that, if it were to occur, would be considered a significant impact as described above before the application of mitigation. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- ▶ A **significant and unavoidable impact** is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less-than-significant level even with any feasible mitigation. Under CEQA, a project with significant and unavoidable impacts may proceed, but the lead agency is required to prepare a “statement of overriding considerations” in accordance with CEQA Guidelines Section 15093, explaining why specific economic, legal, social, technological, or other benefits,

including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects.

- ▶ A **beneficial impact** is an impact that is considered to cause a positive change or improvement in the environment and for which no mitigation measures are required.
- ▶ An impact may have a level of significance that is too uncertain to be reasonably determined, which would be designated **too speculative for meaningful evaluation**, in accordance with CEQA Guidelines Section 15145. Where some degree of evidence points to the reasonable potential for a significant effect, the EIR may explain that a determination of significance is uncertain, but is still assumed to be “potentially significant,” as described above. In other circumstances, after thorough investigation, the determination of significance may still be too speculative to be meaningful. This is an effect for which the degree of significance cannot be determined for specific reasons, such as because aspects of the impact itself are either unpredictable or the severity of consequences cannot be known at this time.

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3.1 AESTHETICS AND RECREATION

3.1.1 ENVIRONMENTAL SETTING

AESTHETICS

Introduction

Aesthetics or visual resources impacts are generally defined in terms of a project's physical characteristics and potential visibility, and the extent to which the presence of a proposed project would change the perceived visual character and quality of the physical environment in which it would be located. Both natural and created features in a landscape contribute to its visual character. Landscape characteristics influencing visual character include geologic, hydrologic, botanical, wildlife, recreation, and urban features.

Existing Visual Character

The proposed Katherine Johnson Middle School project site consists of approximately 9.75 acres of flat land in the urbanized Arden-Arcade area. The site was developed as the Creekside Elementary School in 1953, with several subsequent updates and modernizations. School buildings and paved parking stalls are present in the southern portion of the project site, while the northern portion of the site consists of open turf playfields for the children at the school campus (i.e., baseball and soccer). Chicken Ranch Slough and the associated Creekside Nature Trail, administered by the Fulton-El Camino Recreation and Park District, are located along the project site's northern boundary, and run through a small part of the project site in the north. A community garden is present on the southwest side of the project site.

The proposed Katherine Johnson Middle School project site currently includes old school buildings in square blocks, which are lacking in architectural details or interest. The buildings span nearly a 70-year period, and although they have been upgraded at various times to meet code requirements, the campus does not present a unified architectural style. The existing buildings were constructed in the California finger style, which followed the post-war 1950s design aesthetic of one-story buildings with flat roofs, and finger-like classroom corridors that isolated individual classrooms from other campus learning centers. Buildings range from one to two stories tall and are generally painted white. The campus is surrounded by chain link fencing, with a locked gate at the north end of Kent Drive. Older landscaping, including scattered urban street trees, shrubs, and turf grass, is present around the school buildings. Asphalt pavement and poles holding basketball backstops are present on the east side of the campus. Exhibit 3.1-1 through Exhibit 3.1-9 illustrate the existing visual character of the facilities at the existing Creekside School campus (i.e., the proposed Katherine Johnson Middle School project site).

The surrounding viewshed consists of paved local two-lane streets with signage, overhead electrical lines and wood power poles, single-family and multi-family residences with landscaping and fencing, and tall trees along the banks of Chicken Ranch Slough to the north.



Source: Google Earth 2021

Exhibit 3.1-1. View of the existing Creekside School (proposed Katherine Johnson Middle School project site) multi-purpose building, entry, administration building, staff parking, and classroom building, from the intersection of Kent Drive and Miramar Road, looking northwest.



Source: AECOM 2022

Exhibit 3.1-2. View of the existing Creekside School entrance and administration building, looking southwest.



Source: AECOM 2022

Exhibit 3.1-3. View of the existing Creekside School interior courtyard between classroom buildings, looking east.



Source: AECOM 2022

Exhibit 3.1-4. View of the existing Creekside School classroom building, looking southeast.



Source: AECOM 2022

Exhibit 3.1-5. View of the existing Creekside School former classroom building, looking southwest.



Source: AECOM 2022

Exhibit 3.1-6. View of the existing Creekside School classroom buildings and outdoor paved play area, looking west.



Source: AECOM 2022

Exhibit 3.1-7. View of the existing Creekside School classroom building, outdoor turf playfields, and school campus perimeter fence, looking west. Large trees associated with Chicken Ranch Slough are visible in the background.



Source: AECOM 2022

Exhibit 3.1-8. View of the existing Creekside School former hardcourt play area, outdoor turf playfields, and school campus perimeter fence, looking northeast. Large trees associated with Chicken Ranch Slough are visible in the background to the north (on the left side of the photo).



Source: Google Earth 2021

Exhibit 3.1-9. View of campus fencing, community garden, and existing Creekside School classroom buildings and turf playfields, from Bellport Lane, looking east. Large trees associated with Chicken Ranch Slough are visible in the background (on the left side of the photo).

The proposed portable classrooms at Encina High School would be installed in an approximately 0.3-acre area in the southwest corner of the Encina High School parking lot. This site is comprised primarily of black, asphalt pavement with marked parking stalls, and a small strip of grass (see Exhibit 3.1-10). The parking lot contains existing high-mast lighting for parking related to nighttime sporting events. The portable classroom site is surrounded by Encina High School Buildings to the north and the Encina High School outdoor track to the east, by the Greer Elementary School to the south, and by Bell Street and multi-family residential development to the west.



Source: Google Earth 2021

Exhibit 3.1-10. View of Encina High School parking lot and light standards, classroom buildings, and fencing; and playfields and buildings to the south on the adjacent Greer Elementary School campus.

RECREATION

Local Recreational Opportunities

SJUSD hosts a local community garden on District-owned property, on the southwest side of the proposed Katherine Johnson Middle School project site (see Exhibit 3.1-9).

A portion of the approximately 1.5-acre Creekside Nature Area, administered by the Fulton-El Camino Recreation and Park District (Park District), is adjacent to the proposed Katherine Johnson Middle School project site's northern boundary (Fulton-El Camino Recreation and Park District 2022a). The Park District is responsible for administration of an approximately 0.5-mile-long nature trail, which runs along the south side of Chicken Ranch Slough (see Exhibit 3.1-7 through Exhibit 3.1-9). A portion of the existing nature trail and Chicken Ranch Slough cross through the project site's northern boundary. Currently the nature trail is "land-locked," which means there is no public access except for a pathway and a pedestrian bridge that cross over the slough from the housing development to the north (from Lacy Lane). Public parking along Lacy Lane is prohibited. The trail has also been accessed, informally, by public parking in the existing Creekside School parking lot on the weekends, and then walking across the campus to the trail. The trail consists of a dirt path, and does not include a pathway large enough for Park District maintenance vehicles. Because trail access is difficult, this also impedes Park District management of the trail, and at least one homeless encampment along the trail was noted during a site visit performed in June 2022.

It should be noted that both Google Maps and Google Earth incorrectly identify the turf playfields in the northern portion of the existing Creekside School (proposed Katherine Johnson Middle School project site) as "Creekside Park." Creekside Park does not exist as a public park, public open space, or public recreation area. The entire project site is owned by the District, and the northern turf playfields are, and have been since originally developed, part of the existing Creekside School (proposed Katherine Johnson Middle School) campus. The turf playfields are inside the District's existing school campus perimeter fence, and would continue to be inside the perimeter fence as part of the proposed project. Although the District does not have a joint-use agreement with any local park district for public use of the playfields, the playfields are used informally by the public on the weekends when school sporting events are not occurring.

The Park District administers several other nearby parks and recreational facilities in the vicinity of the proposed Katherine Johnson Middle School project site (Fulton-El Camino Recreation and Park District 2022b). The Cottage Pool and the Cottage Children's Center are located in Cottage Park at 3907 Cottage Way, approximately 0.5 mile south of the project site. The Park District's 4,500-square-foot public swimming pool hosts a public swim team and provides public swimming lessons. The adjacent Cottage Children's Center hosts before and after school programs, a pre-school, and summer camps. The 5.2-acre Seely Park (located approximately 0.6 mile north of the project site) includes a playground, walking path, basketball court, picnic tables and barbecues, restrooms, water splash park, and off-street parking. The 8.2-acre Bohemian Neighborhood Park (approximately 0.8-mile northwest of the project site) includes a gazebo, playground, tennis courts, basketball courts, picnic tables and barbecues, and play area. The 7.7-acre Santa Anita Park (approximately 0.9 mile southwest of the project site) includes a disc golf course, picnic tables, and a portion of Chicken Ranch Slough.

Regional Recreational Opportunities

The 624-acre Del Paso Regional Park is approximately 1.25 miles north of the proposed Katherine Johnson Middle School project site and approximately 2.5 miles north of the proposed Encina High School portable classroom site. The Del Paso Regional Park includes outdoor lighted sports fields (baseball and softball), a museum, equestrian trails, natural habitat areas with interpretive trails, picnic areas, and the Haggen Oaks Golf Complex (City of Sacramento 2022). Haggen Oaks includes two public 18-hole golf courses, a driving range, and instructional programs for children and adults. Del Paso Regional Park is administered by the City of Sacramento.

The American River Parkway (Parkway) is approximately 2.5 miles southwest of the proposed Katherine Johnson Middle School project site and approximately 0.8 mile southwest of the proposed Encina High School portable classroom site. The Parkway is a river corridor/open space greenbelt that extends along the lower American River from Nimbus Dam to the confluence with the Sacramento River. There are several distinct areas of the Parkway, each having individual features which contribute to their separate identities. The Parkway's trail system, which has been designated a "National Recreation Trail," includes the 32-mile-long multi-use (pedestrian, equestrian, and bicycle) Jedediah Smith Memorial Trail, which parallels the lower American River from Folsom to downtown Sacramento. The Parkway (from Hazel Avenue to the confluence with the Sacramento River) is managed by Sacramento County Department of Parks and Recreation, as guided by the American River Parkway Plan (Sacramento County 2008).

3.1.2 REGULATORY FRAMEWORK

A summary of the regulatory framework follows. Though the plans, policies, and regulations below do not apply to the proposed project, this information is provided for the reader's edification and context to help with the understanding of the impact analysis.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

In 1981, the lower American River, from Nimbus Dam to the confluence with the Sacramento River (approximately 23 miles), was designated a National Wild and Scenic River (U.S. Fish & Wildlife Service 2022). The river is designated as "Recreational." This stretch of river flows east-west through the Sacramento region and is the most heavily used Wild and Scenic River in California. In addition to boating and swimming, the river also includes fishing opportunities for salmon and steelhead. As noted above, the lower American River is approximately 2.5 miles southwest of the proposed Katherine Johnson Middle School project site and approximately 0.8 mile southwest of the proposed Encina High School portable classroom site (at the nearest point).

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

In 1972, the lower American River from Nimbus Dam to the confluence with the Sacramento River was designated as a California Wild and Scenic River. The river is designated as "Recreational" (California Public Resources Code Section 5093.545[h]).

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Sacramento County General Plan

The *Sacramento County General Plan of 2005–2030* (Sacramento County 2017) includes the following policies related to aesthetics and recreational resources, which are provided for context.

Land Use Element

- ▶ **Policy LU-18:** Encourage development that complements the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.
- ▶ **Policy LU-27:** Provide safe, interesting and convenient environments for pedestrians and bicyclists, including inviting and adequately-lit streetscapes, networks of trails, paths and parks and open spaces located near residences, to encourage regular exercise and reduce vehicular emissions.
- ▶ **Policy LU-31:** Strive to achieve a natural nighttime environment and an uncompromised public view of the night sky by reducing light pollution.
- ▶ **Policy LU-102:** Ensure that the structural design, aesthetics and site layout of new developments is compatible and interconnected with existing development.

Conservation Element

- ▶ **Policy CO-25:** Support the preservation, restoration, and creation of riparian corridors, wetlands and buffer zones.
- ▶ **Policy CO-26:** Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.

Open Space Element

- ▶ **Policy OS-1:** Actively plan to protect, as open space, areas of natural resource value, which may include but are not limited to wetlands preserves, riparian corridors, woodlands, and floodplains associated with riparian drainages.
- ▶ **Policy OS-11:** Establish trail connections and linkages within the County and across jurisdictional boundaries that are compatible with existing land uses. These trail connections shall have the capability of being Class I trails (off-street, separated facilities) with grade separations wherever feasible.

Circulation Element

- ▶ **Policy CI-65:** Incorporate Low Impact Design (LID) techniques to the greatest extent feasible to improve water quality runoff and erosion control, infiltration, groundwater recharge, visual aesthetics, etc. LID techniques may include but are not limited to:
 - Bioretention techniques, such as filtration strips, swales, and tree box filters;
 - Permeable hardscape;
 - Green roofs;

- Erosion and sediment controls;
- Reduced street and lane widths where appropriate.

Sacramento Countywide Design Guidelines

The *Sacramento Countywide Design Guidelines* (Sacramento County 2018) were adopted to promote high quality, sustainable, and healthy community design. The Design Guidelines, in conjunction with the County's Design Review Program, are intended to: achieve high standards for the quality of the built environment, advance sustainable development, and provide business and user-friendly practices. As with the County General Plan, the County Design Guidelines (and County Design Review Program) do not directly apply to the proposed project, but are summarized below for context.

- ▶ The interface of office, business park, institutional, and industrial developments with other types of uses, particularly residential, should be planned carefully. The transition in scale, use, visual privacy, noise, odors, operational hours, and traffic flow should respect the needs and livability of adjacent neighborhoods.
- ▶ Architectural materials should convey an image of high quality and durability. Preferable facade materials include plaster, articulated pre-cast concrete panels, certain metals, such as steel and aluminum, natural stone, and masonry (e.g., brick, tile, and glass block). Curtain wall systems with large continuous surfaces are discouraged...
- ▶ Mature trees, rock outcrops, creeks, and other desirable natural site features shall be preserved and incorporated into the landscape plan to the greatest extent possible. Building placement and configuration shall protect any heritage and landmark trees.
- ▶ Projects located adjacent to open space, creeks, and wetlands should integrate these natural features into the project design. Views and the location of outdoor patios, plazas, or eating areas should be considered in the context of the site's natural features. The project landscape theme and plantings should be coordinated and consistent with adjoining natural areas. If an existing or proposed trail exists, coordinate a connection and easement from the project to the trail. A vegetative buffer should be preserved or created to treat off-site runoff before it reaches the natural area.
- ▶ Window glass should be lightly tinted or clear. Reflective and very deeply tinted glass is discouraged. Windows should be oriented or shaded to minimize heat transfer from summer sun. Provide natural lighting features where possible.
- ▶ Reflective materials, such as mirrored glass and unpainted steel siding or roofs, are discouraged.
- ▶ Every project should have an overall lighting plan for pedestrian pathways, architectural lighting, lobbies and entryways, parking lots, and service areas.

The Design Guidelines encourage lighting plans for each site-specific development, addressing pedestrian pathways, architectural lighting, lobbies and entryways, parking lots, and service areas. Lighting design guidelines for institutional development (Sacramento County 2018) include the following:

- ▶ Lighting should enhance the architectural and site design concepts while being energy efficient.

- ▶ Architectural lighting is encouraged.
- ▶ Spillover lighting that is visible from outside the site should be avoided by orienting fixtures downward or shielding light.
- ▶ Energy efficient lighting shall be at levels that provide public safety and meet or exceed Zoning Code standards.
- ▶ Low, pedestrian-scaled fixtures are encouraged to help identify and light pedestrian routes.
- ▶ Lighting in service areas should be the minimum required for operation, and should be designed to minimize the visibility to those areas, while providing for a safe environment. Motion controlled lighting is recommended.
- ▶ Lighting should be light-emitting diode (LED) lights or other acceptable high energy efficiency light, with automatic controls to dim lights after certain hours or when no one is present. Lighting shall be adequate to provide for a safe environment.

3.1.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to aesthetics or recreation if it would:

- ▶ have a substantial adverse effect on a scenic vista;
- ▶ substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway;
- ▶ except as provided in Public Resources Code Section 21099, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality;
- ▶ create a new source of substantial light or glare that would adversely affect day or nighttime views in the area;
- ▶ increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- ▶ include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

ANALYSIS METHODOLOGY

The aesthetic value of an area is a measure of the variety and contrast of the area's visual features, the character and quality of those features, and the scope and scale of the scene, combined with the anticipated viewer response. The analysis of visual resources for this project uses a qualitative approach for characterizing and evaluating the

visual resources of the areas that could be affected by the project. Identification of the project's aesthetics effects were based on the three steps listed below.

1. An objective inventory of the visual features or visual resources that comprise the landscape.
2. An assessment of the character and quality of the visual resources in the context of the overall character of the regional visual landscape.
3. A determination of the importance to viewers (i.e., sensitivity of the viewers) and the potential viewer response, to the identified visual resources in the landscape.

Visual character and quality were evaluated based on the criteria developed by the Federal Highway Administration (FHA 1988) and the U.S. Forest Service (USFS 1995), which include the key concepts of vividness, intactness, and unity. According to these criteria, none of these is itself equivalent to visual quality; all three must be considered high to indicate high quality visual resources. These terms are defined below.

- ▶ “Vividness” is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- ▶ “Intactness” is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements.
- ▶ “Unity” is the visual coherence and compositional harmony of the landscape considered as a whole.

Viewer sensitivity depends on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also affected by viewer activity, awareness, and expectations in combination with the number of viewers and the duration of the view. The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Landscape elements are considered higher or lower in visual importance based on their proximity to the viewer. Generally, the closer a resource is to the viewer, the more dominant, and therefore visually important, it is to the viewer.

The above factors were considered in combination with the proposed project elements, and the type and duration of anticipated construction activities.

ISSUES NOT EVALUATED FURTHER IN THIS DEIR

Substantial Adverse Effects on a Scenic Vista—Scenic vistas consist of outstanding examples of the natural environment, or the built environment considering the surrounding context and setting. Scenic vistas exhibit the highest degree of vividness, intactness, and unity, and consist of outstanding examples that are often regarded as “the best of its kind.” There are no scenic vistas at either school campus or in the project vicinity. Thus, there would be no impact from substantial adverse effects on scenic vistas, and this issue is not addressed further in this EIR.

Damage to Scenic Resources within a State- or Locally-Designated Scenic Highway—There are no state- or locally-designated scenic highways in the vicinity of either school campus. Garden Highway, the closest locally designated scenic highway, is approximately 4.5 miles to the southwest (Sacramento County 2017). State Route 160, the closest state-designated scenic highway, is approximately 11.5 miles to the southwest (California

Department of Transportation 2022). Thus, there would be no impact from damage to scenic resources within a scenic highway, and this issue is not addressed further in this EIR.

IMPACT ANALYSIS

IMPACT 3.1-1 Substantially Degrade the Existing Visual Character or Quality of the Project Site, or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality. *The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site have been developed and operated as a school since 1953 and 1959, respectively. Redevelopment of the proposed Katherine Johnson Middle School site with a new, more modern school would improve the visual character and quality of the site, and would not conflict with applicable zoning or other regulations governing scenic quality. The proposed portable classrooms would be installed in an existing asphalt parking lot. This impact is considered less than significant.*

The proposed Katherine Johnson Middle School project site is composed of school buildings that were originally constructed in 1953, with subsequent additions and modernizations. Some of the buildings are in a state of disrepair, and there is no unified architectural style. Similarly, the outdoor turf playfields and hardcourt play areas are not being maintained since they are currently not actively used (the project site is currently used as an adult education school). Overall, the proposed Katherine Johnson Middle School project site presents a low degree of intactness, vividness, and unity (see Exhibit 3.1-1 through Exhibit 3.1-9); therefore, the overall visual character of the project site is considered low.

The proposed Katherine Johnson Middle School project site is surrounded by residential land uses and a daycare facility. A public recreational trail is present around the site's northern boundary, and a community garden is present in the southwestern corner of the project site; furthermore, the project site is visible to motorists from several public roadways. Therefore, the viewer sensitivity is considered high.

As shown in the conceptual site plan (Exhibit 2-2 in Chapter 2, "Project Description"), all of the existing buildings on the proposed Katherine Johnson Middle School campus would be demolished as part of the proposed project. New school buildings on the campus would be connected to new outdoor learning spaces, outdoor eating areas, and an outdoor amphitheater. The new buildings throughout the campus would be constructed with modern exterior architectural coatings, modern roof styles, new energy efficient windows and security light fixtures, and modern door styles. The existing turf playfield in the northern part of the project site would be retained and refurbished, and new paved hardcourt playfields would be installed. The existing chain link fencing around the campus perimeter would be replaced. The existing community garden on District-owned property in the southwest portion of the project site would be visually integrated into the campus site plan, and a new modern public tot lot play area would visually complement the redesigned school play areas. Landscaping along the new sidewalk on the east side of Belport Avenue would improve the visual appearance of the new connectivity with the existing Creekside Nature Trail to the north. The new staff parking area in the southern portion of the project site would include landscaped planter boxes with trees and shrubs. New landscaping throughout the campus, particularly around the new buildings, would enhance the visual appearance of the project site when compared to existing conditions.

The proposed portable classrooms at the Encina High School campus would be new buildings that are constructed and installed in accordance with CDE and DSA standards, and would be installed in an asphalt parking lot; therefore, the buildings would not substantially detract from the existing visual character (see Exhibit 3.1-10).

Both school campuses are zoned for residential development (Sacramento County 2022), and schools are a primary, permitted use in residential areas under the Sacramento County Zoning Code Chapter 3, Section 3.2.5 (Sacramento County 2021). The County Zoning Code does not include design guidelines related to schools, other than signage requirements (Section 5.10.1.M). Neither the Sacramento County General Plan (Sacramento County 2017) nor the Sacramento County Design Guidelines (Sacramento County 2018) contain standards or guidelines that are specific to school design; rather, they contain general guidelines that would apply to a variety of projects. These policies and guidelines are related to topics such as new development that complements the aesthetic style and character of nearby existing development, land use connectivity including walkable communities, high-quality architectural design, incorporation of natural features such as trees and rock outcroppings into site-specific design, the use of anti-reflective exterior coatings, and the need for shielding of nighttime lighting to reduce light pollution (see Impact 3.1-2 for specifics related to nighttime lighting and glare). Although the District is not subject to the County General Plan policies or the County Design Guidelines, the redeveloped and modernized school campus would generally be consistent with these types of County General Plan policies and the County's Design Guidelines, because these policies and guidelines include basic design principles that form the foundation of both functional and aesthetically pleasing architectural design and land use planning. The project is designed to avoid adverse effects to the natural features north of the project site along Chicken Ranch Slough, and a buffer is provided from the slough. The project is designed to enhance pedestrian connectivity in the vicinity of the project site by improving the connection between Belport Lane and the trail north of the project site administered by the Park District. Although the District is not subject to local General Plan requirements, including the Sacramento County Design Guidelines, the proposed Katherine Johnson Middle School is designed to serve the public school needs of the community, and the District would consider the existing neighborhood characteristics in the new school design. The proposed project is required to conform to all functional (CDE) and architectural (DSA) requirements, which are specific to schools. Because the entire proposed Katherine Johnson Middle School campus would be completely modernized and redesigned, the visual character and quality of the project site would be substantially improved as compared to existing conditions, as viewed by recreationists using the Creekside Nature Trail to the north, local residents using the community garden, motorists on local roadways, and the surrounding residences. Therefore, this impact is considered **less than significant (beneficial)**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.1-2 **Potential for Substantially Increased Light, Glare, or Skyglow Effects.** *The proposed project would require an increase in nighttime lighting of new school facilities for security purposes near sensitive receptors, which could cause increased light, glare, and skyglow effects. This impact would be **potentially significant**.*

Because the proposed Katherine Johnson Middle School project site and the Encina High School are already fully developed as school campuses, nighttime lighting for security purposes is already present. In addition, both schools are located in the urbanized Arden-Arcade area, which is fully developed with residential, commercial, and office uses that require nighttime security lighting. Therefore, the school campuses are not located in a “dark sky” area. Redevelopment at the proposed Katherine Johnson Middle School project site with a new, more

modern school would include minor sources of nighttime lighting for security purposes associated with the buildings and facilities, access road, parking lots, and entryways. However, the outdoor sports fields would not have lighting for nighttime use.

The addition of the new portable classrooms at the Encina High School campus would only require a few small outdoor lights for nighttime security in a 0.3-acre paved parking area surrounded by a roadway and school uses. The nighttime security lights would be mounted on the buildings, and would be shielded and directed downward. Therefore, the new portable classrooms at Encina would not substantially increase light or glare, and would result in a **less-than-significant** impact.

Since there is an existing school, and since the relocation of Katherine Johnson Middle School campus would involve only a marginal increase in the area affected and additional building square footage, the proposed project would result in a minor increase in the amount of nighttime lighting as compared to existing conditions. The increase in nighttime security lighting as compared to existing conditions would not be substantial. Nevertheless, without a lighting plan, nighttime security lighting could result in light spillover onto adjacent properties, and could result in nighttime glare and skyglow effects. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 3.1-2: Prepare and Implement a Lighting Plan and Avoid Glare.

To reduce impacts associated with light and glare, SJUSD shall prepare and implement a lighting plan for redevelopment of the proposed Katherine Johnson Middle School campus that includes the following elements:

- ▶ Shield or screen outdoor lighting fixtures to direct the light downward and prevent light spill on adjacent properties.
- ▶ Place and shield or screen flood and area lighting needed for security so as not to disturb adjacent residential areas and passing motorists.
- ▶ Light fixtures that are of unusually high intensity or brightness (e.g., harsh mercury vapor, low-pressure sodium, or fluorescent bulbs) or that blink or flash, shall not be used. LED lighting shall be used where feasible.
- ▶ Motion-controlled exterior nighttime lighting, rather than lighting that is always on, shall be used.
- ▶ Use appropriate building materials (such as low-glare glass, low-glare building glaze or finish, neutral, earth-toned colored paint and roofing materials), shielded or screened lighting, and appropriately shielded lighting for signage, to prevent light and glare from adversely affecting adjacent housing and motorists on nearby roadways.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-2 would reduce potentially significant impacts from nighttime lighting, glare, and skyglow effects at the proposed Katherine Johnson Middle School project site to a **less-than-significant** level because a lighting plan with measures specifically designed to reduce light spillover, glare, and skyglow effects would be prepared and implemented by SJUSD.

IMPACT **Increased Use of Existing Recreational Facilities Resulting in Substantial Physical Deterioration.**
3.1-3 *Recreationists using the Creekside Nature Trail may be affected by short-term, temporary construction-related noise and dust, and the visual presence of construction equipment and personnel. However, the trail is lightly used, and therefore the short-term and temporary use of other local and regional recreational facilities during project construction would not result in substantial physical deterioration. As a result of project-related improvements, long-term use of the Creekside Natural Trail may increase; however, this would represent a public benefit, and the Park District receives funding that is used for park facility maintenance and upkeep. Therefore, this impact is considered **less than significant**.*

The existing Creekside Natural Trail would continue to be available for use by the public during redevelopment of the adjacent proposed Katherine Johnson Middle School. Short-term temporary adverse effects experienced by recreationists on the trail would include increased noise and dust, and the visual presence of personnel and equipment, during the demolition and construction process at the project site. Although some recreationists may choose to use other facilities during this period, the trail is lightly used due to the current lack of public access. Therefore, the short-term and temporary use of other local and regional recreational facilities during the project's construction phase would not result in substantial physical deterioration of those facilities.

The existing turf playfields in the northern portion of the proposed Katherine Johnson Middle School project site are part of the existing SJUSD-owned Creekside School campus—not part of a park. The District does not have a joint-use agreement with any local park district for public use of the playfields. However, at the conclusion of project-related demolition and construction activities, the playfields may continue to be used informally by the public on the weekends, as they are now, when school-related sporting events are not occurring.

As a result of the improved trail access that would be provided by the new sidewalk on SJUSD-owned property at the project site (on the east side of Belpoint Lane), use of the existing Creekside Nature Trail may increase. Location of the Katherine Johnson Middle School at the project site could lead to additional use of the trail to access the school site for a limited number of students. However, the trail is a designated public recreational facility that is intended to provide a public benefit and there is no evidence that the limited increase in use of the trail would lead to physical deterioration that would represent an adverse environmental impact beyond that reported throughout this EIR. The trail is administered by the Park District, which receives funds through developer fees, as well as public grants, which are used for public facility improvements and maintenance and upkeep of recreational facilities. Furthermore, because SJUSD would set back its perimeter fencing from the trail as part of the proposed project, a larger trail width area would be available for the Park District to perform maintenance and provide emergency access, which would also provide a public benefit for this recreation area.

Installation of the proposed portable classrooms at Encina High School would have no effect on Encina's recreational facilities, because the portable classrooms would be used by adult learners. Furthermore, recreational facilities are available at the high school, as well as throughout the surrounding area, for existing Sacramento residents who attend adult education classes.

For the reasons stated above, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated, and this impact is considered **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.1-4 **Physical Impacts on the Environmental from Construction or Expansion of Recreational Facilities.** *The proposed project includes on-site recreational facilities at the redeveloped campus for middle school students, and minor on-site recreational improvements for the public. The proposed project does not include improvements to the Creekside Nature Trail. Physical environmental impacts associated with the proposed on-site recreational facilities are evaluated throughout the individual topic areas of this EIR. This impact would be less than significant.*

The proposed project is located in unincorporated Sacramento County, which maintains a park standard of 3 acres per 1,000 residents.

No additional recreational facilities would be required at the Encina High School as a result of installation of the proposed portable classrooms. The portable classrooms would be used by adult learners, and recreational facilities are available at the high school, as well as throughout the surrounding area as described above in the Environmental Setting, for existing Sacramento residents who attend adult education classes.

The SJUSD is not subject to County parkland standards. The proposed project includes construction of on-site recreational facilities at the proposed Katherine Johnson Middle School sufficient to meet the needs of the Katherine Johnson Middle School students, as required by the CDE. These facilities include an indoor gymnasium, outdoor hardcourt play areas (e.g., basketball), and outdoor turf playfields for soccer and baseball along with a track. The turf playfields and track would be located in the northern portion of the project site, in the same location as they are currently. The proposed project also includes construction of a sidewalk (on the east side of Belpoint Lane), connecting to the existing community garden and a new public tot lot play area south of Chicken Ranch Slough. These facilities would be installed on District-owned land, on the southwestern portion of the project site. Although the sidewalk would help facilitate public access to the Creekside Nature Trail, the proposed project does not include any improvements to the trail itself, which is under the jurisdiction of the Park District. The physical environmental impacts from construction of the proposed on-site recreational facilities are evaluated throughout all of the topic area sections in this EIR, and mitigation measures are identified for potentially significant and significant impacts, where necessary. There are no other potentially significant or significant impacts beyond those comprehensively considered throughout the other sections of this EIR. Therefore, this impact is considered **less than significant**.

Mitigation Measure

No mitigation measures are required.

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3.2 AIR QUALITY

This section analyzes the potential short-term, construction-related, as well as the long-term air quality effects associated with the proposed. This section includes an evaluation of direct impacts, as well as cumulative effects given the nature of criteria air pollutant emissions impacts. Finally, this section evaluates impacts related to pollutant concentrations, with a focus on how those pollutants could affect sensitive populations.

3.2.1 ENVIRONMENTAL SETTING

The project site is located in the Sacramento Valley Air Basin (SVAB). The Sacramento Valley Air Basin climate is characterized by hot, dry summers and cool, rainy winters.

Typically, winds transport air pollutants northward out of the SVAB; however, during approximately half of the time from July to September, the wind pattern shifts southward, blowing air pollutants back into the SVAB and exacerbating the concentration of air pollutant emissions in the air basin. In addition, between winter storms, high pressure and light winds contribute to low-level temperature inversions and stable atmospheric conditions, resulting in the concentration of air pollutants.

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; lead; and particulate matter (PM), which is subdivided into two classes based on particle size – PM equal to or less than 10 micrometers in diameter (PM₁₀) and PM equal to or less than 2.5 micrometers in diameter (PM_{2.5}).

Health-based air quality standards have been established for these pollutants by EPA at the national level and by CARB at the state level. These standards are referred to as the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS), respectively. The NAAQS and CAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. Both EPA and CARB designate areas of California as “attainment,” “nonattainment,” “maintenance,” or “unclassified” for the various pollutant standards according to the federal Clean Air Act (CAA) and the California CAA (CCAA), respectively. Because the air quality standards for these air pollutants are regulated using human and environment health-based criteria, they are commonly referred to as “criteria air pollutants.”

Within the Sacramento Valley Air Basin, the Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for ensuring that emission standards are not violated. With respect to regional air quality, the SMAQMD region, including Sacramento County, is currently designated as nonattainment for the NAAQS and CAAQS for ozone, and nonattainment for the NAAQS for 24-hour PM_{2.5}, and the CAAQS for PM₁₀.

3.2.2 REGULATORY FRAMEWORK

The project site is within in the SVAB, in the eastern portion of the SMAQMD’s jurisdictional boundary. The EPA, CARB, and SMAQMD are responsible for regulating air quality in the vicinity of the project site. Each agency develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA

regulations may not be superseded, in general, both state and local regulations may be more stringent. The regulatory frameworks for criteria air pollutants, toxic air contaminants (TACs), and other emissions are described below.

FEDERAL

The primary legislation that governs federal air quality regulations is the CAA, enacted in 1970 and amended by Congress most recently in 1990. The CAA delegates primary responsibility for clean air to EPA. EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies.

Criteria Air Pollutants

Under the CAA, EPA has established the NAAQS for seven criteria air pollutants discussed previously: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), PM₁₀, PM_{2.5}, and lead. The purpose of the NAAQS is two-tiered: primarily to protect public health, and secondarily to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property). The current primary and secondary NAAQS are shown in Table 3.2-1. These health-based pollutant standards are reviewed with a legally prescribed frequency and are revised as warranted by new data on health and welfare effects. Each standard is based on a specific averaging time over which the concentration is measured. Different averaging times are based on protection from short-term, high-dosage effects or longer term, low-dosage effects.

The CAA requires EPA to determine if areas of the country meet the NAAQS for each criteria air pollutant. Areas are designated according to the following basic designation categories:

- ▶ **Attainment:** This designation signifies that pollutant concentrations in the area do not exceed the established standard. In most cases, a maintenance plan is required for a region after it has attained an air quality standard and is designated as an attainment or maintenance area after previously being designated as nonattainment. Maintenance plans are designed to ensure continued compliance with the standard.
- ▶ **Nonattainment:** This designation indicates that a pollutant concentration has exceeded the established standard. Nonattainment may differ in severity. To identify the severity of the problem and the extent of planning and actions required to meet the standard, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe, extreme).
- ▶ **Unclassifiable:** This designation indicates that insufficient data exist to determine attainment or nonattainment. For regulatory purposes, an unclassified area is generally treated the same as an attainment area.

As shown in Table 3.2-2, the SMAQMD meets the NAAQS for all criteria air pollutants except ozone and PM_{2.5}. The CAA requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP) to demonstrate how attainment standards will be achieved.¹

¹ The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing them will achieve ambient air quality standards. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area.

Table 3.2-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS ¹	NAAQS ^{2,3} Primary	NAAQS ^{2,3} Secondary
CO	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	NA
CO	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	NA
NO ₂	1 hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	NA
NO ₂	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
Ozone	1 hour	0.09 ppm (180 µg/m ³)	NA ⁵	NA
Ozone	8 hour	0.070 ppm (137 µg/m ³) ⁸	0.070 ppm (137 µg/m ³) ⁴	Same as Primary
PM ₁₀	24 hour	50 µg/m ³	150 µg/m ³	Same as Primary
PM ₁₀	Annual Arithmetic Mean	20 µg/m ³ ⁶	NA	NA
PM _{2.5}	24 hour	NA	35 µg/m ³	Same as Primary
PM _{2.5}	Annual Arithmetic Mean	12 µg/m ³ ⁶	12 µg/m ³ ¹⁰	15.0 µg/m ³
SO ₂	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	NA
SO ₂	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)	NA
SO ₂	Annual Arithmetic Mean	NA	0.030 ppm (80 µg/m ³)	NA
Sulfates	24 hour	25 µg/m ³	NA	NA
H ₂ S	1 hour	0.03 ppm (42 µg/m ³)	NA	NA
Lead	30-day Average	1.5 µg/m ³	NA	NA
Lead	Calendar quarter	NA	1.5 µg/m ³	
Lead	Rolling 3-month Average	NA	0.15 µg/m ³ ⁹	Same as Primary
Vinyl Chloride	24 hour	0.01 ppm (26 µg/m ³)	NA	NA
Visibility-Reducing Particles	8 hour	See Note 7	NA	NA

Source: CARB 2016

Key: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; CO = carbon monoxide; EPA = U.S. Environmental Protection Agency; NO₂ = nitrogen dioxide; O₃ = ozone; PM₁₀ = particulate matter 10 microns in diameter or less; PM_{2.5} = particulate matter 2.5 microns in diameter or less; ppm = parts per million; ppb = parts per billion; SO₂ = sulfur dioxide; H₂S = hydrogen sulfide

¹ California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter – PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

² National standards shown are the “primary standards” designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

³ National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

⁴ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

⁵ The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.

⁶ In June 2002, CARB established new annual standards for PM_{2.5} and PM₁₀.

⁷ Statewide Visibility Reducing Particles (VRP) Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

⁸ The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.

⁹ National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

¹⁰ In December 2012, EPA strengthened the annual PM_{2.5} National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m³). In December 2014, EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Table 3.2-2. Attainment Status for Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	State Standard
Ozone ^a	Nonattainment ^a	Nonattainment
Particulate Matter—10 Micrometers or Less	Attainment	Nonattainment
Particulate Matter—2.5 Micrometers or Less	Nonattainment	Attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Unclassifiable/Attainment	Attainment
Sulfur Dioxide	Unclassifiable/Attainment	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-Reducing Particles	No Federal Standard	Unclassified

Source: SMAQMD 2017

Toxic Air Contaminants

Air quality regulations also focus on hazardous air pollutants (HAPs), referred to at the state as TACs. These are a set of airborne pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. HAPs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Stationary sources of HAPs include gasoline stations, dry cleaners, and diesel backup generators, among which are subject to permit requirements. On-road motor vehicles and off-road sources, such as construction equipment and trains, are also common sources of HAPs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several HAPs, including benzene, toluene, and xylenes. Public exposure to HAPs can result from emissions from normal operations, as well as accidental releases.

HAPs can be separated into carcinogens (cancer-causing) and non-carcinogens, based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Non-carcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. EPA regulates HAPs through statutes and regulations that generally require the use of the maximum or best available control technology for toxics (MACT and BACT) to limit emissions.

The CAA requires EPA to identify and set national emissions standards for HAPs to protect public health and welfare. Emissions standards are set for what are called “major sources” and “area sources.”² The CAA also requires EPA to issue vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria are established to limit mobile-source emissions of toxics.

STATE

CARB is responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA.

Criteria Air Pollutants

The CCAA, adopted in 1988, required CARB to establish CAAQS (as shown above in Table 3.2-2). CARB has also established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter, in addition to the above-mentioned criteria air pollutants regulated by EPA. The CCAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practicable date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources. CARB also maintains air quality monitoring stations throughout the state in conjunction with air districts. CARB uses the data collected at these stations to classify air basins as being in attainment or nonattainment with respect to each pollutant and to monitor progress in attaining air quality standards.

CARB is the lead agency for developing the SIPs in California.³ Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register. Most recently, in March 2017, CARB adopted the *2016 State Strategy for the State Implementation Plan* (State SIP Strategy), and in October 2018, adopted the *2018 Updates to the California State Implementation Plan* (2018 SIP Updates), describing the proposed commitment to achieve the reductions necessary from mobile sources, fuels, and consumer products to meet federal ozone and PM_{2.5} standards over the next 15 years.

CARB has established emission standards for vehicles sold in California and for various types of equipment. California gasoline specifications are governed by both state and federal agencies, which have imposed numerous requirements on the production and sale of gasoline in California during the past 30 years. In December 2004, CARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA earlier that year. The standards required engine manufacturers to meet after-treatment–based exhaust standards for nitrogen oxides (NO_x) and PM, starting in 2011, that were more than 90 percent lower than then-current levels, putting emissions from off-road engines

2 Major sources have the potential to emit more than 10 tons per year of any HAP or more than 25 tons per year of any combination of HAPs; all other sources are considered area sources. There are two types of emissions standards: those that require application of MACT and BACT, and those that are health-risk based and deemed necessary to address the risks that remain after implementation of MACT or BACT. For area sources, the MACT or BACT standards may be different because of differences in generally available control technology.

3 SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products.

virtually on par with those from on-road, heavy-duty diesel engines. CARB has also adopted control measures for DPM and more stringent emissions standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).

In 2017, Senate Bill (SB) 1 (the Road Repair and Accountability Act of 2017) was passed, which, in addition to funding transportation-related projects, requires the Department of Motor Vehicles to refuse registration or renewal or transfer of registration for certain diesel-fueled vehicles, based on weight and model year, that are subject to specified provisions relating to the reduction of emissions of diesel particulate matter, oxides of nitrogen, and other criteria pollutants from in-use diesel-fueled vehicles. As of January 1, 2020, compliance with the CARB Truck and Bus regulation is now automatically verified by the California DMV as part of the vehicle registration process.

In June 2020, CARB approved the Advanced Clean Trucks regulation, requiring truck manufacturers to transition from diesel-powered trucks and vans to electric zero-emission trucks beginning in 2024 with phasing in of increasingly stringent requirements through 2045. By 2045, under the Advanced Clean Trucks regulation, every new truck sold in California will be zero-emission.⁴

Toxic Air Contaminants

As described under the federal regulations above, CARB regulates TACs, of which a subset of the identified substances are the federally identified and regulated HAPs, through statutes and regulations that generally require the use of MACT and BACT.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act (Assembly Bill 2588; Chapter 1252, Statutes of 1987). The Air Toxics Hot Spots Information and Assessment Act seeks to identify and evaluate risks from air toxics sources, but does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities must perform a health risk assessment and, if specific thresholds are violated, must communicate the results to the public in the form of notices and public meetings. TACs are generally regulated through statutes and rules that require the use of MACT or BACT to limit TAC emissions.

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), most of the estimated health risk from TACs is attributed to relatively few compounds, the most dominant being DPM. In 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled vehicles and engines.⁵

4 This is a key element of CARB’s strategy to achieve a transition in California’s last mile delivery and local trucks from the use of conventional combustion technologies to zero emission everywhere feasible and near-zero emission powered by clean, low-carbon renewable fuels everywhere else. Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the SIP, Sustainable Freight Action Plan, SB 350, and Assembly Bill (AB) 32 (which focuses on greenhouse gas emissions reductions).

5 Additional regulations apply to new trucks and diesel fuel. Subsequent CARB regulations on diesel emissions include the On-Road Heavy Duty Diesel Vehicle (In Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-road Diesel Vehicle Regulation, and the New Off-road Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

The State of California has also implemented regulations to reduce DPM emissions. Two such regulations applicable to the proposed project include Title 13, Sections 2485 and 2449 of the California Code of Regulations, which limit idling time to a maximum of 5 minutes for heavy-duty commercial diesel vehicles (defined as diesel vehicles heavier than 10,000 pounds gross vehicle rated weight) and off-road diesel-fueled construction vehicles, respectively. These regulatory measures are driven by the CARB Airborne Toxic Control Measure and subsequent amendments.

LOCAL

Criteria Air Pollutants

SMAQMD is responsible for monitoring air pollution within the SVAB and for developing and administering programs to reduce air pollution levels below the health-based standards established by the state and federal governments. All projects within SMAQMD's jurisdictional area are subject to SMAQMD rules and regulations in effect at the time of construction. Specific SMAQMD rules that could be applicable include but are not limited to the following:

- ▶ **Rule 401:** Ringlemann Chart. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than does smoke described in Subsection 301.1 of this rule.
- ▶ **Rule 402:** Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- ▶ **Rule 403:** Fugitive Dust. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:
 - Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.
 - Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; and
 - Other means approved by the Air Pollution Control Officer.
- ▶ **Rule 404:** Particulate Matter. Except as otherwise provided in Rule 406 of this regulation, a person shall not discharge into the atmosphere from any source particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

- ▶ **Rule 405:** Dust and Condensed Fumes. A person shall not discharge into the atmosphere in any one hour from any source whatsoever dust or condensed fumes in total quantities in excess of the amount shown in the Rule's Table for Process Weight and Allowable Discharge.
- ▶ **Rule 442:** Architectural Coatings. Limit the emissions of volatile organic compounds (VOCs) from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the SMAQMD.
- ▶ **Rule 201:** General Permit Requirements. To provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.
- ▶ **Rule 902: Asbestos.** This rule requires the project applicant to notify the Air District of any regulated renovation or demolition activity with specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

SMAQMD has also produced a guidebook called the *CEQA Guide to Air Quality Assessment in Sacramento County* (CEQA Guide), which contains guidance for analyzing construction and operational emissions (SMAQMD 2021). The CEQA Guide provides methods to analyze air quality impacts from plans and projects, including screening criteria, thresholds of significance, calculation methods, and mitigation measures to assist lead agencies in complying with CEQA. In developing the thresholds, SMAQMD took into account health-based air quality standards and the strategies to attain air quality standards, emissions projections and regional growth and land use trends.

As part of the Sacramento Federal Nonattainment Area (SFNA) for ozone, and in accordance with requirements under the CAA, SMAQMD worked with the other local air districts within the Sacramento region (El Dorado County Air Quality Management District, Feather River Air Quality Management District, Placer County Air Pollution Control District, and Yolo-Solano Air Quality Management District) to develop a regional air quality management plan to describe and demonstrate how the Sacramento Federal Nonattainment Area, is meeting requirements under the federal CAA in demonstrating reasonable further progress and attainment of the NAAQS for ozone (SMAQMD 2017). Some elements of the Ozone Attainment and Progress Plan were updated in 2018 and included in the 2018 Updates to the California State Implementation Plan, which updated SIP elements for nonattainment areas throughout the state, as needed. These updates were adopted by CARB in October 2018. The Ozone Attainment and Progress Plan is the currently adopted and applicable air quality plan for the region.

Similarly, the region prepared the PM_{2.5} Maintenance Plan and Redesignation Request (SMAQMD 2013) to address how the region attained and would continue to attain the 24-hour PM_{2.5} standard. In 2017, EPA found that the area attained the 2006 24-hour PM_{2.5} NAAQS by the attainment date of December 31, 2015. The PM_{2.5} Maintenance Plan and Redesignation Request will be updated and submitted in the future based on the clean data finding made by the EPA.

The SMAQMD also prepared the PM₁₀ Implementation/Maintenance Plan and Redesignation Request for Sacramento County (SMAQMD 2010). EPA approved the PM₁₀ Plan, which allowed EPA to proceed with the redesignation of Sacramento County as attainment for the PM₁₀ NAAQS. The approval of the first Maintenance Plan showed maintenance from 2013 through 2023. A second plan must provide for maintenance of the NAAQS for 10 more years after expiration of the first 10-year maintenance period. The SMAQMD adopted and

submitted the Second 10-Year PM₁₀ Maintenance Plan for Sacramento County in August of 2021 to demonstrate maintenance of the PM₁₀ standard through 2033.

Toxic Air Contaminants

At the local level, air pollution control or management districts may adopt and enforce CARB control measures. Under SMAQMD Rule 201 (General Permit Requirements), Rule 202 (New Source Review), and Rule 207 (Federal Operating Permit Program), all sources that could emit TACs must obtain permits from SMAQMD.

Odors

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

3.2.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

An air quality impact would be considered significant if it would exceed any of the thresholds of significance listed below, which are based on Appendix G of the CEQA Guidelines and on SMAQMD's CEQA Guide (SMAQMD 2021). Based on Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact on air quality if it would:

- ▶ conflict with or obstruct implementation of the applicable air quality plan;
- ▶ result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard;
- ▶ expose sensitive receptors to substantial pollutant concentrations; or
- ▶ result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to support determinations of significance. The project site is located within unincorporated Sacramento County in an area regulated by the SMAQMD. Thus, pursuant to the SMAQMD-recommended thresholds (SMAQMD 2020a) for evaluating project-related air quality impacts, the project's impacts would be considered significant if the project would:

- ▶ generate construction-related criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended daily thresholds of 85 pounds per day (lb/day) for NO_x, 80 lb/day or 14.6 tons per year (tons/yr) of PM₁₀, 82 lb/day or 15 tons/yr of PM_{2.5}, or result in or substantially contribute (at a level equal to or greater than 5 percent of a CAAQS) to a violation of a CAAQS;
- ▶ generate long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended daily thresholds of 65 lb/day of reactive organic gases (ROG) or NO_x, 80 lb/day and 14.6 tons/yr of PM₁₀, 82 lb/day and 15 tons/yr of PM_{2.5}, or result in a violation of the CAAQS or result in or substantially contribute (at a level equal to or greater than 5 percent of a CAAQS) to a violation of a CAAQS;

- ▶ contribute to localized concentrations of air pollutants at nearby receptors that would exceed applicable ambient air quality standards; or
- ▶ expose sensitive receptors to excessive nuisance odors, as defined under SMAQMD Rule 402.

Note that the above thresholds of significance for PM₁₀ and PM_{2.5} for construction and operational emissions are applicable only if all feasible BACT and Best Management Practices (BMPs) have been applied. Otherwise, the threshold of significance is zero (0) emissions.

For cumulative impacts, SMAQMD states that, as a result of the District's approach to thresholds of significance, if a project's emissions are not anticipated to exceed the SMAQMD-recommended thresholds, as listed above, the project would not be expected to result in a cumulatively considerable contribution to a significant impact at a cumulative level (SMAQMD 2021).

ANALYSIS METHODOLOGY

The discussion below presents the methods used for the air quality analysis and how the significance of the proposed project's air quality impacts was determined. Potential air quality impacts associated with short-term construction and long-term operations were evaluated in accordance with SMAQMD-recommended and CARB-approved methodologies.

Construction and operational emissions of criteria air pollutants were compared with the applicable thresholds of significance (described above) to determine potential impacts. SMAQMD's significance thresholds serve as a proxy for determining whether the project could violate air quality standards, cause a substantial contribution to an existing or projected air quality violation, and/or conflict with any applicable air quality plan.⁶

Construction-related emissions were modeled using the California Emissions Estimator Model (CalEEMod) Version 2022.1, which is the most current version of the SMAQMD-recommended model for estimating construction and operational emissions from land use development projects. Project-specific construction parameters (*e.g.*, building and pavement demolition amounts, construction schedule, total acres disturbed, quantity of import material, amount of development per land use, estimated construction workers and construction-related vehicle trips) were used as inputs in the air quality analysis. Construction is assumed to begin in January 2023 and last approximately 20 months, through August 2024. Prior to the demolition of the existing buildings beginning in 2023, a small amount of earthmoving and utility installation activities would occur at the existing Encina High School campus prior to construction beginning at the project site to accommodate relocation of the Creekside Adult Center. The project is anticipated to be balanced, with no requirement for import or export of fill materials. Where project-specific information was not available, CalEEMod default parameters were used. Modeled construction-related emissions are compared to the applicable SMAQMD thresholds to determine significance.

Following construction, operation of the new school would generate air pollutant emissions. CalEEMod was also used to estimate these long-term operational emissions, including emissions associated with area and energy sources (*i.e.*, natural gas combustion, landscape maintenance, periodic architectural coatings, and consumer

⁶ A technical appendix is posted on the District's website with model details, assumptions, inputs, and outputs. Please see: <https://www.sanjuan.edu/buildkjms>.

products), and vehicle trips to and from the school site. The mobile source emissions analysis is based upon project-specific information for staff and students. As a proposed relocation and expansion of an existing school, the majority of the project's vehicle trips would not be new (i.e., current operational trips by staff and students/families to and from the school would shift in location from the existing site to the proposed relocated school) and building operations would be assumed to be more efficient than those of the existing much older buildings that would be demolished. Nonetheless, to ensure conservative results, the analysis of mobile-source and building operations emissions accounts for the gross emissions of the proposed project and does not attempt to discount current operations from the project-generated emissions calculations. These gross long-term operational emissions are compared to the applicable SMAQMD thresholds of significance for project operations to determine significance.

TAC emissions associated with project construction and operation that could affect surrounding areas are evaluated qualitatively. The potential for the project to result in other emissions, such as those leading to odors, is also evaluated qualitatively.

ISSUES NOT EVALUATED FURTHER IN THIS DEIR

All issues related to air quality are discussed below.

IMPACT ANALYSIS

IMPACT 3.2-1	Conflict with or obstruct implementation of the applicable air quality plan. <i>Emissions associated with proposed project construction or operations could conflict with or obstruct implementation of the applicable air quality plan. Therefore, this impact is potentially significant.</i>
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Air quality plans describe air pollution control strategies to be implemented to bring an area that does not attain the NAAQS or CAAQS into compliance with those standards, or to maintain existing compliance with those standards, pursuant to the requirements of the CAA and CCAA.

Construction

Construction activities associated with the proposed project would result in emissions of criteria air pollutants and ozone precursors, including ROG, NO_x, PM₁₀, and PM_{2.5}, the pollutants for which the project region is designated as nonattainment under either the NAAQS or CAAQS. These activities would include site preparation (e.g., excavation, grading, and clearing); exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes; asphalt paving; and application of architectural coatings. Ozone precursor emissions of ROG and NO_x are associated primarily with construction equipment exhaust and the application of architectural coatings. Dust (particulate matter) generation is dependent on soil type and soil moisture, as well as the amount of total acreage of clearing, grubbing and grading activities. Clearing and earthmoving activities comprise the major source of construction dust generation, but re-entrained road dust from traffic and general disturbance of the soil also contribute to the problem. Sand, lime, or other fine particulate materials may be used during construction, and stored on-site. If not stored properly, such materials could become airborne during periods of high winds. PM emissions are also generated by equipment exhaust. The effects of construction activities include increased dust fall and locally elevated levels of suspended particulates. PM₁₀ and PM_{2.5} are considered unhealthy because the particles are small enough to inhale and damage lung tissue, which can lead to respiratory problems.

SMAQMD has adopted air quality plans pursuant to regulatory requirements under EPA and CARB for the attainment and maintenance of federal and state ambient air quality standards, as detailed above in “Regulatory Setting,” under “Sacramento Metropolitan Air Quality Management District.” The goal of the air quality plans is to reduce criteria air pollutant emissions for which the SVAB is designated as nonattainment in order to achieve NAAQS and CAAQS by the earliest practicable date. As documented in the SMAQMD CEQA Guide (SMAQMD 2021), the SMAQMD construction and operational mass emissions thresholds for ozone precursors correlate to the NO_x and ROG reductions from heavy-duty vehicles and land use project emission reduction requirements committed to in the Ozone Attainment Plan for the Sacramento Federal Ozone Nonattainment Area; therefore, projects whose emissions would be less than the recommended thresholds of significance for criteria air pollutants would not conflict with or obstruct implementation of applicable air quality plans related to the attainment of ozone. Similarly, the construction and operational mass emissions thresholds for PM correlate to the SMAQMD’s permitting offset trigger levels, which prevents deterioration of ambient air quality and ensures projects do not worsen the region’s attainment status (SMAQMD 2015). Therefore, projects whose emissions do not exceed the recommended PM thresholds of significance would also not conflict with or obstruct implementation of the applicable air quality plans related to PM.

The proposed project construction-related activities would be required to comply with SMAQMD rules and regulations established, in part, to ensure implementation of and consistency with strategies and actions of the applicable air quality plans, including but not limited to Rule 401, Rule 402, Rule 403, Rule 404, and Rule 405. Since the project would generate PM emissions during construction, implementation of best management practices would be required in order to use the SMAQMD non-zero thresholds of significance for PM. As detailed below in Impact 3.2-2 and shown in Table 3.2-3, emissions generated during construction would not exceed the SMAQMD thresholds of significance. However, due to the nonattainment status of the SVAB with respect to ozone, PM₁₀, and PM_{2.5}, SMAQMD recommends that all construction projects implement the SMAQMD Basic Construction Emission Control Practices; without incorporation of SMAQMD’s Basic Construction Emission Control Practices, the project’s construction activities could potentially conflict with or obstruct implementation of the SMAQMD’s air quality plans for PM. Therefore, the project’s construction activities could result in a potentially significant temporary contribution to regional air pollution and thereby could conflict with air quality plans applicable to the SMAQMD; this impact of short-term construction-related activities would be **potentially significant**.

Operations

With regard to long-term operations of the project and consistency with applicable air quality plans, the project site is zoned RD-5 Residential. The Sacramento County General Plan land use designation is Low Density Residential, and the Arden-Arcade Community Plan land use designation is RD-5/Public-Quasi Public (Sacramento County 1980). Public schools are a permitted, primary use under the current Sacramento County Zoning Code in areas zoned RD-5 (Sacramento County 2021: Table 3.1). In addition, as detailed below in Impact 3.2-2 and shown in Table 3.2-4, emissions generated from long-term operation of the project would not exceed the SMAQMD thresholds of significance. As such, emissions associated with the proposed project are consistent with those anticipated for the purposes of regional air quality attainment plans. Operational emissions associated with long-term operations of the proposed project are consistent with those anticipated for the purposes of regional air quality attainment plans; this impact of long-term operations would be **less than significant**.

Mitigation Measure 3.2-1: Implement the SMAQMD Basic Construction Emission Control Practices.

The SJUSD shall require that the construction contractors for the Katherine Johnson Middle School and the Encina portable classrooms comply with Basic Construction Emission Control Practices identified by the SMAQMD and listed below or as they may be updated in the future:

- 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.
- 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 track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d) 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. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Significance after Mitigation

As stated above, emissions associated with long-term operations of the proposed project are consistent with those anticipated for the purposes of regional air quality attainment plans. However, without incorporation of SMAQMD's Basic Construction Emission Control Practices, the project's construction activities could potentially conflict with or obstruct implementation of the SMAQMD's air quality plans for PM. With incorporation of Mitigation Measure 3.2-1, the proposed project's construction activities would be required to implement applicable emission control practices and would not conflict with or obstruct an applicable air quality attainment plan. This impact would be **less than significant with mitigation**.

IMPACT 3.2-2 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. *Emissions of criteria air pollutants and ozone precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. Therefore, this impact is **potentially significant**.*

Construction

As discussed above, construction-related emissions were estimated using CalEEMod. As there can be differences in the emissions between winter and summer, Table 3.2-3 for construction and operations show the maximum level of emissions for pounds per day per season.

Table 3.2-3. Summary of Construction-Related Emissions of Criteria Air Pollutants and Precursors

Construction Year	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NOx (pounds per day)	Maximum Daily Emissions PM ₁₀ (pounds per day)	Maximum Daily Emissions PM _{2.5} (pounds per day)	Maximum Annual Emissions PM ₁₀ (tons per year)	Maximum Annual Emissions PM _{2.5} (tons per year)
2022	2.42	22.2	3.98	2.36	0.02	0.01
2023	3.95	39.7	9.64	5.64	0.25	0.15
2024	17.5	20.6	1.46	0.98	0.07	0.05
SMAQMD Significance Threshold ¹	-	85	80	82	14.6	15
Emissions Exceed SMAQMD Threshold?	-	No	No	No	No	No

Notes:

NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PM_{2.5} = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; ROG = reactive organic gases; SMAQMD = Sacramento Metropolitan Air Quality Management District

¹ Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Modeled by AECOM in 2022. A technical appendix is posted on the District's website with model details, assumptions, inputs, and outputs. Please see: <https://www.sanjuana.edu/buildkims>.

As shown in Table 3.2-3, the modeled daily emissions generated by construction-related activities would not exceed the SMAQMD-recommended threshold of significance. However, due to the nonattainment status of the SVAB with respect to ozone, PM₁₀, and PM_{2.5}, SMAQMD recommends that all construction projects implement the SMAQMD Basic Construction Emission Control Practices (SMAQMD 2019). 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. Without incorporation of SMAQMD's Basic Construction Emission Control Practices, the project's construction activities could potentially conflict with or obstruct implementation of the SMAQMD's air quality plans for PM. Therefore, this impact of short-term construction-related activities would be **potentially significant**.

Operations

Once project-related construction is completed, additional pollutants would be emitted through the use, or operation, of the site. Such emissions sources would include motor vehicle trips to and from the site; fuel combustion from landscape maintenance equipment; natural gas combustion emissions from on-site natural gas use; evaporative emissions of ROG associated with the use of consumer products; and evaporative emissions of ROG resulting from the intermittent re-application of architectural coatings. As noted in Chapter 2, “Project Description,” Katherine Johnson Middle School will be an all-electric campus, and the District has no plan to extend natural gas service to the site.

While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur for the lifetime of the project. Long-term operational emissions were modeled using CalEEMod, Version 2022.1, as discussed in the Methodology section above. The resultant long-term operational emissions estimates are shown in Table 3.2-4.

Table 3.2-4. Summary of Operational Emissions of Criteria Air Pollutants and Precursors

Operational Sector	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NOx (pounds per day)	Maximum Daily Emissions PM ₁₀ (pounds per day)	Maximum Daily Emissions PM _{2.5} (pounds per day)	Maximum Annual Emissions PM ₁₀ (tons per year)	Maximum Annual Emissions PM _{2.5} (tons per year)
Mobile	5.50	2.90	0.92	0.19	0.12	0.02
Area	1.84	0.02	< 0.005	< 0.005	< 0.005	< 0.005
Energy	0.02	0.36	0.03	0.03	0.01	0.01
Total Operational Emissions	7.4	3.3	0.96	0.22	0.13	0.03
SMAQMD Significance Threshold ¹	65	65	80	82	14.6	15
Emissions Exceed SMAQMD Threshold?	No	No	No	No	No	No

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

1 Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Data compiled by AECOM in 2022. A technical appendix is posted on the District’s website with model details, assumptions, inputs, and outputs. Please see: <https://www.sanjuan.edu/buildkims>.

As shown in Table 3.2-4, total operational emissions would not approach or exceed any SMAQMD threshold. This comparison to the SMAQMD thresholds shows that operations would not contribute substantially to any existing or projected air quality violation and would not conflict with efforts to reach attainment of any air quality standards. Therefore, impacts to air quality from long-term operations of the project would be **less than significant**.

Health Effects of Criteria Air Pollutants

Criteria air pollutants can have human health effects at various concentrations, dependent upon the duration of exposure and type of pollutant. CAAQS and NAAQS were established to protect the public with a margin of

safety from adverse health impacts caused by exposure to air pollution. Similarly, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. With respect to regional air quality, the SMAQMD region, including Sacramento County, is currently designated as nonattainment for the NAAQS for ozone and 24-hour PM_{2.5}, and nonattainment for the CAAQS for ozone and PM₁₀ (SMAQMD 2021). As noted above, projects that emit criteria air pollutants that exceed the SMAQMD thresholds of significance are considered to be “cumulatively considerable” and may contribute to the regional cumulative degradation of air quality that could result in impacts to human health.

Health effects associated with ozone include respiratory symptoms, worsening of lung disease, and damage to lung tissue. In recent years, a correlation has also been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality (EPA 2022). ROG and NO_x are precursors to ozone, for which the SVAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of ROG and NO_x to regional ambient ozone concentrations is the result of complex photochemistry. The increases in ozone concentrations in the SVAB due to ozone precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project’s emissions of ozone precursors is speculative. Health effects associated with short- and long-term exposure to elevated concentrations of PM₁₀ include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (WHO 2018). PM_{2.5} poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health.

The proposed project would primarily generate criteria air pollutant emissions during the construction phase, and the primary pollutants of concern would be ozone precursors (ROG and NO_x) and PM. Adverse health effects induced by regional criteria pollutant emissions generated by the proposed project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Existing models have limited sensitivity to small changes in regional criteria pollutant concentrations, and as such, translating project-generated regional criteria pollutants to specific health effects would not produce meaningful results. In other words, minor increases in regional air pollution from project-generated ROG and NO_x would have nominal or negligible impacts on human health. Currently, CARB and EPA have not approved a quantitative method to meaningfully and consistently translate the mass emissions of criteria air pollutants from a project to quantified health effects. As explained in the amicus brief filed by the South Coast Air Quality Management District (SCAQMD) in the *Sierra Club v. County of Fresno* (2014) 26 Cal.App.4th 704, it “takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels” (SCAQMD 2015).

In 2020, SMAQMD published *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sacramento Air District* (SMAQMD 2020b), which provides a screening level analysis estimating the health effects of criteria air pollutants and their precursors, as well as provides guidance for conducting a health effects analysis of a project that satisfies the requirements of the *Sierra Club v. County of Fresno*, 2018, 6 Cal. 5th 502 case ruling regarding the proposed Friant Ranch Project. The Guidance was prepared by conducting regional photochemical modeling and relies on the EPA's Benefits Mapping and Analysis Program to assess health impacts from ozone and PM_{2.5}. An analysis was conducted to estimate the level of health effects for a proposed project that has emissions at the maximum SMAQMD-recommended thresholds of significance using 41 hypothetical project locations, as well as a screening model conducted to estimate potential health effects for strategic areas where development is anticipated to cause exceedance of thresholds of significance. The results were used to develop two screening tools intended to support individual projects in analyzing health risks from criteria pollutants: the Minor Project Health Screening Tool for projects with criteria pollutant emissions below SMAQMD's adopted thresholds of significance, and the Strategic Area Project Health Screening Tool for projects with emissions between two and six times the SMAQMD threshold levels.

The modeling results support a conclusion that any one proposed project in the SFNA, which is inclusive of the proposed project site, with emissions at or below the maximum SMAQMD thresholds of significance levels for criteria air pollutants does not on its own lead to sizeable health effects. The findings of the SMAQMD screening modeling indicate that the mean health incidence for a project emitting at the threshold of significance levels at all 41 representative locations was less than 3 per year for mortality and less than 1.5 per year for other health outcomes evaluated. The maximum reported mortality rate is 22 incidences per year and all other health outcomes evaluated are under 9 per year from a project emitting 656 pounds/day of each NO_x, ROG, and PM_{2.5} at the downtown Sacramento strategic location.

As shown in Table 3.2-3 and Table 3.2-4, project-related emissions during both construction and operational phases would be well below the SMAQMD-recommended thresholds of significance. In addition, the emissions presented in Table 3.2-4 for long-term operations does not account for the fact that the project would replace an existing facility and that the majority of the mobile-trips would be a shift from existing mobile trips to and from the existing school location to the proposed project site, and not new mobile trips or related mobile-source emissions to the region. As described previously, the SMAQMD modeling indicated that for projects with emissions at or below the maximum SMAQMD thresholds of significance levels for criteria air pollutants, the project on its own does not lead to sizeable health effects. In addition, the tool's outputs are based on the simulation of a full year of exposure at the maximum daily exposure, which is not a realistic scenario. As discussed above, the nature of criteria pollutants is such that the emissions from an individual project cannot be directly identified as responsible for health impacts within any specific geographic location. As a result, attributing health risks at any specific geographic location to a single proposed project is not feasible, and this information and consideration is presented for informational purposes only.

Mitigation Measure: Implement Mitigation Measure 3.2-1.

Significance after Mitigation

As stated above, long-term operational emissions would be less than the SMAQMD-recommended thresholds of significance for operations without the need to implement mitigation. The above mitigation will be incorporated to ensure that the project would implement the SMAQMD-required emission control practices, allowing the use of the non-zero particulate matter significance thresholds and the total construction-related

emissions would be less than the SMAQMD-recommended thresholds of significance. Therefore, with implementation of Mitigation Measure 3.2-1, this impact is **less than significant**.

IMPACT 3.2.-3 **Exposure of Sensitive Receptors to Substantial Air Pollutant Concentrations.** *Because neither the short-term construction nor the long-term operation of the proposed project would result in the exposure of sensitive receptors to substantial concentrations of TAC emissions for an extended period of time, this impact would be less than significant.*

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as the majority of the workers tend to stay indoors most of the time. Sensitive receptors nearest to the project are students of the school itself, as well as residences surrounding the school.

The project site is generally surrounded by residential uses. Residential land uses are adjacent to the southern and western perimeters of the project site. In addition, a pre-school and daycare are located adjacent to the southwest corner of the project site.

The exposure of sensitive receptors (e.g., existing off-site residents) to TAC emissions from short-term (construction) and long-term operational (mobile, stationary, and other) sources is discussed separately below.

Short-Term Construction Emissions and Exposure to TACs at Surrounding Land Uses

Construction would generate DPM emissions from the use of off-road diesel-powered equipment required for site grading and excavation, paving, and other construction activities. These activities may expose nearby receptors to TACs, including surrounding residents in adjacent areas; the nearest residence is located approximately 40-50 feet to the south and east of the project site. For this analysis, DPM is assumed to be equivalent to exhaust-generated PM_{2.5}, which is a subset of the total PM presented in Table 3.2-3.

Health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. Concentrations of mobile-source DPM emissions are typically reduced by approximately 60 percent at a distance of around 300 feet (100 meters) (Zhu and Hinds 2002). Construction activities would be dispersed throughout the entire approximately 9.75-acre project site, so the majority of construction activities would take place farther away from each of the nearby sensitive receptors. Residences on the western, northern, and northeastern side of the project site are also buffered by additional vegetation within their properties. The roadway, vegetation and open space would help to disperse potential DPM.

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 person is exposed to the substance. As described above, PM₁₀ and PM_{2.5} emissions during construction would be a maximum of 9.6 lb/day and 5.6 lb/day, respectively (Table 3.2-1). The risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs (OEHHA 2015). The total construction period is projected to require 20 months. As a result, the exposure of sensitive receptors to construction emissions would be short term, intermittent, and temporary in nature. Even during this period of time, construction activities would vary in activity and equipment intensity, and would take place throughout the entirety of the project site. If the duration of construction activities near a sensitive receptor was for the entirety of 20 months, which is not anticipated, then the exposure would be less than five percent of the total exposure period used for typical health risk calculations (i.e., 30 years).

Because of the intermittent and temporary nature of construction activities, and the dispersive properties of TACs, as well as the fact that PM emissions would be far less than the SMAQMD emission thresholds, short-term construction would not expose sensitive receptors to DPM emission levels that would result in a health hazard. As a result, this impact would be **less than significant**. It should also be noted that, with implementation of Mitigation Measure 3.2-1 for Impact 3.2-1, potential TAC emissions from construction-related activities, particularly PM, would be further reduced, correlating to a reduction in potential exposure of sensitive receptors to TAC emissions during construction.

In addition, as noted in the SMAQMD response to the District's Notice of Preparation (NOP) for this EIR, the project is subject to compliance with the District's Rule 902, which includes requirements to ensure public health and safety for projects that require demolition and removal of asbestos containing materials.⁷

Land Use Compatibility and Exposure to TACs from Nearby Land Uses

School land uses are not typically considered substantial sources of TACs; however, the proposed replacement school would result in an increase of daily traffic trips to and from the project site. Because children are particularly sensitive to elevated concentrations of TACs, CARB recommends that the project site be assessed with regard to the compatibility of surrounding land uses that may be sources of TAC emissions. This recommendation coincides with hazards evaluations required under CEQA and school siting requirements of the California Department of Education, as well.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides guidance concerning land use compatibility with regard to sources of TAC emissions (CARB 2005). The handbook offers recommendations for siting sensitive receptors near uses associated with TACs (e.g., freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, industrial facilities). While the handbook is advisory and not regulatory, it offers the following recommendations that are pertinent to the proposed project:

- ▶ Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads carrying 100,000 vehicles per day, or rural roads carrying 50,000 vehicles per day.

⁷ For more information, please see: <http://www.airquality.org/ProgramCoordination/Documents/rule902.pdf>.

- ▶ Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.
- ▶ Avoid siting new sensitive land uses within 300 feet of a large gasoline station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gasoline dispensing facilities.
- ▶ Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation using perchloroethylene. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult the local air district. Do not site new sensitive land uses in the same building with dry-cleaning operations that use perchloroethylene.

The project site is consistent with all the recommendations described above per the CARB Handbook. The replacement school would be located more than 2.5 miles from the nearest freeway (i.e., I-80), which exceeds the 500-foot buffer recommended by CARB. In addition, the new school would not be located within 1,000 feet of a major service or maintenance rail yard, 300 feet of a large gasoline station, 50 feet of a typical gasoline dispensing facility, or 500 feet of any dry-cleaning operation using perchloroethylene. Therefore, the siting of the school would be consistent with all of the CARB recommendations listed above to avoid and minimize impacts from TACs and thus would not result in the exposure of sensitive receptors to TACs that exceed the recommended thresholds. Within a half-mile radius of the proposed project site, there are predominantly residential and retail land uses, with no industrial or agricultural land uses. As a result, this impact would be **less than significant**.

Carbon Monoxide Hotspots

A mobile-source pollutant of localized concern is CO. Continuous engine exhaust may elevate localized CO concentrations, or “hot spots.” The SMAQMD CEQA Guidance acknowledges that land use development projects do not typically have the potential to result in localized concentrations of criteria air pollutants that expose sensitive receptors to substantial pollutant concentrations, in part, because the predominant source of these pollutants is typically in the form of mobile-source exhaust from vehicle trips that occur throughout a network of roads and are not concentrated in a single location.

Emissions and ambient concentrations of CO have decreased substantially throughout California in the past three decades. The national statewide CO standard is attained statewide in California, and an exceedance of NAAQS or CAAQS in the region was last recorded in 1993. This is primarily attributable to requirements for cleaner vehicle emissions. CO hot spots are typically observed at heavily congested roadway intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. Construction sites are less likely to result in localized CO hot spots due to the nature of construction activities, which normally utilize diesel-powered equipment for intermittent or short durations. Note that while the SMAQMD CEQA guidance previously contained screening criteria to determine whether project impacts of localized CO concentrations were less than significant, this has been removed, and the CEQA guidance states: *“As of June 1, 2018, the US EPA documented that transportation conformity requirements no longer apply for CO in the Sacramento region. Sacramento has demonstrated 20 years of maintenance of the federal 8-hour CO standard.”* (SMAQMD 2021).

The proposed project would not result in prolonged idling throughout the day, nor contribute substantially to regionally high-volume, congested roadways. It is anticipated that the proposed project would not result in substantial increases in daily trips in the project area because the project would relocate the nearby existing facility that currently operates at the Encina High School and the additional traffic accommodated by the new

facility would be relatively low. Finally, the surrounding intersections at which vehicle trips may increase are not locations of typically limited vertical and/or horizontal of ambient air (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadways), and therefore would not likely be subject to elevated concentrations of CO. Due to the low level of new trips that would be generated by the project, improved vehicle emissions standards for CO, and lack of conditions that would limit dispersion of CO emissions from vehicle exhaust, the proposed project would not violate air quality standards for CO nor have the potential to result in CO hotspots. Therefore, this impact is **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.2-5 **Exposure of Sensitive Receptors to Objectionable Odors.** *Short-term odorous emissions from diesel exhaust from on-site construction equipment would be temporary and intermittent in nature and dissipate rapidly from the source. The proposed project would not include the long-term operation of an odorous emission source and no substantial existing odor sources are adjacent to the site. Therefore, the proposed project would not result in the exposure of sensitive receptors to objectionable odors. This impact would be less than significant.*

Odor Emissions Related to Short-Term Construction

The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines and emissions associated with asphalt paving and the application of architectural coatings may be considered offensive to some individuals. Depending on the wind direction, residents to the south and to the east may be exposed to odors from diesel exhaust associated with grading and asphalt paving activities. However, because the prevailing wind direction is northern and therefore not in the direction of these residents, as well as the fact that odors would be temporary and disperse rapidly with distance from the source, construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Furthermore, SJUSD is required to comply with SMAQMD Rules 402 (Nuisance) and 442 (Architectural Coatings), which would ensure that odors generated by short-term construction would not affect a substantial number of people. Therefore, this impact would be **less than significant**.

Odor Emissions Related to Long-Term Operations

Schools are not typically considered to be sources of objectionable odors. Industries and/or facilities that are likely to emit objectionable odors include wastewater treatment plants, landfills, composting facilities, petroleum refineries, and manufacturing plants. The proposed project would not include any of these types of facilities. Other minor sources of odor that could be generated during operations of the school include landscaping equipment and cooking for the cafeteria. These activities would take place intermittently each day and the nearby sensitive receptors are not located in the direction of the prevailing northern winds in the area. As a result, this impact would be **less than significant**.

Residential and retail uses surround the project site. Land uses in the vicinity do not include activities that are known to generate odors. Therefore, the proposed project would not expose sensitive receptors at the project site to objectionable odors from off-site. As a result, this impact would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

3.3 BIOLOGICAL RESOURCES

This section addresses impacts on biological resources known from or with potential to occur in the project area. The analysis includes a description of the existing environmental conditions at the time of the NOP, the methods used for site and impact assessment, the impacts associated with implementing the proposed project, and mitigation measures proposed to reduce potentially significant impacts, where necessary. This section also includes a brief overview of the federal, State, and local laws and regulations pertaining to the protection of biological resources in the area.

The biological resources information presented in this section is based on information gathered from biological resources databases, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants; aerial photography interpretation; an official species list obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC) (USFWS 2022); and the results of technical studies conducted for the project.

A biological resources field survey and biological resources assessment report (AECOM 2022a) was completed for the project to assess habitat quality and the potential for occurrence of special-status species. The report described the results of a reconnaissance-level biological resources survey for the proposed Katherine Johnson Middle School site. The purpose of the biological resources survey was to evaluate habitats and potentially sensitive biological resources which may occur within and/or immediately adjacent to the approximately 9.75-acre project footprint (Exhibit 3.3-1). The Biological Resources Assessment Report is included on the District's website. Please see: <https://www.sanjuan.edu/buildkjms>.

For the purposes of this EIR, the project footprint is defined as all areas that have the potential to be directly affected either temporarily or permanently by project construction activities, including staging, access, and building demolition. The biological study area encompassed the project footprint in its entirety, and an additional buffer zone which extends beyond the project footprint boundaries. The biological study area for the proposed project encompassed a total of 14.82 acres, whereas the proposed Katherine Johnson Middle School site is approximately 9.75 acres in land area. Because the Encina portable classrooms portion of the project would involve placement of portable classrooms on an existing developed parking lot, the biological resources assessment was focused on the proposed Katherine Johnson Middle School site.

This EIR section documents the findings identified by the biological resources databases, biological resources field survey, and Biological Resources Assessment Report efforts. Potentially sensitive species or habitats with the potential to occur within the project footprint are described. Additional information relating to the environmental setting, landscape, and appropriate regulatory framework to assess project impacts which may affect these sensitive individuals is also included.

3.3.1 ENVIRONMENTAL SETTING

The project site is located in the Central California Valley ecoregion of California, defined by an underlying geomorphology of alluvial fans and terraces (Griffith et al. 2016). The region features flat, intensively farmed plains and areas of urban development. The topography of the project area is generally flat with elevations ranging from approximately 80 feet above mean sea level (amsl) in the eastern portion of the site to approximately 85 feet amsl at the western portion.

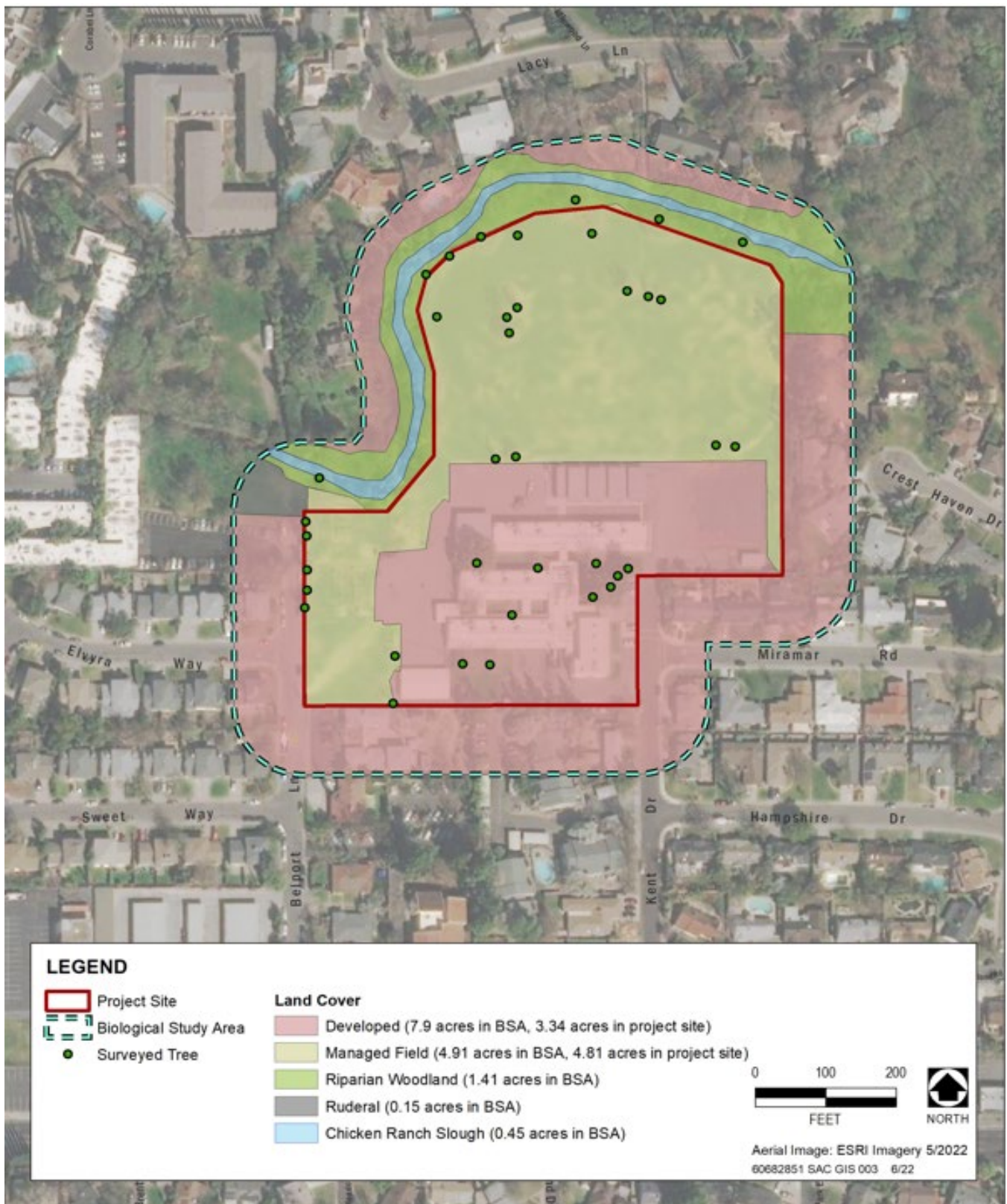


Exhibit 3.3-1 Land Cover Types and Vegetation

The approximately 9.75-acre proposed Katherine Johnson Middle School site is situated in Sacramento County, east of the Sacramento City limits, in the urbanized Arden-Arcade Community. The project site is located at 2641 Kent Drive (APN 268-0290-001-0000), and is bounded by Miramar Road on the south, Belport Lane on the west, private residences adjacent to Lacy Lane on the north, and private residences adjacent to Creekside Lane and Crest Haven Drive on the east. This property is not within any habitat conservation plan, critical habitat, natural communities conservation plan, or other conservation plan.

Soils in the project site are characterized as San Joaquin-Urban land complex, 0 to 3 percent slopes and Urban land (NRCS 2022). The San Joaquin series consists of moderately deep to a duripan, moderately well drained soils formed in alluvium derived from mixed but predominantly granitic rock sources on terrace geomorphology (NCSS 1999).

Desktop analysis and background research included an evaluation of regional climate data, which indicated that the area experiences the wet winters and dry summers typical of the Mediterranean climate found throughout California. The average annual high temperature locally is 74 degrees Fahrenheit (°F) and the average low temperature is 48 °F. The average annual precipitation in the project vicinity is 18.52 inches (U.S. Climate Data 2022).

LAND COVER TYPES AND VEGETATION

The project footprint consists of developed properties and managed recreational fields. The project footprint is surrounded primarily by single-family and multi-family residential developments, except for the Town & Country Pre-School and Daycare facility (at 2550 Belport Lane), which borders the project’s southwestern boundary. A portion of the approximately 1.5-acre Creekside Nature Area, administered by the Fulton-El Camino Recreation and Park District, is adjacent to the project site’s northern boundary. Chicken Ranch Slough is adjacent to, and runs through a small portion of, the project site’s northern boundary. An existing 0.5-mile-long nature trail, maintained by the Park District, is present along the southern bank of the slough along the project site’s northern boundary. Within the entire biological study area, five land cover types have been identified. Land cover type acreages are summarized in Table 3.3-1 and have been depicted in Exhibit 3.3-1. The sections below describe the dominant vegetation and habitat potential observed within each land cover type.

Table 3.3-1. Land Cover Types

Habitat Type	Acreage within Biological Study Area	Acreage within Project Footprint
Developed	7.9	3.34
Managed Field	4.91	4.81
Ruderal	0.15	0.0
Riparian Woodland	1.41	0.0
Aquatic (Chicken Ranch Slough)	0.45	0.0
Total	14.82	8.15

Managed Field

The managed field land cover type is currently utilized as an athletic recreational field for students and is dominated by regularly mowed non-native grasses and forbs. There are planted and protected native oak trees encroaching into and surrounding the northern portion of the athletic field. The vegetation community is dominated by unidentified planted grass and ruderal vegetation including pineapple weed (*Matricaria discoidea*),

musk stork's bill (*Erodium moschatum*), cheeseweed (*Malva parviflora*), and dandelion (*Taraxacum officinale*). This managed field is open to the public and is used by dog walkers and pedestrians. This area appeared to be regularly disturbed, as evidenced by foot trails and observations of people using the area for recreation. The vegetation present is maintained by regular mowing, watering, and landscaping activities. Multiple common bird species, including American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), bushtit (*Psaltirparus minimus*), northern mockingbird (*Mimulus polyglottos*), turkey vulture (*Cathartes aura*), Eurasian collared dove (*Streptopelia decaocto*), European starling (*Sturnus vulgaris*), yellow-billed magpie (*Pica nuttalli*), and red-tailed hawk (*Buteo jamaicensis*) were observed foraging within and above this field.

Managed field habitat provides limited foraging, roosting, resting, and nesting sites for birds. Wildlife that may be found in this land cover type, in addition to those that were observed during the field investigation, may also include opportunistic birds like the rock pigeon, California scrub jay, and European starling. Other wildlife that may use developed areas for cover and foraging include the common western fence lizard and eastern fox squirrel.

Developed

Developed land cover is present in the southern and southeastern portion of the project site and is defined as areas developed by humans and devoid of vegetation, such as concrete sidewalks and other paved walkways, utility boxes, and concrete bollards. The developed areas within the project site are comprised entirely of the existing schoolyard, which includes areas paved with asphalt and buildings. The developed areas outside of the project site, within the biological study area, consist of residential developments (primarily single-family homes with some multiple family residential buildings). Horticultural landscape is present within the yards of the developed residential areas and existing schoolyard. These managed landscapes are defined as areas planted and maintained with ornamental plant species that receive supplemental irrigation and maintenance to maintain the health and aesthetic appeal of planted species. No special-status species are expected within these areas.

Opportunistic bird species that are tolerant of human disturbance commonly use developed areas. This could include American crow, northern mockingbird, song sparrow (*Melospiza melodia*), house finch (*Haemorrhous mexicanus*), red-tailed hawk, and red-shouldered hawk (*Buteo lineatus*) as examples. Other wildlife that may use developed areas for cover and foraging include western fence lizard and eastern fox squirrel.

Ruderal

Ruderal land cover is dominated by introduced, non-native species that thrive in disturbed places. A small area of ruderal vegetation is present in the northwestern portion of the biological survey area. The vegetation community is dominated by nonnative (some invasive) grasses including ripgut brome (*Bromus diandrus*) and wild oats (*Avena* spp.), with Italian thistle (*Carduus pycnocephalus*) and blackberry (*Rubus* spp.). This area is not open to public foot traffic, as its access is restricted on both sides by fences; trash was observed within this area. The ruderal vegetation does not appear to be maintained in any way. No wildlife was observed using the ruderal vegetation at the time of the survey, and no evidence of wildlife use (i.e., tracks, scat, or burrows) was found.

Riparian Woodland

Riparian woodland land cover is dominated by valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), California sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), with blue oak (*Quercus douglasii*) and interior live oak being less frequent within the corridor. This riparian woodland follows a section

of Chicken Ranch Slough close to the northern boundary of the proposed Katherine Johnson Middle School site. The largest individual trees were observed closest to Chicken Ranch Slough and native oaks were generally of lesser stature within the managed field. The understory was dominated by Himalayan blackberry (*Rubus armeniacus*), California wild rose (*Rosa californica*), and nonnative grasses. Wildlife species observed using the riparian woodland at the time of the survey include American crow, northern mockingbird, bushtit, California towhee (*Melospiza crissalis*), and eastern fox squirrel.

Chicken Ranch Slough

Chicken Ranch Slough is an intermittent stream located immediately north of the project site. At the time of the survey, the section of Chicken Ranch Slough adjacent to the project site contained slow moving water. This open water habitat was approximately 3 feet deep at the time of the survey, varying from approximately 6 to 15 feet wide. The banks are steep and vegetated with ruderal species including wall barley (*Hordeum murinum*), ripgut brome, and English plantain (*Plantago lanceolata*). This feature is surrounded on both sides by riparian woodland, with a nonnative grassland understory. The section of Chicken Ranch Slough in the vicinity of the project site is heavily disturbed. Trash was observed along the banks and within the stream and one encampment was observed between the schoolyard's fence and the slough. One mallard (*Anas platyrhynchos*) was observed swimming downstream.

3.3.2 SENSITIVE BIOLOGICAL RESOURCES

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

SPECIAL-STATUS SPECIES

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

- ▶ Species officially listed by the State of California or the federal government as endangered, threatened, or rare;
- ▶ Candidates for State or federal listing as endangered or threatened;
- ▶ Taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations Section 15380 of the CEQA Guidelines;
- ▶ Species identified by the CDFW as species of special concern;
- ▶ Species listed as fully protected under the California Fish and Game Code;
- ▶ Species afforded protection under local or regional planning documents; and
- ▶ Taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B.

The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:

- ▶ CRPR 1A – Plants presumed to be extinct in California;
- ▶ CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere;
- ▶ CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere;
- ▶ CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere;
- ▶ CRPR 3 – Plants about which more information is needed (a review list); and
- ▶ CRPR 4 – Plants of limited distribution (a watch list).

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

The term “California species of special concern” is applied by CDFW to animals not listed under the ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers, or have limited ranges, and known threats to their persistence currently exist. “Fully protected” was the first state classification used to identify and protect animal species that are rare or facing possible extinction. Most of these species were subsequently listed as threatened or endangered under CESA or ESA. The remaining fully protected species that are not officially listed under CESA or ESA are still legally protected under California Fish and Game Code, as described below in the “Regulatory Framework” section, and qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380.

Special-Status Wildlife

A list of special-status wildlife species that could potentially occur within the project footprint, if suitable habitat conditions were present, was developed through a query of US Fish and Wildlife IPaC data (USFWS 2022a) and the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2022b).

The database searches resulted in 32 special-status animal species being evaluated for their potential to occur in the proposed Katherine Johnson Middle School site or vicinity. A comprehensive table representing these species is included (Biological Resources Survey Report for the Katherine Johnson Middle School Project, Table A-1, posted at: <https://www.sanjuan.edu/buildkjms>). No special-status species were observed within the biological study area. Due to a lack of suitable habitat combined with the highly disturbed nature of the ruderal vegetation and trees within the project site, and the proximity of this vegetation community to roadways and developed properties, it is unlikely that special-status wildlife species would occur in or near the project site. Only low-quality foraging habitat for special-status bird species is present within the project footprint.

Special-Status Plants

A list of special-status plant species that could potentially occur within the project footprint, if suitable habitat conditions were present, was developed through a query of the California Department of Fish and Wildlife

Natural Diversity Database (CDFW 2022b) and the California Native Plant Society Inventory of Rare Plants (CNPS 2022).

The database searches resulted in 17 special-status plant species being evaluated for their potential to occur in the proposed project site. No special-status plant species were observed during the reconnaissance survey. No suitable habitat for special-status plants is present within the project footprint.

Sensitive Natural Communities

California natural communities are categorized by CDFW and partner organizations, such as CNPS, based on vegetation type classification, and are ranked using the same system to assign global and state rarity ranks for plant and animal species in the CNDDDB. Natural communities that are ranked S1–S3 on the Natural Communities List are considered sensitive natural communities by CDFW, to be addressed in the environmental review processes (CDFW 2022a). Riparian habitat is defined separately in the context of Section 1600 of the California Fish and Game Code. According to guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600 Fish and Game Code*, the outer edge of riparian vegetation is a reasonable and identifiable boundary for the lateral extent of a stream, the protection of which should result in preserving the fish and wildlife at risk within a stream or drainage, and therefore may constitute the limits of CDFW jurisdiction along waterways.

There are no sensitive natural communities within the project footprint. Wetland, waters, and riparian communities were identified within the biological study area, including Chicken Ranch Slough and associated riparian area, but these features are located outside of the limits of the project footprint.

Critical Habitats

The USFWS designates critical habitats for species listed as threatened or endangered under the ESA. These habitats include specific geographic areas that contain features essential for the conservation of a threatened or endangered species and may include an area that will be needed for a species' recovery. There are no designated critical habitats in the proposed project footprint or the immediate vicinity (USFWS 2022c).

Migratory Birds and Raptors

The established riparian corridor north of the project footprint provides suitable nest trees for raptors and other migratory birds. Buildings and structures also provide habitat for nesting birds. Foraging habitat identified within the extents of the biological study area was marginal. The Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds, and essentially all native bird species in California are covered by the MBTA. Migratory bird and raptor nests are protected further by Sections 3503 and 3503.5, respectively, of the California Fish and Game code. California Fish and Game Code (CFGF) 3503.5 protects all birds in the orders Accipitriformes, Falconiformes, and Strigiformes (collectively known as raptors or birds of prey) and includes hawks, eagles, falcons, and owls. All other migratory bird species, except for non-native and invasive bird species, are protected under the Migratory Bird Treaty Act described above and by CFGF Section 3503.

The managed field land cover provides marginally suitable foraging habitat and the riparian corridor adjacent to the project offers marginally suitable nesting habitat for birds protected by the Migratory Bird Treaty Act.

Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that may otherwise be separated by rugged terrain, changes in vegetation, and/or areas of human disturbance or urban development. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. The fragmentation of natural habitat creates isolated “islands” of habitat that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations. The proposed Katherine Johnson Middle School site is developed and surrounded by developed land. The only portion of the biological study area which could serve as a wildlife corridor would be the Chicken Ranch Slough and associated riparian corridor, which is outside of the project footprint boundaries.

Aquatic Resources

AECOM biologists reviewed U.S. Geological Survey (USGS) quadrangle maps, the National Wetlands Inventory (USGS 2018a-i; USFWS 2022b), and current and historic Google Earth satellite images of the project area for the presence of aquatic resources. No wetlands were observed during the biological reconnaissance survey, and thus, a wetland delineation was not conducted.

As discussed above, Chicken Ranch Slough is an intermittent stream located immediately north of the project site, but outside of the project footprint.

Project activities are not expected to take place within proximity to stormwater drainageways. An identified stormwater drainage is separated from school facilities by a chain link fence on the west of the project area outside of both the project footprint and the biological study area boundaries.

3.3.3 REGULATORY FRAMEWORK

FEDERAL

Endangered Species Act, 16 U.S.C. Section 1531 Et Seq

Pursuant to the ESA (16 United States Code [U.S.C.] Section 1531 et seq.), USFWS has regulatory authority over species listed or proposed for listing as endangered or threatened. In general, persons subject to ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

Clean Water Act, 33 U.S.C. Section 1251 Et Seq.

Section 404 of the Federal Clean Water Act (CWA) requires a project applicant to obtain a permit from the U.S. Army Corps of Engineers (USACE) before engaging in any activity that involves any discharge of dredged or fill material placed in waters of the United States, including wetlands. Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state’s water quality standards and criteria.

Migratory Bird Treaty Act, 16 U.S.C. Section 703, Et Seq.

The Migratory Bird Treaty Act provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs.

STATE

California Endangered Species Act, California Fish and Game Code Section 2050, et seq.

California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. Furthermore, CESA states that reasonable and prudent alternatives shall be developed by CDFW, together with the project proponent and any state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured. Standard CESA issuance requirements can include land acquisition, permanent protection and management, and/or funding in perpetuity of compensatory lands.

Protection of Bird Nests and Raptors, California Fish and Game Code Section 3503

Section 3503 and 3503.5 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Typical violations include destruction of active nests because of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young.

Porter-Cologne Water Quality Control Act, California Water Code Section 13000, et seq.

The Porter-Cologne Act (California Water Code Section 13000, *et seq.*) requires that each of the state's nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB's jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

LOCAL

County of Sacramento Tree Protection Ordinance

The County of Sacramento Tree Protection Ordinance (Sacramento County Code Chapter 19.12 Tree Preservation and Protection) governs the removal and preservation of trees on public property and specified private property within the County.

3.3.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the CEQA Guidelines, as amended. The proposed project would result in a significant impact related to biological resources if any of the following occur:

- ▶ have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- ▶ interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP.

ANALYSIS METHODOLOGY

The biological resources analyses prepared for this EIR relied on published biological literature, data, maps, and a biological reconnaissance survey. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the thresholds of significance presented in this section. Impacts associated with biological resources that could result from project implementation were evaluated based on existing conditions; expected construction and operational practices; and the materials, locations, and duration of potential demolition, construction, and operational activities. Because the Encina portable classrooms portion of the project would involve placement of portable classrooms on an existing developed parking lot, the impact analysis is focused on the proposed Katherine Johnson Middle School site.

ISSUES NOT EVALUATED FURTHER IN THIS EIR

Substantial adverse effect on any riparian habitat or sensitive natural community. The proposed project would not result in a loss or modification of riparian habitat that would result in deteriorated water quality of Chicken Ranch Slough or deteriorated habitat for any wildlife that may use this habitat. The riparian habitat is not present within the project footprint, only the biological study area. Further, the riparian habitat borders the northern portion of the project site, which is currently a managed field and will remain a managed field under the current project design. The construction activities in this portion of the project site are expected to be minimal.

Canopies of trees within the riparian habitat may cross over the fence-line into the project site, but the need for pruning is not anticipated.

Interference with the movement of native resident or migratory fish; wildlife corridors or nursery sites.

The proposed project will not interfere with the movement of native resident or migratory fish, wildlife corridors or nursery sites. Chicken Ranch Slough and the associated riparian corridor could be used as a corridor for wildlife or movement of fish, and nursery sites; however, the project footprint does not encroach into this area. Additionally, project construction would be temporary and any disturbance from noise would be minor.

Conflict with the provisions of an adopted HCP. The proposed project would not conflict with the provisions of an adopted HCP because it is not located within an area with an adopted HCP.

IMPACT ANALYSIS

IMPACT 3.3-1 Loss of nesting habitat and temporary construction impacts on special-status nesting birds and common nesting bird species. *Project activities, including tree removal, building demolition, and site development activities, could result in loss of suitable nesting habitat for special-status bird species (Swainson's hawk, white-tailed kite, and northern harrier) and common bird species protected under California Fish and Game Code and the MBTA. This impact is considered **potentially significant**.*

Project activities, including tree removal, building demolition, and site development activities, could result in loss of suitable nesting habitat for special-status bird species (Swainson's hawk, white-tailed kite, and northern harrier) and common bird species protected under California Fish and Game Code and the MBTA. Construction activities could have direct or indirect impacts to nesting migratory birds. Direct impacts could occur through removal of vegetation, trees, or structures containing nests, and through noise and other disturbances during demolition and construction activities. Construction activities could potentially result in nest abandonment by the adults and mortality of chicks and eggs. Loss of the nests of common bird species (those not meeting the definition of special status as provided above) would not be a significant impact under the California Environmental Quality Act because it would not result in a substantial impact on local or regional populations; however, destruction of active bird nests is a violation of the Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code. This impact is considered **potentially significant**.

Mitigation Measure 3.3-1: Avoid Impacts on Special-Status and Common Nesting Migratory Birds

SJUSD will require the selected contractor/s to implement the following measures during demolition and construction activities to avoid adverse effects to special-status nesting birds and common nesting birds.

- Wherever feasible, the contractor will conduct construction activities that could potentially affect special-status nesting birds and common nesting birds during the nesting season. The nesting season for Swainson's hawk is March 1 to September 15 and the nesting season for common nesting birds (raptors, passerines) February 1 to August 31. If construction activities are completed outside of these nesting seasons, no additional measures are required to avoid adverse effects on nesting birds.
- If construction activities that could affect suitable habitat for nesting birds cannot be conducted outside of the nesting seasons listed above, a qualified biologist shall complete pre-construction surveys for nesting birds (including raptor and passerine nest surveys). Surveys will be conducted by

a qualified biologist within suitable nesting habitat that could be affected by construction activities (e.g., staging areas, access routes) and will include a 500-foot buffer area (or larger area if required by established survey protocol) surrounding these areas. Surveys for Swainson's hawk nests will extend 0.25 miles beyond the project boundaries to the extent that access is available. The qualified biologist will complete preconstruction surveys within 1 week of the start of construction activities, and will be repeated if construction activities lapse for more than 1 week. If no nesting birds are detected during preconstruction surveys, no additional measures are required.

- Buffers will be marked on plans and specifications and in the field by a qualified biologist using temporary fencing, high-visibility flagging, or other means that are equally effective in clearly delineating the buffers.
- Construction activities will not occur within the buffer unless the qualified biologist determines that such construction activities would not adversely affect nesting activities. Construction activities that may impact special-status nesting birds occurring within the avoidance buffer indicated in Table 2 will be monitored by a qualified biologist either continuously or periodically during work, as determined by the qualified biologist. The qualified biologist will be empowered to stop construction activities that, in the biologist's opinion, threaten to cause unanticipated and/or unpermitted adverse effects on nesting birds (e.g., nest abandonment). Buffers will be maintained until there is no longer a threat of disturbance to the nesting bird (e.g., young have fledged, individuals have moved out of the area), as determined by a qualified biologist.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-1 would reduce potentially significant impacts to nesting migratory birds and raptors by requiring preconstruction surveys if construction occurs within the nesting season, the establishment of non-disturbance buffers around active nests during construction, and biological monitoring. Implementing this mitigation measure would reduce project impacts on nesting birds and raptors to a **less-than-significant** level.

IMPACT 3.3-2 Have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. *However, with implementation of grading, erosion control, and stormwater pollutant laws, regulations, and permit conditions, and implementation of site-specific BMPs, this impact would be less than significant.*

The construction activities taking place will be restricted to the project site, which is void of any wetland or aquatic features. However, the project site is within 25 feet of Chicken Ranch Slough, a tributary to the American River. Construction activities could have direct or indirect impacts on the water quality of Chicken Ranch Slough in the event of a spill, or from fugitive dust resulting from excavation and fill. Introduction of sediments or hazardous materials (e.g., fuels, oils, and solvents) from construction activities could adversely affect aquatic resources downstream of the project site.

As described in detail in Impact 3.7-1, in the Hydrology and Water Quality Section of this EIR, existing regulations would apply to the proposed project and would be implemented to reduce or avoid impacts related to erosion, sedimentation, and water quality degradation during construction as described above under the Regulatory Framework section. For example, SJUSD must obtain a grading permit from the County, which will

include permit terms and conditions requiring implementation of erosion and sediment control BMPs to protect receiving water quality (such as Chicken Ranch Slough). Furthermore, projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB's Construction General Permit, which requires preparation of a SWPPP and implementation of BMPs to prevent soil erosion and discharge of other construction-related pollutants such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. With the implementation of these existing regulations, including permit conditions, the impact would be **less than significant**.

Please refer to Section 3.7 of this EIR for a discussion on hydrology and water quality.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.3-3 **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.** *The proposed project and construction activities would have direct or indirect impacts to native oak trees protected under the Sacramento County Tree Preservation Ordinance. Direct impacts would occur through the removal or trimming of protected oak trees. Indirect impacts could occur from compaction of soils containing roots. The impact is potentially significant.*

A tree inventory was conducted on April 2, 2022, by AECOM biologists under the guidance of International Society of Arboriculture (ISA) Certified Arborist, Keith Wright (#WE-10700A) and an Arborist Report prepared (AECOM 2022b). All trees in the project site with a single trunk diameter at breast height (dbh) of 6" or greater, or multi-trunked tree having an aggregate diameter of 10 inches or greater were included in the inventory. Trees with more than 1/3rd of their canopy overhanging the project site were included in the inventory. The inventory consisted of visual assessments from ground level. Data collected for inventoried trees included:

- ▶ Global positioning system (GPS) location (latitude/longitude)
- ▶ Unique Tree Identification (ID)
- ▶ Common name and genus/species
- ▶ Number of stems
- ▶ Dbh: the minimum dbh for measurement is >6 inches per tree or >10 inches combined dbh for trees with multiple stems.
- ▶ Approximate height: Height was estimated in 5-foot increments.
- ▶ Tree Health: Alive or Dead
- ▶ Approximate Canopy Diameter

Trunk diameters were measured using a diameter tape. Trunk diameter measurements were taken at 4.5 feet (54 inches) above the ground, with the following exception. In cases where a tree's trunk split into multiple stems at approximately 4.5 feet above ground, the measurement was made by taking the diameter of each individual stem

and calculating the aggregate total. The location of each tree was mapped with a handheld GPS controller paired with Trimble R1 Global Navigation Satellite System (GNSS) receiver capable of sub-meter accuracy.

Native oak trees are protected under Sacramento County's Tree Preservation Ordinance. The ordinance defines tree with protections as follows:

"As used in this chapter, a "tree" shall mean any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground (dbh). As used in this chapter, a "tree" shall mean any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground (dbh)." (Sacramento County 2022)

The results of the tree inventory were compared with conceptual site plans to determine which trees may require removal to accommodate project development. Where possible, trees were evaluated for retention and inclusion in the post-development landscape. Based on this assessment, one of two impact status categories were assigned to each protected tree: (1) retain on site; or (2) remove to accommodate construction.

The tree inventory evaluated 37 trees total, 22 of which may be subject to removal to accommodate the proposed project. Seven County protected native oak trees, all of which are valley oaks (*Quercus lobata*), may be removed and their description and location is detailed in the Arborist Report (AECOM 2022b). This impact is **potentially significant**.

Mitigation Measure 3.3-2: Avoid Impacts on Protected Trees

Prior to project construction, the San Juan Unified School District (District) shall contact the County of Sacramento's tree administrator to discuss the proposed activity and if deemed necessary, the tree administrator will inspect the site of the proposed activity. After consultation between the District and the tree administrator, if the tree administrator determines that a permit is required, the District shall apply for a permit and comply with relevant permit conditions, including permit conditions that may be met through on-site replanting and the landscaping plan. The application for a tree permit would contain the following information:

1. Location, size and species of the tree(s);
2. The type of activity for which the permit is sought;
3. A statement of the reasons for the activity; and
4. Funds for an arborist report, if applicable.

Significance after Mitigation

As needed, the District will obtain the proper County tree permits for trees to be removed or trimmed, which require tree protection measures to avoid damaging protected trees, a replanting security, and required replanting mitigation ratios and/or fees for off-site mitigation. Mitigation or planting in accordance with the County Ordinance will reduce impacts to **less than significant with mitigation** because it would require the replacement of trees removed or damaged by the proposed project and/or funding to do so.

3.4 CULTURAL RESOURCES

3.4.1 ENVIRONMENTAL SETTING

The project site is in the southern Sacramento Valley, on a flat alluvial plain. Based on geologic mapping prepared by Gutierrez (2011), the project site is located in the Pleistocene-age Riverbank Formation, which predates the arrival of humans in the area. While cultural resources sites can be found on such landforms they cannot be found in subsurface contexts.

In an attempt to unify the various hypothesized cultural periods in California, Fredrickson (1973: 112-116) proposed an all-encompassing scheme for cultural development, while acknowledging that these general trends may manifest themselves differently and that there may be some variation between sub-regions. These general cultural periods (Paleo-Indian, Early, Middle and Late Archaic, and Emergent periods) are used in this section in connection with the North-Central Sierra Nevada chronology because of their relevancy to the vicinity of the project.

The Late Pleistocene Pattern and Period (>10,000 Before Present [B.P.]) in the foothill and eastern Sacramento Valley is practically non-existent. Sites CA-SAC-370 and CA-SAC-379, located near Rancho Murieta, produced numerous bifaces, cores, and raw materials from gravel strata estimated to be between 12,000 and 18,000 years in age. Early Holocene Pattern and Period (circa [ca.] 10,000–7000 B.P.) is defined as a human adaptation to lake, marsh, and grassland environments that were prevalent at this time. Appearing after 11,000 years B.P., the tradition slowly disappeared ca. 8000–7000 B.P.

During the Archaic Pattern and Period – (ca. 7000–3200 B.P.), the climate in the valleys and foothills of Central California became warmer and drier, and millingsstones are found in abundance.

The Early and Middle Sierran Pattern (ca. 3200–600 B.P.) evidences an expansion in use of obsidian, which is interpreted with reservation to indicate an increase in regional land use, and the regular use of certain locales. During this time, a much heavier reliance on acorns as a staple food develops, and supports large, dense populations.

During the Late Sierran Period (ca. 600–150 B.P.), archaeological village sites generally correspond to those identified in the ethnographic literature. Diagnostic artifacts are small contracting stem points, clam shell disk beads, and trade beads introduced near the end of the period, marking the arrival of European groups (Beardsley 1954:77–79; Elsasser 1978:44; Fredrickson 1973).

The project site is situated in the Nisenan (sometimes referred to as the Southern Maidu) sphere of influence. The Nisenan territory included the drainages of the Yuba, Bear, and American rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. In the Nisenan territory, several political divisions, constituting tribelets, each had their own respective headmen who lived in the larger villages. However, it is not known which of these larger population centers wielded more influence than others, although they were all located in the foothill areas. In general, more substantial and permanent Nisenan villages were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground (Bennyhoff 1961:204–209; Wilson and Towne 1978: 387).

HISTORICAL SETTING

The Arcade area was once part of the 44,000-acre Rancho Del Paso Mexican land grant secured by Eliab Grimes in 1844. The southern boundary of the rancho fell along the north bank of the American River with approximate modern boundaries of Northgate Boulevard on the west, Elkhorn Boulevard on the north, and Manzanita Avenue to the east. Until his death in 1848, Eliab Grimes and his business partner John Sinclair, who was the alcalde of Sacramento, operated the rancho as a wheat and cattle ranch. Grimes did not have children and left his portion of the rancho to his nephew Hiram Grimes, who purchased Sinclair's share of the rancho in 1849. Hiram Grimes then sold the entire rancho to San Francisco merchant and trader Samuel Norris. Members of Eliab Grimes' family took Norris to court in the 1850s over the legality of the rancho purchase, and after accruing a decade's worth of legal fees, Norris sold the rancho to his lawyers Lloyd Tevis and James Ben Ali Haggin (*Sacramento Union* 1914 January 6; Beck and Haase 1974: 28).

Tevin and Haggin retained ownership of the ranch lands for nearly half a century with a shared vision to keep the ranch intact.¹ In 1891, Tevis and Haggin began planning for the eventual sale of the rancho to a single buyer who would parcel out the land by incorporating the Rancho Del Paso Land Company and selling their holdings to the corporation for \$10. A suitable buyer was secured in 1910 when the Sacramento Valley Colonization Company purchased the 44,000-acres for \$1.5 million (*Engineering & Mining Journal* 1914 September 19; *Thoroughbred Record* 1915 September 11; *Sacramento Union* 1891 September 19; *Sacramento Union* 1914 January 6).

Sacramento Valley Colonization Company immediately started improvements to the tract of land including removing fences, cutting a few new roads, and creating parcels as small as 10 acres each. The company sold to both private individuals and other development companies, such as the Haggin Grant Irrigated Land Company, which purchased 1200-acres in 1911. The last of the former Del Paso Rancho land was sold in December of 1915 in an 814-acre purchase by another subdivider (Ehrenreich-Risner 2010: 4; *Sacramento Union* 1911 April 15; *Sacramento Union* 1915 December 25).

Although many development companies purchased large tracts for residential subdivisions, the Arcade area was relatively untouched for 30 years. Into the late 1930s, the former rancho land remained mostly rural, with some small orchards, and the Del Paso County Club which was established in 1916. Not until after World War II did development in Arcade area begin in earnest, with a patchwork of small-scale subdivisions that quickly spread in all directions (Sacramento County Planning & Community Development 1980:1; Laval Company Inc. 1937; HistoricAerials.com 1947, 1957).

The post-war growth experienced throughout the country also occurred in the Sacramento regions, and 75 percent of the Arden-Arcade land area was developed by the mid-1960s, with large-scale residential subdivisions, shopping centers and schools. Residents of this 18-square-mile area have opposed annexation to the City of Sacramento - both in the 1960s and most recently in the 2000s (Sacramento County Planning & Community Development 1980: 1-2).

¹ The men owned 400,000 acres throughout California and operated their own wheat, hops, cattle, and sheep operations and also leased land to farmers. Haggin set aside a portion of Rancho Del Paso to establish a thoroughbred horse racing ranch.

3.4.2 RESEARCH METHODOLOGY

A records search, Native American consultation, fieldwork, and archival research were conducted to establish what cultural resources and tribal cultural resources may be present within the project site and, furthermore, may be impacted as a result of the implementation of the proposed project. The analysis is also informed by the provisions and requirements of state and local laws and regulations that apply to cultural resources and tribal cultural resources.

NCIC RECORDS SEARCH

A records search was completed for the project site and a 0.25-mile buffer by staff at the North Central Information Center (NCIC) at California State University, Sacramento in Sacramento on June 6, 2022 (NCIC File No. 22-116) of the California Historical Resource Information System (CHRIS). The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the Office of Historic Preservation (OHP) Built Environment Resources Directory (BERD).

PREVIOUS CULTURAL STUDIES

The records search indicated that no previous cultural studies have been conducted within the project site and that no previously documented resources are within the project site. A total of 10 studies (Table 3.4-1) have been conducted within 0.25 of the project site, which resulted in the documentation of one resource, the El Camino Baptist Church (P-34-1560). The resource is approximately 0.13-mile southwest from the project site and was previously determined ineligible for listing in the National Register of Historic Places by consensus through the Section 106 of the National Historic Preservation Act.

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission (NAHC) was contacted on May 9, 2022, requesting a search of its Sacred Lands File (SLF) and an Assembly Bill (AB) 52 CEQA Tribal Consultation List. The NAHC responded on July 8, 2022, with a positive result for the project site. AECOM contacted the two tribal representatives identified by the NAHC for more information on July 26, 2022. The NAHC also provided a list of Native American tribal contacts who may have additional knowledge relating to cultural resources in the area.

On July 5, 2022, AECOM, on behalf of the SJUSD, initiated AB 52 consultation by sending letters to the list of Native American tribal contacts with a description of the project and maps depicting the project site. Wilton Rancheria responded via email on July 27, 2022, to initiate consultation under AB 52, and the District met with representatives in July and August of 2022 and incorporated recommendations into the mitigation for this EIR.

United Auburn Indian Community (UAIC) responded via email on August 4, 2022, that the tribe responded to the NOP for the project on June 23, 2022, and expressed concerns regarding the potential sensitivity for buried tribal cultural resources to be present, specifically near Chicken Ranch Slough. UAIC indicated that if Wilton Rancheria was actively consulting on the project, UAIC will officially defer to them; however, request for the CEQA document (which were previously stated in the response to the NOP) were provided.

Table 3.4-1. Studies within 0.25-mile of the Project Site

NCIC Report No.	Title	Author (Date)
002018	An Archaeological Survey of the Proposed Hobson Use Permit (Control No. 89-UP-1486).	Derr (1990)
002020	An Archaeological Survey of the Proposed Hobson Use Permit (Control No. 89-UP-1486).	Derr (1992)
002766	Cultural Resource Assessment of a 6.6-acre parcel at 2700 Fulton Avenue	Peak (2001)
007543	Fulton & El Camino/ SC-15226	Billat (2006)
007543a	Cultural Resources Study of the Fulton & El Camino Project, T-Mobile Site No. SC15226, 2805 El Camino Avenue, Sacramento, Sacramento County, California 95821	Supernowivz (2006)
008619	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Arrington (2006)
010569	Cultural Resources Study of the El Camino Sidewalk Improvement Project, Control Number 2007-70025, Sacramento County, California	Maniery (2010)
011179	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate SC15226A (El Camino & Fulton), 2809 El Camino Avenue, Sacramento, Sacramento County, California	Wills (2010)
011242	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SC15226A (El Camino & Fulton), 2809 El Camino Avenue, Sacramento, Sacramento County, California	Crawford (2012)
011522	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SC15226A (El Camino & Fulton), 2809 El Camino Avenue, Sacramento, Sacramento County, California	Depietro et al. (2014)
011625	Collocation ("CO") Submission Packet: FCC Form 621. T-Mobile West, LLC	Wills and Crawford (2014)

Notes: APE = Area of Potential Effect; NCIC = Northern California Information Center

Source: NCIC, Data compiled by AECOM; All reports are on file at the NCIC

CULTURAL RESOURCE INVESTIGATIONS

Cultural resource investigations consisted of an assessment of the built environment i.e., the existing Creekside School and an archaeological pedestrian survey. AECOM Architectural Historian Chandra Miller conducted a site visit on July 5, 2022, to document the extant buildings on the property. The Creekside School built environment was recorded by AECOM on Department of Parks and Recreation (DPR) 523 series forms with a historical context and evaluation of significance. The result of the built environment investigation is summarized below.

Built Environment Investigation

Based on review of historical maps from the 1880s through early 1900s, the site of the extant Creekside School was within the former Rancho Del Paso Mexican land grant owned by J.B. Haggin and was undeveloped with an unnamed waterway (Britton & Rey 1885; USGS 1891; USGS 1901). The first map with the waterway named was in 1911 as Chicken Ranch Slough and the current site was still undeveloped (USGS 1911). In 1925, the current site of the Creekside School was within the Del Paso Park View Tract No. 2 that subdivided sections 27 and 30 of the former Rancho Del Paso land grant in 1914. The Creekside School is on what was historically Lot 212 which spanned 15.08 acres (Sacramento County Assessor 1925). The earliest aerial photographs of the property from 1928 and 1937 illustrate the property as undeveloped with a few trees south of Chicken Ranch Slough and much

of the area covered with low-lying wetlands (Fairchild Aerial Surveys 1928; Laval Company Inc. 1937). It appears the current school site was undeveloped until the construction of the school in 1952.

Creekside School is constructed in the “finger-style” plan and the original campus was completed in 1953 for the Arcade School District. The complex consists of a tall multi-purpose building and a kitchen building section, an administration building, two classroom wings with four classrooms, one classroom wing with six classrooms, and one restroom building. A two-room classroom (added in 1957), six modern portable classrooms (added in 1998 and 2016–2018), and one storage shed (likely built in 1953) are also on the campus. All the permanent buildings and the shed are designed in the Contemporary style and are connected through covered, flat roof walkways. The main building components are wood framed with vertical and horizontal wood siding, geometric concrete panels, stucco, brick veneer, and a combination of flat and low-pitched shed roofs.

The Arcade School District was established in 1885. The first school in the district was constructed four years earlier along Chicken Ranch Slough around the area of present-day Wright Street between Marconi and El Camino avenues, west of the present-day Creekside School. This one-room schoolhouse, which is no longer extant, was called Chicken Ranch Slough School but was changed to Arcade School when the school district was established. By 1923, a more modern Arcade School was built at the current location on Edison and Watt avenues in 1923 (Cowan 1990: 4, 11). The student population in the district began to dramatically increase starting in 1938 when the nearby Sacramento Army Air Depot (now known as McClellan Air Force Base) opened. By the end of 1940, the Arcade School had an attendance of nearly 225 students and six teachers. A series of classroom additions were made to Arcade School in 1939 and 1940 in order to accommodate the booming student population which had increased by 227 percent in five years (*Sacramento Bee* 1941 January 18; *Sacramento Bee* 1940 December 11).

In 1945, the Arcade School District asked prolific local school architect Gordon Stafford to serve as the district architect. In the post-war years, Arden School District, like other school districts around Sacramento, were forced to operate under a double-session program with morning and afternoon classes to accommodate the students at overcrowded schools while new schools were under construction. The district was forced to operate double-sessions at different schools between 1948 and 1958. Peak crowding occurred for a time in 1950–1951 when all 1st through 8th grades at all of the schools had to operate in double-sessions, but were relieved when three schools opened that year. By 1954, the Arcade School District’s and adjacent Arden School District’s building programs provided sufficient numbers of classrooms to accommodate all of the students in the Arden-Arcade area and nearly ended the practice of double sessions. In 1960, the Arcade School District was one of six local school districts that consolidated to form the SJUSD. All told, between 1940 and 1960, the Arcade School District constructed 14 new schools, including Creekside School, all designed by Gordon Stafford (*Sacramento Bee* 1946 January 15; Cowan 1990: 36-37, 41, 53).

Bids for the construction of Gordon Stafford’s design for Creekside School were called for in the spring of 1952 and Guth & Schmidt Construction Company secured the contract with a low bid of \$376,986 in May 1952 (*Sacramento Bee* 1952 April 12; *Sacramento Bee* 1952 May 3). The school was named “Creekside” after the proximity of Chicken Ranch Slough that serves as the northern boundary of the parcel (*Sacramento Bee* 1953 April 4). Site preparation for construction began in July on the 14-room elementary school with a multi-purpose room with kitchen that would accommodate 450 students from the nearby Penland Park and Dunmovin Heights residential subdivisions (*Sacramento Bee* 1952 July 19). The school officially opened on April 6, 1953, but only

for first, second, and third graders. Kindergarten and fourth through sixth grades would be added to the school in the fall of 1953, with plans to eventually accommodate seventh and eighth graders. Opening of the school ended double sessions in the Arcade Elementary School District, but four more schools and additions to existing schools were planned to anticipate the area's growing student population (*Sacramento Bee* 1953 April 4). A small, two-classroom building was added to the campus along the southern parcel boundary in 1957 and paved play areas were added in the 1960s. A semi-permanent portable addition was added on the west end of the north wing in 1998 and the extant portable classrooms moved to the property between 2016 and 2018 (DLR 2014: 3-5; CAS 1964, 1971; Google Earth Pro 1993, 1998, 2016).

In 1981, budget cuts and decreased enrollment rates forced the SJUSD to study its 53 elementary schools for future consolidation or closures. One of the four closed elementary schools was the nearby Pope Avenue School. When it was closed in 1981, the students were divided between Creekside School and Del Paso Manor School (*Sacramento Bee* 1981 March 7). Even through consolidation, enrollment in the area schools continued to decline over the decades and SJUSD ultimately closed Creekside School in June 2005 (*Sacramento Bee* 2005 June 9). The Sacramento County Office of Education leased the property, but it sat vacant until 2009 when it was leased by Keystone Education to be used as a special needs school called "Pathway to Choices" that closed in 2015. The following year the SJUSD began offering English as a Second Language (ESL) classes at the former Creekside School campus which developed into the Creekside Adult Center, the current use of the property (*Sacramento Bee* 2008 October 28; *Sacramento Bee* 2009 October 28; DLR 2014: 3; CAERC May 2016: 2, 6-7).

Archaeological Investigation

AECOM Archaeologist Diana Ewing conducted an intensive-level pedestrian survey of the entire project site on July 5, 2022, using parallel transects spaced at 12 to 15 meters. Surface visibility ranged from 90 percent in the main field by the paved parking lot to 60 percent at the community garden. Modern refuse including outdoor furniture was abundant in the area of the community garden. No archaeological resources were observed.

3.4.3 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

National Historic Preservation Act

The 1966 National Historic Preservation Act (NHPA) set forth national policy for recognizing and protecting historic properties. It established the NRHP, State Historic Preservation Officers and programs, and the Advisory Council on Historic Preservation. The implementing regulations for Section 106, Title 36, Section 800 of the Code of Federal Regulations, set forth specific steps federal agencies must follow in order to take into account the effects of their projects on historic properties. In most cases, compliance with Section 106 is carried out by federal agencies through consultation with the State Historic Preservation Officer, and in the case of projects involving tribal lands, with the tribal representative. Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA.

The NRHP - the nation's master inventory of known historic resources - is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic,

architectural, engineering, archaeological, and cultural value. The formal criteria (contained in Title 36, Section 60.4 of the Code of Federal Regulations) for determining NRHP eligibility are as follows:

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

Ordinarily, buildings and structures less than 50 years old are not considered eligible for listing in the NRHP. A resource that lacks integrity or does not meet one of the NRHP criteria is not considered a historic property under federal law, and effects to such a resource are not considered significant under the NHPA.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Environmental Quality Act and the California Register of Historical Resources

Under CEQA, lead agencies must consider the effects of their projects on historical resources. CEQA defines a “historical resource” as a resource listed in, or determined to be eligible for listing in, the CRHR, a resource included in a local register of historical resources, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5[a] of the Guidelines). Sacramento County does not currently have a local register. Public Resources Code Section 5024.1 requires that any properties that can be expected to be directly or indirectly affected by a proposed project be evaluated for CRHR eligibility. According to Public Resources Code Section 5024.1(c)(1–4), a resource may be considered historically significant if it retains integrity and meets at least one of the following criteria. A property may be listed in the CRHR if the resource:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

To be considered eligible, a resource must meet one of the above stated criteria and also retain integrity. Integrity has been defined by the National Park Service as consisting of seven elements: location, design, setting, materials, workmanship, feeling, and association.

Impacts to historical resources that materially impair those characteristics that convey its historical significance and justify its inclusion or eligibility for the NRHP or CRHR are considered a significant effect on the environment (CEQA Guidelines 15064.5).

In addition to historically significant resources, which can include archaeological resources that meet the criteria listed above, an archeological site may meet the definition of a “unique archeological resource” as defined in Public Resources Code Section 21083.2(g):

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Public Resources Code Section 21083.2 (a), (b) and (c)). CEQA Guidelines Section 15064.5, subdivision (e), requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). Public Resources Code Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the most likely descendant. With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by the NAHC. The most likely

descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains, and items associated with Native Americans.

Assembly Bill (AB) 52

AB 52 (effective July 1, 2015) added Public Resources Code Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, relating to consultation with California Native American tribes, consideration of “tribal cultural resources,” and confidentiality. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of effects on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the environment. Lead agencies must avoid damaging effects to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential.

AB 52 requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation. Section 21080.3.1(d) states that within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project location and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to requests consultation pursuant to this section.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Sacramento County General Plan

Though not applicable to the project directly, the County’s General Plan addresses cultural resources and the summary below is provided for context.

The *Sacramento County General Plan of 2005–2030* (Sacramento County 2011, as updated in 2017) Conservation Element, states under Section VI, Cultural Resources, the following goal and six objectives:

- GOAL:** Promote the inventory, protection and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic historical, religious or socio-economic importance.
1. Comprehensive knowledge of archeological and historic site locations.
 2. Attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to Native American values.
 3. Structures with architectural or historical importance preserved to maintain contributing design elements.

4. Known cultural resources protected from vandalism unauthorized excavation, or accidental destruction.
5. Properly stored and classified artifacts for ongoing study.
6. Public awareness and appreciation of both visible and intangible historic and cultural resources.

To implement the primary goal and the objectives, the Conservation Element contains the following policies:

- ▶ **CO-150.** Utilize local, state and national resources, such as the NCIC, to assist in determining the need for a cultural resources survey during project review.
- ▶ **CO-152.** Consultations with Native American tribes shall be handled with confidentiality and respect regarding sensitive cultural resources on traditional tribal lands.
- ▶ **CO-154.** Protection of significant prehistoric, ethnohistoric and historic sites within open space easements to ensure that these resources are preserved in situ for perpetuity.
- ▶ **CO-155.** Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinterment shall have priority. The project developer shall provide the burden of proof that off-site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.
- ▶ **CO-157.** Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.

3.4.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate a project's impacts to cultural resources under CEQA are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

- ▶ Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 15064.5;
- ▶ Cause a substantial adverse change in the significance of an archeological resource pursuant to Public Resources Code Section 15064.5; or
- ▶ Disturb any human remains, including those interred outside of dedicated cemeteries.

IMPACT ANALYSIS

IMPACT 3.4-1 Substantial adverse change in the significance of a historical resource. *No historical resources have been identified within the project site. **No impact** would occur.*

The Creekside School campus was evaluated for the CRHR and does not meet any of the criteria for listing and, therefore, is not a historical resource for the purposes of CEQA. Because Creekside School is not a historical resource, there would be no impact from project construction activities. This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code. As no historical resources have been identified, **no impact** would occur. The Encina portables component of the proposed project would involve minor trenching and placement of portable classrooms on an existing parking lot and therefore there is no impact.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.4-2 Substantial adverse change in the significance of an archeological resource. *Although no significant archaeological resources are known to exist within the project site, it is possible that previously undiscovered cultural resources could be inadvertently exposed during project ground-disturbing activities. Unless properly evaluated and managed, this could result in a significant impact to archaeological resources. This impact is considered **potentially significant**.*

Previous studies and the current investigation did not result in the identification of archaeological resources in the proposed project site as defined by Section 15064.5 of CEQA. The project site is on Pleistocene-aged landform; therefore, it is unlikely that undiscovered subsurface cultural resources are present. However, a possibility still exists that archaeological features could be discovered in the project site. The impact is considered **potentially significant**. The Encina portables component of the proposed project would involve minor trenching and placement of portable classrooms on an existing parking lot and therefore there is no impact.

Mitigation Measures

Mitigation Measure 3.4-2: Avoid Potential Effects on Archaeological Resources

In the event that archaeological cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are discovered during project ground-disturbing activities, all ground disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can access the significance of the find. If it is a precontact archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the project applicant to avoid disturbance to the resources and, if complete avoidance is not possible, follow accepted professional standards in recording any find including

submittal of the standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project site (the North Central Information Center [NCIC]).

Significance after Mitigation

Adherence to this mitigation measure would reduce potentially significant impacts to cultural resources because mitigation would be implemented in coordination with the appropriate agency(ies) and tribes to avoid, move, record, or otherwise treat discovered resources appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid disturbance, disruption, or destruction of cultural resources, this impact would be reduced to a **less-than-significant** level.

IMPACT 3.4-3 Disturbance of human remains including those interred outside of dedicated cemeteries. *Although there is no evidence of human remains, future ground-disturbing activities in the project site could adversely affect presently unknown burials. This impact is considered **potentially significant**.*

There has been no indication or evidence that the area has been used for human burials in the recent or distant past. Therefore, human remains are unlikely to be encountered. Project construction would involve grading, trenching, excavation, and potentially other earthmoving activities. Human remains are unlikely to be encountered. However, in the unlikely event that human remains are discovered during subsurface activities, they could be inadvertently damaged. Therefore, this impact would be **potentially significant**. The Encina portables component of the proposed project would involve minor trenching and placement of portable classrooms on an existing parking lot and therefore there is no impact.

Mitigation Measures

Mitigation Measure 3.4-3: Stop Work If Human Skeletal Remains Are Uncovered, and Follow the Procedures Set Forth in CEQA Guidelines Section 15064.5(e)(1).

SJUSD shall require the following steps to be taken as a part of contracts related to construction of the project in the event of the accidental discovery or recognition of any human remains:

- (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 (NAHC) within 24 hours (pursuant to Health and Safety Code Section 7050[c]);
 - (2) the NAHC shall identify the person or persons it believes to be the most likely descendant from the deceased Native American pursuant to the provisions of Public Resources Code Section 5097.98; and

- (3) the most likely descendant may make recommendations to the SJUSD/contractors, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resources Code Section 5097.98; or
- (2) Where the following conditions occur, SJUSD/contractors shall assist the most likely descendant with repatriation of Native American remains and associated grave goods, as directed by the mostly likely descendant, with appropriate dignity on the property in a location not subject to further subsurface disturbance:
 - (A) the NAHC 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 NAHC;
 - (B) the most likely descendant identified fails to make a recommendation; or
 - (C) SJUSD rejects the recommendation of the most likely descendant, and mediation by the NAHC fails to provide measures acceptable to SJUSD.

Significance after Mitigation

If remains are encountered, the above-described mitigation measure would require compliance with the procedures in Section 7050.5 of the California Health and Safety Code and Public Resources Code 5097.98. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area can occur until the county coroner has examined the remains. Public Resources Code Section 5097.94 identifies the responsibilities for acting upon notification of a discovery of Native American human remains. These procedures are specifically designed to reduce the adverse effect of project implementation related to human remains by requiring that the human remains are treated in an appropriate and respectful manner and in accordance with applicable laws and regulations. Therefore, this impact would be reduced to a **less-than-significant** level.

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3.5 GEOLOGY AND PALEONTOLOGICAL RESOURCES

3.5.1 ENVIRONMENTAL SETTING

GEOLOGY

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are located in the Sacramento Valley, which forms the northern third of California's Great Valley geomorphic province. The Great Valley is composed of thousands of feet of sedimentary deposits that have undergone periods of subsidence and uplift over millions of years. During the Jurassic and Cretaceous Periods of the Mesozoic era (206–144 million years B.P.), the Great Valley existed in the form of an ancient ocean. By the end of the Mesozoic era (144 million years B.P.), the northern portion of the Great Valley began to fill with sediment as tectonic forces caused uplift of the basin. By the time of the Miocene epoch, approximately 24 million years B.P., sediments deposited in the Sacramento Valley were mostly of terrestrial origin.

Most of the surface of the Great Valley is covered with Holocene (11,700 years B.P. to present day) and Pleistocene (11,700–2.3 million years B.P.) alluvium. This alluvium is composed of sediments from the Sierra Nevada to the east and the Coast Ranges to the west that were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary deposits underlie the Quaternary alluvium.

Based on a review of available geologic mapping (Gutierrez 2011, Helley and Harwood 1985), the proposed Katherine Johnson Middle School project site is underlain by the Pleistocene-age Riverbank Formation. The Riverbank Formation is composed of weathered reddish gravel, sand, and silt forming clearly recognizable alluvial terraces and fans. The Riverbank Formation stands topographically above the younger alluvial terraces formed by the Modesto Formation, but below the older alluvial terraces formed by the Turlock Lake Formation. In the Sacramento Valley, the Riverbank Formation contains more mafic igneous rock fragments, as composed to the more arkosic nature of this formation in the San Joaquin Valley. The age of the Riverbank Formation ranges from approximately 130,000 to 450,000 years B.P. (Helley and Harwood 1985). The Encina High School portable classroom site is underlain by Holocene-age Basin Deposits (Gutierrez 2011).

PALEONTOLOGICAL RESOURCES

Paleontological Sensitivity Assessment Criteria

A paleontologically sensitive geologic formation is one that is rated high for potential paleontological productivity (i.e., the recorded abundance and types of fossil specimens, and the number of previously recorded fossil sites) and is known to have produced unique, scientifically important fossils. Exposures of a specific geologic formation at any given project site are most likely to yield fossil remains representing particular species or quantities similar to those previously recorded from that geologic 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 formation.

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology (SVP 2010) established four categories of sensitivity for paleontological resources: high, low, no, and undetermined. Areas where fossils have been previously found are considered to

have a high sensitivity and a high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas consisting of high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) are considered to have no sensitivity. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys are performed. After reconnaissance surveys, a qualified paleontologist can determine whether the area of undetermined sensitivity should be categorized as having high, low, or no sensitivity. In keeping with the SVP significance criteria, all vertebrate fossils are generally categorized as being of potentially significant scientific value.

Paleontological Sensitivity Assessment

As noted above, the Encina High School is underlain by Holocene-age Basin Deposits, which are too young to contain unique paleontological resources. The proposed Katherine Johnson Middle School project site is underlain by the Riverbank Formation. A records search of the U.C. Berkeley Museum of Paleontology (UCMP) was performed by AECOM in July 2022; there are no recorded fossil localities within the proposed Katherine Johnson Middle School project site (UCMP 2022). However, vertebrate fossil specimens of Columbian mammoth and specimens from the genus *Equus* (which includes horses, donkeys, and zebras) were recovered from Chicken Ranch Slough near the proposed Katherine Johnson Middle School project site in 1968 (UCMP 2022).

Remains of land mammals have been found at several localities in alluvial deposits referable to the Riverbank Formation in the Sacramento and San Joaquin Valleys. 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 (1991b) lists a variety of different fossils localities in the Sacramento and San Joaquin Valleys that are referable to the Riverbank Formation. For example, the Teichert Gravel Pit, along State Route 16 in Sacramento County (also UCMP localities V-69129 and V-75126) 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).

Other fossil localities in the Riverbank Formation in Sacramento County were recovered during construction of 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. Pleistocene-age mammoth remains were discovered in 2004 during excavation of a SMUD trench in Elk Grove (Kolber 2004). UCMP locality V-74086, located in south Sacramento at Ehrhardt Avenue, also contained fossilized Rancholabrean-age mammoth remains. The other two UCMP sites in Sacramento—localities V-6747 and V-3524—contained remains of Rancholabrean-age camel and *Equus*.

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 tiger from sediments referable to the Riverbank Formation (Hay 1927; UCMP 2022). Three sites in Sutter County have yielded Rancholabrean vertebrate fossils recovered from Pleistocene-age sediments, which may be referable to the Riverbank Formation (UCMP 2022). 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 several other locations in the San Joaquin Valley (UCMP 2022), including Lathrop, Modesto, Stockton, Tracy (along the Delta-Mendota Canal), Manteca, and Merced.

Because of the large number of vertebrate fossils that have been recovered from the Riverbank Formation, it is considered to be of high paleontological sensitivity.

SEISMICITY

With the exception of the Cleveland Hills fault located near Lake Oroville, the Sacramento Valley has not been seismically active in the last 11,700 years (Holocene time). Faults with known or estimated activity during the Holocene are generally located in the Coast Ranges and the San Francisco Bay Area to the west, and the Lake Tahoe area to the east (Jennings and Bryant 2010). The proposed Katherine Johnson and Encina school campuses are not located within an Alquist-Priolo Earthquake Fault Zone (California Geological Survey [CGS] 2022) or within or immediately adjacent to the trace of any other known fault (Jennings and Bryant 2010). Both school campuses are located in an area with a low potential for strong seismic ground shaking (CGS 2008; Branum et al. 2016). The school campuses and the surrounding areas are nearly flat; therefore, landslides do not represent a hazard.

Liquefaction represents a hazard in areas that are composed of younger (Holocene-age), unconsolidated alluvial deposits, in areas where the groundwater table is near the surface, and where active seismic sources are nearby. Because the proposed Katherine Johnson Middle School project site is composed of stable, consolidated Pleistocene-age rock formations (Gutierrez 2011); because active seismic sources are a relatively long distance away from both school campuses (Jennings and Bryant 2010); and groundwater is present at a depth of approximately 90 feet below the surface at the proposed Katherine Johnson Middle School project site and approximately 75 feet below the surface at the Encina High School portable classroom site (California Department of Water Resources [DWR] 2021), liquefaction at either school campus is unlikely.

SOILS

Soil properties influence the development of building sites, including the engineering design, construction techniques, and site maintenance. A review of the Natural Resources Conservation Service (NRCS 2021) soil survey data indicates that nearly the entire proposed Katherine Johnson Middle School project site consists of the San Joaquin-Urban Land complex, 0–3 percent slopes. Approximately 0.5 acre in the southwest corner of the project site is composed of Urban Land¹, and approximately 0.1 acre in the southeast corner of the site is composed of the Xerarents²-Urban Land-San Joaquin complex, 0–5 percent slopes. NRCS does not provide soil characteristics for Urban Land or Xerarents. The San Joaquin-Urban Land complex, which comprises most of the project site, has a low shrink-swell potential, is moderately well drained, and has a moderate permeability. The San Joaquin-Urban Land complex soil type also has a moderately high wind erosion potential, a moderate water erosion potential, and is assigned to hydrologic group C (meaning that it has a moderately slow infiltration rate when thoroughly wet and a correspondingly moderate stormwater runoff rate). The NRCS ratings indicate that the

¹ Soils in areas of high population density in the largely built environment. These soils can be substantially changed human-transported materials, human-altered materials, or minimally altered or intact “native” soils.

² Imported fill material.

San Joaquin-Urban Land complex soil does not have any limitations for construction of buildings such as the new school buildings proposed at the project site (i.e., structures that are less than three stories tall, constructed on conventional spread footings of reinforced concrete, and built on undisturbed soil at a depth of at least 2 feet below the surface).

Soil at the proposed Encina High School portable classroom site is composed of Urban Land, and the Urban Land-Xerarents-Fiddymment Complex, 0-8 percent slopes (NRCS 2021). These soils have been substantially modified by human activities, and likely consist of artificial fill as a result of previous school development activities. The NRCS has not provided ratings for characteristics associated with these soil types.

3.5.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Earthquake Hazards Reduction Act, Public Law 95–124

The Earthquake Hazards Reduction Act (enacted in 1977), established the National Earthquake Hazards Reduction Program (amended in 1990), which includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code Sections 2621–2630

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting on structures designed for human occupancy. The main purpose of the law is to prevent the construction of structures used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. Earthquake Fault Zones are generally one-quarter mile wide or less (i.e., approximately 650 feet on both sides of the actual fault trace). The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed structures would not be constructed across active faults.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that respective cities or counties with jurisdiction over a project may withhold development permits until geologic or soils investigations are conducted

for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U.S. Environmental Protection Agency (55 Code of Federal Regulations 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the SWRCB's jurisdiction is administered through nine regional water quality control boards. Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. SWRCB's statewide storm water general permit for construction activity (Order 2009-009-DWQ as amended by Order No. 2012-0006-DWQ) requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a storm water pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction. (See Section 3.7 of this Draft EIR, "Hydrology and Water Quality," for more information about the NPDES permit program and SWPPPs.)

California Building Standards Code, California Code of Regulations Title 24

The State of California provides minimum standards for building design through the California Building Standards Code (CBC) (CCR Title 24). The CBC applies to building design and construction in the state and is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC requires an evaluation of seismic design that falls into Categories A–F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Public Resources Code Section 5097.5 – Paleontological Resources

California Public Resources Code (PRC) Section 5097.5 prohibits excavation or removal of any “...vertebrate paleontological site, including fossilized footprints...or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.” Section 5097.5 also states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor. Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Sacramento County General Plan

The *Sacramento County General Plan of 2005–2030* (Sacramento County 2017) includes the following policies related to geology and paleontological resources, which are provided for context.

Safety Element

- ▶ **Policy SA-1:** The County shall require geotechnical reports and impose the appropriate mitigation measures for new development located in seismic and geologically sensitive areas.

Conservation Element

- ▶ **Policy CO-26:** Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.
- ▶ **Policy CO-28:** Comply with other water quality regulations and NPDES permits as they apply to County projects or activities, such as the State's Construction General Permit and Aquatic Pesticides Permit.
- ▶ **Policy CO-161:** As a condition of approval for discretionary projects, require appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources.
- ▶ **Policy CO-162:** Projects located within areas known to be sensitive for paleontological resources, should be monitored to ensure proper treatment of resources and to ensure crews follow proper reporting, safeguards and procedures.
- ▶ **Policy CO-163:** Require that a certified geologist or paleo resources consultant determine appropriate protection measures when resources are discovered during the course of development and land altering activities.

Sacramento County Land Grading and Erosion Control Ordinance

Sacramento County Municipal Code Title 16, Chapter 16.44, requires a Grading and Erosion Control Permit from the County if a project involves grading, filling, excavation, storage, or disposal of 350 cubic yards or more of soil or other earthen material, or if a project requires clearing and grubbing of 1 acre or more of land. The permit

application must include proposed grading plans that include a variety of information such as location of all watercourses, wetlands, and drainage systems; proposed grading, slopes, and elevation shown by contours; quantity of material to be excavated; location, implementation schedule, and maintenance schedule of all erosion control measures and sediment control measures to be implemented; description of measures designed to control dust and stabilize the construction site road and entrance; and description of the location and methods of storage and disposal of construction materials.

3.5.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to geology or paleontological resources if it would:

- ▶ directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 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;
 - strong seismic ground shaking;
 - seismic-related ground failure, including liquefaction; or
 - landslides;
- ▶ result in substantial soil erosion or the loss of topsoil;
- ▶ be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or
- ▶ 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;
- ▶ 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; or
- ▶ directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Paleontological Resources

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on paleontological resources if it would directly or indirectly destroy a unique paleontological resource or site. 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 several factors: 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 generally are 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 generally are considered scientifically important because they are relatively rare.

ANALYSIS METHODOLOGY

The paleontological resources analysis prepared for this EIR relied on published geologic literature and maps, and a paleontological records search performed at the UCMP. The geology, seismicity, and soils analyses relied on published seismic, geologic, and soils data and maps. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the thresholds of significance presented in this section. Impacts associated with geology, seismicity, soils, and paleontological resources that could result from project implementation were evaluated based on existing conditions; expected construction and operational practices; and the materials, locations, and duration of potential demolition, construction, and operational activities.

ISSUES NOT EVALUATED FURTHER IN THIS EIR

Risks to People or Structures Caused by Surface Fault Rupture—The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are not located within an Alquist-Priolo Earthquake Fault Zone or within or immediately adjacent to the trace of any other known fault. Thus, there would be no impact, and this issue is not evaluated further in this EIR.

Risks to People or Structures Caused by Liquefaction—Because the proposed Katherine Johnson Middle School project site is composed of stable, Pleistocene-age rock formations; active seismic sources are a relatively long distance away from both Katherine Johnson and Encina; and groundwater is present at a depth of approximately 75–90 feet below the surface at both school campuses, liquefaction is unlikely. Thus, there would be no impact, and this issue is not evaluated further in this EIR.

Risks to People or Structures Caused by Landslides—The proposed Katherine Johnson Middle School project site, the Encina High School portable classroom site, and the surrounding areas are nearly flat, and therefore

landslides would not represent a hazard. Thus, there would be no impact, and this issue is not evaluated further in this EIR.

Risks to People or Structures Caused by Construction in Unstable Soils—The NRCS soil survey ratings indicate that soil at the proposed Katherine Johnson Middle School project site is not limited for construction of buildings such as those required for the new school buildings. The depth to groundwater in the project area is approximately 90 feet below the ground surface, and the proposed Katherine Johnson Middle School project site is underlain by compacted artificial fill and the stable Pleistocene-age Riverbank Formation. The Encina High School site would only require minor earthmoving activities for the portable classrooms, groundwater is approximately 75 feet below the surface, and the site is underlain by compacted artificial fill associated with former school development. Furthermore, since both school campuses and the surrounding areas are flat, landslides would not represent a hazard. Therefore, hazards from construction in unstable soils are unlikely. Thus, there would be no impact, and this issue is not evaluated further in this EIR.

Risks to People or Structures from Construction in Expansive Soil—Based on a review of NRCS soil survey data, soils at the proposed Katherine Johnson Middle School project site have a very low expansion potential. Because the Encina High School portable classroom site is composed of compacted artificial fill, there would also be a very low, to no, expansion potential. Thus, there would be no impact, and this issue is not evaluated further in this EIR.

Soil Suitability for Septic Systems—The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are located within an area served by a municipal wastewater system. Wastewater generated by the existing school facilities is conveyed off site via local facilities operated by the Sacramento Area Sewer District (SASD) and larger regional facilities operated by the Sacramento County Regional Sanitation District (RegionalSan) to the Sacramento Regional Wastewater Treatment Plant for treatment. The new school buildings on the campuses would connect to underground SASD conveyance lines. Because the proposed project would not require installation of a septic system or alternative wastewater disposal system, there would be no impact, and this issue is not evaluated further in this EIR.

Destruction of a Unique Geologic Feature—A unique geologic feature consists of a major natural element that stands out in the landscape, such as a large and scenic river, gorge, waterfall, volcanic cinder cone, lava field, or glacier. These features are considered outstanding examples that are regarded as the best of their kind. Both school campuses and the surrounding areas are flat and are developed with urban uses. There are no unique geologic features at either school site or within the project viewshed. Thus, there would be no impact and this issue is not addressed further in this EIR.

IMPACT ANALYSIS

- IMPACT 3.5-1** **Potential Risks to People and Structures Caused by Strong Seismic Ground Shaking.** *The proposed Katherine Johnson Middle School and Encina High School campuses are located in a region of low seismic activity; however, strong seismic ground shaking could still occur. A site-specific geotechnical report with project-related engineering and construction recommendations for seismic design would be prepared. In compliance with CDE and CBC requirements, recommendations in the geotechnical report would be implemented to reduce potential hazards to people and structures from strong seismic ground shaking to the maximum extent practicable. This impact is considered **less than significant**.*

The nearest active faults are located approximately 37–45 miles to the northwest and southwest, respectively. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, and site soil conditions. The 2016 map showing the probabilistic *Earthquake Shaking Potential for California* (digitized by the California Department of Conservation in 2018) indicates that the proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are in the lowest potential shaking hazard intensities. Regions in the low intensity categories are distant from known, active faults and are projected to experience lower levels of shaking less frequently. In most earthquakes, only weaker, masonry buildings would be damaged. However, very infrequent large magnitudes earthquakes could still cause strong ground shaking (Branum, et al. 2016). All project-related facilities would be designed and constructed in accordance with standard engineering practices and CDE requirements, including California Code of Regulations Title 5, Division, Chapter 14, Sections 14001-14036, which requires preparation of a site-specific geotechnical and engineering report that contains recommendations to reduce seismic, geologic, and soils hazards. The new school buildings are required by law to be designed and constructed in accordance with the current edition of the CBC, which contains engineering and design requirements that are specifically intended to reduce the loss of life and property from seismic hazards (see subsection 3.5.2, “Regulatory Framework.” The site-specific geotechnical report would be prepared according to CBC requirements, and all recommendations contained therein would be implemented as required by the CDE. Because the original Creekside School buildings were constructed in 1953 with various additions and modernizations over time, the proposed Katherine Johnson Middle School project would result in an improvement in terms of seismic safety by constructing new buildings that meet the current building standards code, which is more protective. Therefore, this impact would be **less than significant (beneficial)**.

Mitigation Measure

No mitigation measures are required.

- IMPACT 3.5-2** **Potential for Short-Term Temporary Construction-Related Soil Erosion.** *Construction would require grading and excavating that would increase the potential for construction-related soil erosion from wind and water, and the potential for siltation of local drainages from construction-related stormwater runoff. However, compliance with SWRCB requirements to prepare and implement a SWPPP and associated BMPs would reduce the potential for construction-related erosion. This impact is considered **less than significant**.*

Project implementation would include earthmoving activities on approximately 5.5 acres of the approximately 9.75-acre proposed Katherine Johnson Middle School project site (most of the existing outdoor turf playfields would remain in place), and on approximately 0.3 acres at the Encina High School portable classroom site. Based

on NRCS (2021) soil survey data for Sacramento County, the proposed Katherine Johnson Middle School project site consists primarily of the San Joaquin-Urban Land complex. The San Joaquin-Urban Land complex has a moderately high wind erosion hazard, a moderate water erosion hazard, and a moderate stormwater runoff potential. The Encina High School portable classroom site is composed of compacted artificial fill. Earthwork would include soil removal; grading; trenching and pipe installation; installation of building, road, and parking lot foundations; and landscaping. Construction activities during the winter months would expose soils to rain events, which could mobilize loose soil and result soil erosion. Subsequent soil transport during storm events could result in sedimentation both within and downstream of the project site. Furthermore, earthmoving activities during the dry summer months could result in wind erosion.

However, all project-related facilities would be designed and constructed in accordance with standard engineering practices and CDE requirements, including California Code of Regulations Title 5, Division, Chapter 14, Sections 14001-14036, which requires preparation of a site-specific geotechnical and engineering report that contains recommendations to reduce seismic, geologic, and soils hazards, including soil erosion. The District is also required to obtain a grading permit from the County, which requires submittal of plans that include the location, implementation schedule, and maintenance schedule of all erosion control measures and sediment control measures to be implemented; description of measures designed to control dust and stabilize the construction site road and entrance; and description of the location and methods of storage and disposal of construction materials.

Furthermore, as discussed above in subsection 3.5.2, “Regulatory Framework” and in more detail in Section 3.7, “Hydrology and Water Quality,” because the proposed project would disturb more than 1 acre of land, the District would be required by law to prepare a SWPPP and to implement associated BMPs that are specifically designed to reduce construction-related erosion. Construction techniques that could be implemented to reduce the potential for stormwater runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers and re-seeding and mulching to revegetate disturbed areas.

Compliance with CDE requirements, along with preparation of a SWPPP and implementation of BMPs designed to control stormwater runoff and reduce erosion as required by the SWRCB, and implementation of County grading permit terms, would result in a **less-than-significant** impact from construction-related soil erosion.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.5-3 **Damage to or Destruction of Unique Paleontological Resources During Earthmoving Activities.** *The proposed Katherine Johnson Middle School project site is composed of the Riverbank Formation, which is paleontologically sensitive. Although any fossil remains that may have been present were likely destroyed during the original construction of the school in 1953 and subsequent additions and modernizations, earthmoving activities associated with the proposed project could encounter native, undisturbed soils. Therefore, project-related construction activities could result in accidental damage to, or destruction of, unknown unique paleontological resources. This impact is considered **potentially significant**.*

The proposed installation of portable classrooms at Encina High School would take place primarily in an asphalt parking lot, and a small area of grass, which are comprised of compacted artificial fill underlain by Holocene-age

Basin Deposits, which are not paleontologically sensitive. Therefore, construction-related earthmoving activities at the Encina High School portable classroom site would have **no impact** on unique paleontological resources.

Based on regional geologic mapping (Gutierrez 2011, Helley and Harwood 1985) the proposed Katherine Johnson Middle School project site consists of the Pleistocene-age Riverbank Formation. As discussed in detail above in subsection 3.5.1, “Environmental Setting,” the Riverbank Formation is considered to be of high paleontological sensitivity because numerous vertebrate fossil specimens have been recovered from this formation throughout the Sacramento and San Joaquin valleys. This formation is present both at and beneath the surface throughout the project site.

The proposed Katherine Johnson Middle School project site was developed as a school in 1953, with various additions and modernizations over the years. Therefore, any fossils that may have originally been present at the project site have likely long since been destroyed during repeated development at the school campus from 1953 to the present. However, because the new school would be completely reconfigured and facilities would be located on different parts of the project site, and given that excavation ranging from 6–8 feet below the ground surface may be required for utilities, project-related construction activities may encounter native soils and therefore could result in accidental damage to or destruction of unique paleontological resources. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 3.5-3: 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 earth-moving activities at the proposed Katherine Johnson Middle School site, the District shall implement the measures described below.

- Prior to the start of earthmoving activities at the proposed Katherine Johnson Middle School site, the District shall require training to inform all construction personnel involved with earthmoving activities 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. This worker training may either be prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources, or prepared and presented separately by a qualified paleontologist.
- If paleontological resources are discovered during earthmoving activities, the construction contractor shall immediately cease work in the vicinity of the find and notify the District. The District shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan based on Society of Vertebrate Paleontology Guidelines (SVP 2010). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the District to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-3 would reduce project-related impacts on unique paleontological resources from construction at the proposed Katherine Johnson Middle School site to a **less-than-significant** level because construction workers would be alerted to the possibility of encountering paleontological resources and, in the event that resources were discovered, fossil specimens would be recovered and recorded and would undergo appropriate curation.

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3.6 GREENHOUSE GAS EMISSIONS

This section provides background information about greenhouse gas (GHG) emissions and climate change; an overview of state and local GHG emissions inventories; an overview of the existing GHG regulatory context; a summary of the methods used to estimate GHG emissions attributable to the project; and an analysis of potential GHG emissions impacts of the proposed project. Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. Cumulative emissions from many projects and activities affect global GHG concentrations and the climate system. Unlike criteria air pollutants and toxic air contaminants that tend to have more localized or regional impacts, GHG emissions are pollutants of a global concern because of their relatively longer atmospheric lifetimes compared to air pollutant emissions and effect on the climate globally. The proposed project will not, by itself, contribute significantly to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system. Therefore, this section considers the project's cumulative contribution to the significant cumulative impact of climate change.

3.6.1 ENVIRONMENTAL SETTING

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space through the atmosphere. However, infrared radiation is selectively absorbed by GHGs in the 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 Earth. Anthropogenic (e.g., human caused) emissions of GHGs lead to atmospheric levels in excess of natural ambient concentrations and have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

The Intergovernmental Panel on Climate Change (IPCC) concluded that variations in natural phenomena, such as solar radiation and volcanoes, produced most of the warming of the earth from pre-industrial times to 1950. Some variations in natural phenomena also had a small cooling effect. From 1950 to the present, increasing GHG concentrations resulting from human activity, such as fossil fuel burning and deforestation, have been responsible for most of the observed temperature increase (IPCC 2021).

Global surface temperature has increased by approximately 1.96 degrees Fahrenheit (°F) over the last 140 years (IPCC 2021); the likely total human-caused global surface temperature increase is 1.93°F. The rate of increase in global average surface temperature has not been consistent; the last four decades have warmed at a much faster rate per decade (IPCC 2021).

During the same period when increased global warming has occurred, many other changes have occurred in other natural systems. Sea levels have risen; precipitation patterns throughout the world have shifted, with some areas becoming wetter and others drier; snowlines have increased elevation, resulting in changes to the snowpack, runoff, and water storage; and numerous other conditions have been observed. Although it is difficult to prove a definitive cause-and-effect relationship between global warming and other observed changes to natural systems,

there is a high level of confidence in the scientific community that these changes are a direct result of increased global temperatures caused by the increased presence of GHGs in the atmosphere (IPCC 2021).

PRINCIPAL GREENHOUSE GASES AND SOURCES

GHGs are present in the atmosphere naturally, are released by natural and anthropogenic (human-caused) sources, and are formed from secondary reactions taking place in the atmosphere. Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; volcanic activity; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels by stationary and mobile sources, waste treatment, and agricultural processes. The following are the principal GHG pollutants that contribute to climate change and their primary emission sources:

- ▶ Carbon Dioxide (CO₂): Natural sources of CO₂ include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; and evaporation from oceans. Anthropogenic (human) sources include burning of coal, oil, natural gas, and wood.
- ▶ Methane (CH₄): CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- ▶ Nitrous Oxide (N₂O): N₂O is produced by both natural and human-related sources. Primary human-related sources of N₂O are agricultural soil management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. N₂O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests.
- ▶ Fluorinated gases: These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes called High Global Warming Potential (High GWP) gases. These High GWP gases include:
 - Chlorofluorocarbons (CFCs): These GHGs are used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants.
 - Perfluorinated Chemicals (PFCs): PFCs are emitted as by-products of industrial processes and are also used in manufacturing.
 - Sulfur hexafluoride (SF₆): This is a strong GHG used primarily as an insulator in electrical transmission and distribution systems.
 - Hydrochlorofluorocarbons (HCFCs): These have been introduced as temporary replacements for CFCs and are also GHGs.
 - Hydrofluorocarbons (HFCs): These were introduced as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are GHGs emitted as by-products of industrial processes and are also used in manufacturing.

GHGs are not monitored at local air pollution monitoring stations and do not represent a direct impact to human health. Rather, GHGs generated locally contribute to global concentrations of GHGs, which result in changes to the climate and environment.

GLOBAL WARMING POTENTIAL

GWP is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time the gas remains in the atmosphere (its “atmospheric lifetime”). The GWP of each gas is measured relative to CO₂. Therefore, CO₂ has a GWP of 1. GHGs with lower emissions rates than CO₂ may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO₂ (i.e., high GWP). For example, SF₆, while comprising a relatively small fraction of the total GHGs emitted annually worldwide, has a GWP of 22,800, meaning that 1 ton of SF₆ has the same contribution to the greenhouse effect as approximately 22,800 tons of CO₂. The concept of CO₂ equivalence (CO₂e) is used to account for the different GWP potentials of GHGs. GHG emissions are typically measured in terms of pounds or tons of CO₂e and are often expressed in metric tons (MT) CO₂e.

Climate change is a global issue because GHGs can have global effects, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern (see Section 3.2, “Air Quality”). Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years), or long enough to be dispersed around the globe.

POTENTIAL EFFECTS OF CLIMATE CHANGE

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The IPCC’s 2021 Synthesis Report indicated that warming of the climate system is unequivocal and, since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2021).

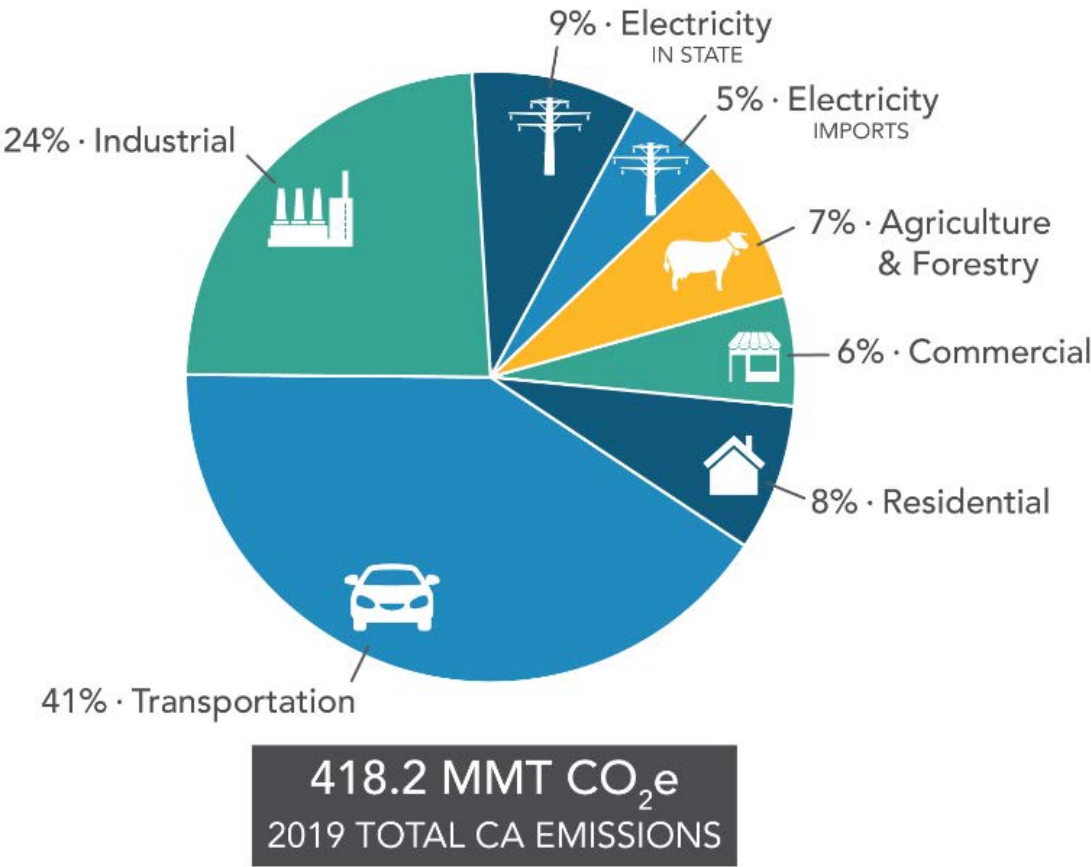
Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. As noted in the Sacramento Valley Regional Report of the California’s Fourth Climate Change Assessment, climate change is expected to make the Sacramento region hotter, drier, and increasingly prone to extremes like megadroughts, flooding, and large wildfires. These changing conditions are likely to affect water and energy availability, agricultural systems, plants and wildlife, public health, housing, and quality of life.

In Sacramento County, primary effects of climate change include increased temperature, changes in precipitation patterns, and sea level rise and secondary consequences include increased frequency, intensity, and duration of extreme heat days and heat waves/events; loss of snowpack and decreased water supplies; increased wildfire; and increased flooding (Sacramento County 2017, 2022).

STATE GREENHOUSE GAS EMISSIONS INVENTORY AND TRENDS

The CARB prepares an annual inventory of statewide GHG emissions. GHGs are typically analyzed by sector, a term that refers to the type of activity. As shown in Exhibit 3.6-1, 418.2 million MT CO₂e were generated in

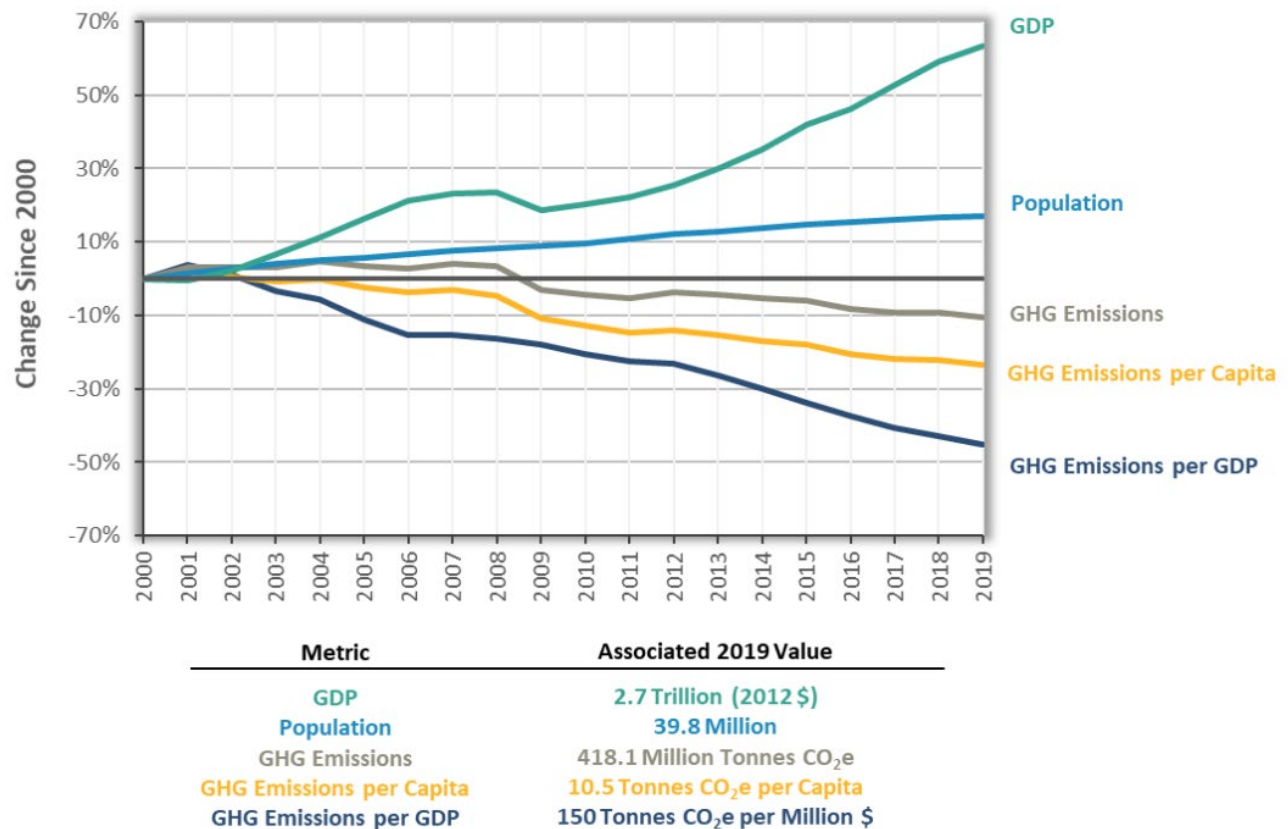
2019. Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2019, accounting for 41 percent of total GHG emissions. Transportation was followed by industry, which accounted for 24 percent, and then the electric power sector (including in-state and out-of-state sources), which accounted for 14 percent of total GHG emissions (CARB 2021a).



Source: CARB 2021a

Exhibit 3.6-1. 2019 California Greenhouse Gas Emissions Inventory by Sector

California has implemented several programs and regulatory measures to reduce GHG emissions. Exhibit 3.6-2 demonstrates California’s progress in reducing statewide GHG emissions. Since 2007, California’s GHG emissions have been declining, even as population and gross domestic product have increased. Per-capita GHG emissions in 2019 were 25 percent lower than the peak per-capita GHG emissions recorded in 2001. Similarly, GHG emissions per million dollars of gross domestic product have decreased by 47 percent since the peak in 2001.



Source: CARB 2021b

Exhibit 3.6-2. Trends in California Greenhouse Gas Emissions (Years 2000 to 2019)

3.6.2 REGULATORY FRAMEWORK

While most do not directly inform proposed project implementation or impact determination, federal, state, regional, and local GHG-related plans, policies, and regulations are helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions.

FEDERAL

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA). On April 2, 2007, the U.S. Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities (including California) along with several environmental organizations sued to require EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 [2007]). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that EPA had the authority to regulate GHGs.

U.S. EPA "Endangerment" and "Cause or Contribute" Finding

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- ▶ **Endangerment Finding:** The current and projected concentrations of the six key GHGs—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- ▶ **Cause or Contribute Finding:** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

STATE

The legal framework for GHG emission reductions has come about through Executive Orders, legislation, and regulations. The major *components* of California's climate change initiatives are outlined below.

Executive Order S-3-05

Executive Order S-3-05 issued in recognition of California's vulnerability to the effects of climate change, set forth the following *target* dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive Order B-55-18

Executive Order B-55-18 established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The Executive Order states that this new goal is in *addition* to the existing statewide targets of reduced GHG emissions.

Assembly Bill 32 and the State Climate Change Scoping Plan

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in Executive Order S-3-05: reduce GHG emissions below 1990 levels by 2020. AB 32 also identifies CARB as the State *agency* responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

In December 2008, CARB adopted the Climate Change Scoping Plan (Scoping Plan), which contains the main strategies California will implement to achieve the required GHG reductions required by AB 32 (CARB 2008). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of California's GHG inventory. CARB acknowledges *that* land use planning decisions will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan details the regulations, alternative compliance mechanisms, voluntary actions and incentives, etc. proposed to meet the target emission reduction levels.

Executive Order B-30-15

Executive Order B-30-15 *established* a statewide GHG emissions reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and Governor Brown's Executive Order S-3-05 goal of reducing statewide emissions 80

percent below 1990 levels by 2050. In addition, the executive order aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

Senate Bill 32

Approval of SB 32 in September 2016 extended the provisions of AB 32 from 2020 to 2030 with a new target of 40 percent below 1990 levels by 2030, in alignment with the goal established under Executive Order B-30-15. The companion bill, AB 197, adds two non-voting members to the CARB, creates the Joint Legislative Committee on Climate Change Policies consisting of at least three Senators and three Assembly members, requires additional annual reporting of emissions, and requires Scoping Plan updates to include alternative compliance mechanisms for each statewide reduction measure, along with market-based compliance mechanisms and potential incentives

Senate Bill 1078 (2002), Senate Bill 100 (2021) – California Renewable Portfolio Standard

Established in 2002 by SB 1078, *California's* Renewables Portfolio Standard (RPS) requires electricity providers (i.e., utilities, cooperatives, and community choice aggregators) to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. Since 2002, state legislative actions have modified and accelerated the RPS several times, resulting in one of the most ambitious renewable energy standards in the country. Most recently, SB 100 increased the RPS target to require retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030 with new interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045.

Executive Order B-16-12

Executive Order B-16-12 orders State entities under the direction of the Governor including CARB, the Energy Commission, and Public Utilities Commission to support the rapid commercialization of zero emission vehicles (ZEV). It directs these entities to achieve various benchmarks related to zero emission vehicles, including:

- ▶ Infrastructure to support up to one million zero emission vehicles by 2020;
- ▶ Widespread use of zero emission vehicles for public transportation and freight transport by 2020;
- ▶ Over 1.5 million zero emission vehicles on California roads by 2025;
- ▶ Annual displacement of at least 1.5 billion gallons of petroleum fuels by 2025; and
- ▶ A reduction of GHG emissions from the transportation sector equaling 80 percent below 1990 levels by 2050.

Executive Order S-01-07 (Low Carbon Fuel Standard)

Executive Order S-01-07 (17 CCR 95480 et seq.) requires the State to achieve a 10 percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a discrete early action item under AB 32, and the final CARB resolution (No. 09-31) adopting the LCFS was issued on April 23, 2009. CARB re-adopted LCFS in 2015.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen Code), which establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This code went into effect as part of local jurisdictions' building codes on January 1, 2011. The 2013 update to the code has been adopted and became effective January 2014. Another update to the energy efficiency standards became effective January 1, 2017. The 2016 update to the Building Energy Efficiency Standards became effective on January 1, 2020, and improved the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The new standards address non-residential development, as well, and build on the energy efficiency progress made within previous iterations. The California Energy Commission adopted the 2022 Energy Code on August 11, 2021, and in December of 2021, this new Code was approved by the California Building Standards Commission. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. It goes into effect on January 1, 2023 (CEC 2022).

LOCAL

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) regulates local air quality and air quality sources in Sacramento County. In the *CEQA Guide to Air Quality Assessment*, SMAQMD includes a GHG chapter that discusses the recommended approach to evaluating GHG emissions. SMAQMD states that GHG emissions should first be evaluated and addressed on a program level, if possible. For project-level analyses, in April 2020, SMAQMD adopted updated GHG thresholds of significance for land use development project operational emissions to assist lead agencies in determining significance for proposed projects during CEQA review. The thresholds include showing consistency with the 2017 Climate Change Scoping Plan. The SMAQMD guidance is further detailed below in the "Thresholds of Significance." SMAQMD also includes a list of analysis expectations and methodologies for CEQA analyses. The SMAQMD guidance is discussed further in the "Thresholds of Significance" subsection below.

3.6.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

GHG emissions have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. It is unlikely that a single project will contribute significantly to climate change, but cumulative emissions from many projects could affect global GHG concentrations and the global climate system. Therefore, impacts are *analyzed* within the cumulative context of the project's potential contribution to the significant impact of global climate change.

Based on Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact from GHG emissions if it would:

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

Section 15064.4(b) of the CEQA Statute and Guidelines, concerning determining the significance of impacts from GHG emissions, states that a lead agency may consider the following three factors in assessing the significance of impacts from GHG emissions.

- ▶ The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- ▶ Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- ▶ The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to support determinations of significance. The project site is located within unincorporated Sacramento County in an area regulated by the SMAQMD. In April 2020, the SMAQMD Board of Directors adopted the Update to the Recommended GHG Emissions Thresholds of Significance, which established thresholds of significance for GHG emissions designed to analyze a project's compliance with applicable State laws, including AB 32 and SB 32 (SMAQMD 2020a). In developing the thresholds, the SMAQMD developed the thresholds for Sacramento County based on determining Sacramento County's share of statewide 2030 GHG emissions by sector, determining the share of Sacramento County 2030 emissions from existing development versus new development, allocating 2030 GHG emissions from new development among land uses and place types to set numeric thresholds, and setting best management practices by land use and place types that achieve those numeric thresholds.

Specifically, the SMAQMD adopted a mass emissions-based threshold for the construction phase of all project types of 1,100 MT CO₂e per year (SMAQMD 2020b). With regard to operational emissions, the SMAQMD's technical support document, *SMAQMD Greenhouse Gas Thresholds/Best Management Practices Applicability*, identifies operational measures that should be applied to a project to demonstrate consistency with the 2017 Climate Change Scoping Plan (SMAQMD 2020c). The measures target GHG emissions inventory areas where State measures did not fully achieve reductions, allowing for local supportive measures. These measures are known as Tier 1 and Tier 2 Best Management Practices (BMPs). The tier 1 BMPs are:

- ▶ BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and

- ▶ BMP 2 - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle (EV) capable spaces shall instead be EV ready.

If Tier 1 BMPs are not fully implemented, then emissions, including natural gas emissions, should be estimated; on-site measures should be implemented to the maximum extent feasible; the project should have the capacity to be all-electric in the future; and BMP 2 requirements should be met. If emissions exceed 1,100 metric tons/year, then SMAQMD recommends that the subject project implement SMAQMD's Tier 2 BMP:

- ▶ BMP 3 - residential projects shall achieve a 15% reduction in vehicle miles traveled per resident and office projects shall achieve a 15% reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.

If the project achieves BMP 3, then the operational impact is considered less than significant, and no further analysis is needed. Relative to BMP 1, Katherine Johnson Middle School will be an all-electric school. Relative to BMP 3, SMAQMD does not provide guidance for public facility projects.

Having established the State policy and regulatory framework for assessing cumulative significance of GHG emissions, and using the SMAQMD GHG thresholds adopted to support a project's review to demonstrate the required GHG emissions rate to achieve consistency with State legislation and Executive Orders, this analysis answers the two checklist questions provided by CEQA Guidelines Appendix G in a single impact assessment. Whether or not the proposed project would generate GHG emissions that would result in a substantial contribution to the significant impact of climate change or conflict with an applicable plan, policy, or regulation adopted for the purposes of reduction GHG emissions depends on whether the proposed project would comply with the SMAQMD thresholds of significance.

ANALYSIS METHODOLOGY

Short-term construction and decommissioning activities and long-term operations of the proposed project would generate GHG emissions associated with off-road and on-road exhaust. Construction-related and operational GHG emissions were modeled using the same methods and assumptions as those described in Section 3.2, "Air Quality," of this EIR. In addition to criteria air pollutants, CalEEMod also estimates GHG emissions associated with construction and operational activities. For construction, GHG emissions were estimated for off-road construction equipment, material delivery trucks, haul trucks, and construction worker vehicles. For operational activities, CalEEMod estimates GHG emissions associated with mobile, area, and energy sources, similar to criteria air pollutant emissions. However, CalEEMod also estimates indirect GHG emissions associated with solid waste disposal and water consumption.¹

As noted for the air quality analysis, although the majority of the proposed project's vehicle trips would not be new (i.e., current operational trips by staff and students/families to and from the school would shift in location from the existing site to the proposed relocated school) and building operations would be more efficient than those of the existing much older buildings that would be demolished, to ensure conservative results, the analysis

¹ A technical appendix is posted on the District's website with model details, assumptions, inputs, and outputs. Please see: <https://www.sanjuan.edu/buildkjms>.

of mobile-source and building operations emissions accounts for the gross emissions of the proposed project and does not attempt to discount or “net out” current operations from the project-generated emissions calculations.

ISSUES NOT EVALUATED FURTHER IN THIS DEIR

All issues related to greenhouse gas emissions are discussed below.

IMPACT ANALYSIS

IMPACT 3.6-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. *Greenhouse gas emissions associated with proposed project construction or operations would not exceed the SMAQMD bright line thresholds of 1,100 MT CO₂e. The impact is less than cumulatively considerable.*

Implementation of the proposed project would generate short-term construction and long-term operational GHG emissions. Construction-related GHG emissions would cease following construction of the proposed project. Operational emissions are considered long-term and assumed to occur for the lifetime the project.

Construction-related exhaust GHG emissions would be generated from a variety of sources during construction of the proposed project including, but not limited to heavy-duty construction equipment, haul trucks, material delivery trucks, and construction worker vehicles. Operational GHG emissions are distinguished by direct and indirect GHG emissions. Direct GHG emissions are those emissions that are generated at the location of consumption or use. For example, mobile-source emissions are direct emissions because GHG emissions are generated as a vehicle begins to move. Conversely, indirect emissions are those emissions that occur at a different time or location from the point of consumption or use. For example, electricity related GHG emissions are indirect emissions because as a consumer uses electricity at their home, the fuel combustion and emissions associated with creating that electricity likely occurred off-site or at a different time. Other indirect GHG emissions include emissions associated with solid waste disposal and water consumption. CalEEMod estimates direct emissions associated with the proposed project’s mobile (e.g., staff and student-related vehicles), area (e.g., landscape maintenance equipment), and energy (e.g., natural gas) sources, and indirect emissions associated with energy (i.e., electricity), water (i.e., conveyance and distribution), and solid waste (i.e., decomposition) sources.

Table 3.6-1 presents a summary of the proposed project’s construction-related and annual operational GHG emissions by source.

Table 3.6-1. Project Construction-related and Operational GHG Emissions

Emissions Source	GHG Emissions (MT CO ₂ e)
Maximum Annual Construction Emissions	370
Total Potential Construction Emissions	579
Operational Area Emissions	1
Operational Energy Emissions	160
Operational Mobile Emissions	354
Operational Water Emissions	2
Operational Waste Emissions	4
Total Annual Operational Emissions¹	554

Notes: GHG = greenhouse gas; MT CO₂e = metric tons of carbon dioxide equivalents

¹ Total operational emissions do not add due to rounding.

Source: Modeled by AECOM in 2022.

As shown in Table 3.6-1, total construction-related emissions of the project would be approximately 580 MT CO₂e; these emissions would be generated over approximately 20 months, with a maximum annual emission of 370 MT CO₂e. Construction-related emissions would be well below the SMAQMD bright-line threshold for construction activities.

Operational emissions are also substantially below the SMAQMD bright-line threshold of operational emissions. In addition, these emissions are conservative, as they do not account for the fact that the majority of the students that would attend the Katherine Johnson Middle School are already attending existing facilities, including generating existing vehicle miles traveled to and from the Encino High School campus, the location of the existing Katherine Johnson Middle School, and the mobile source emissions are not entirely new emissions to the region. The Sacramento Area Council of Governments (SACOG), pursuant to the Sustainable Communities and Climate Protection Act of 2008 (SB 375) incorporates State-developed GHG emissions targets for passenger vehicle emissions into a “sustainable communities strategy” as part of its regional transportation plan. SACOG has also developed analysis and mapping showing the location of low VMT areas within the region. The proposed Katherine Johnson Middle School project site is within a low VMT area, as identified by SACOG – an area where the density, mix of land uses, access to non-vehicular transportation options, and other factors result in a reduced need for vehicular transportation compared to the balance of the region.² As explained above in the Environmental Setting, combustion of fossil fuel in the transportation sector is the single largest source of California’s GHG emissions.

In addition, the above emissions do not account for the fact that existing older facilities, operations of which currently generally GHG emissions, would be replaced by more efficient buildings and related operational emissions sources.

In addition, the emissions estimate provided here is conservative, and will tend to overestimate actual GHG emissions associated with the proposed project because Katherine Johnson Middle School will be an all-electric campus, and the District has no plan to extend natural gas service to the site.

The proposed project may not implement the SMAQMD Tier 1 BMPs. However, as noted above the project is located in a low-VMT area as identified by SACOG as part of the Sustainable Communities Strategy (SCS) as being 15 percent less VMT per capita than the overall region, thereby achieving BMP 3. In addition, as noted above, even without accounting for the fact that the project VMT is primarily not new VMT to the region and that the project would replace much older less energy efficiency buildings, project emissions associated with short-term construction and long-term operations of the proposed project would not exceed the SMAQMD bright-line thresholds. Therefore, this impact is considered **less than cumulatively considerable**.

2 Please see SACOG’s website for more details:

<https://sacog.maps.arcgis.com/apps/webappviewer/index.html?id=0eac172e44514776b2f30e4324652f88&extent=-13567338.6225%2C4599309.7898%2C-13330078.0867%2C4789485.1162%2C102100>

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 ENVIRONMENTAL SETTING

SURFACE WATER HYDROLOGY

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are in the urbanized Arden-Arcade area, just east of the city of Sacramento within the Sacramento River Basin. The Sacramento River Basin encompasses about 27,000 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta to the southeast. The project site is situated in the Lower American River Watershed (HUC Code 12), which encompasses approximately 30,066 acres from Fair Oaks in the northeast to portions of the Rancho Cordova south of Highway 50, and including the lower American River to the west to its discharge point into the Sacramento River. The proposed Katherine Johnson Middle School and Encina High School campuses are approximately 2.5 and 0.8 miles northeast of the American River, respectively.

Chicken Ranch Slough, which is an intermittent stream, is located along the proposed Katherine Johnson Middle School project site's northern border. The stream is approximately 3 feet deep, and the channel width varies from approximately 6 to 15 feet. Chicken Ranch Slough flows to the southwest, eventually merging with Strong Ranch Slough just above the combined discharge point into the lower American River (west of Enterprise Drive).

There are no surface water features at Encina High School. Strong Ranch Slough, which is channelized in a concrete-lined ditch, is approximately 1,500 feet (0.3 mile) east of the portable classroom site. Chicken Ranch Slough, which is also channelized in a concrete-lined ditch from Cottage Way south to the discharge point into the American River, is approximately 2,100 feet west (0.4 mile) of the Encina High School portable classroom site.

Drainage

The Sacramento County Department of Water Resources Drainage Division is the organization primarily responsible for stormwater drainage and flood control within the urbanized and urbanizing portions of unincorporated Sacramento County, including the project area. The drainage and flood control system operated and maintained by Sacramento County consists of 1,443 miles of storm drain pipe, 400 miles of creeks and open channels, 33 pump stations, and 18 detention basins. The project site is also located within Sacramento County Water Agency Zone 11B, which was created to provide funds for the construction of major drainage facilities. Funding for Zone 11B activities is provided by fees collected at the time of development. (Sacramento County Department of Water Resources 2022).

An on-site stormwater drainage system is currently in place at both existing school campuses. The on-site system at the proposed Katherine Johnson Middle School discharges stormwater runoff into Chicken Ranch Slough.

Flooding

According to the most recent Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program, most of the proposed Katherine Johnson Middle School project site is not in a flood hazard zone (FEMA 2012). However, Chicken Ranch Slough is

mapped as FEMA Zone AE (100-year floodplain) and defined as a FEMA Regulatory Floodway¹ within a 100-year flood hazard zone, where the base flood elevations have been determined (Exhibit 3.7-1). Immediately adjacent to, but outside of, the FEMA Regulatory Floodway, is an area mapped as Zone X, shaded. This classification indicates a moderate flood hazard potential, which encompasses the area between the limits of the 100-year and 500-year flood.

The portable classroom site at Encina High School is classified by FEMA as Zone X, protected by levees. This area is outside of the 500-year flood zone and protected by levees from 100-year flooding (Exhibit 3.7-2).

The proposed Katherine Johnson Middle School project site is not located in a 200-year flood (0.5 percent annual exceedance probability [AEP]) hazard area as mapped by the U.S. Army Corps of Engineers and the California Reclamation Board (now the Central Valley Flood Protection Board [CVFPB]) in 2002. Furthermore, neither Chicken Ranch Slough nor Strong Ranch Slough are classified as a Regulated Stream or a Designated Floodway regulated by CVFPB (DWR 2022a). However, the Encina High School portable classroom site is located in a 200-year flood hazard area (U.S. Army Corps of Engineers and California Reclamation Board 2002, DWR 2022) (Exhibit 3.7-3).

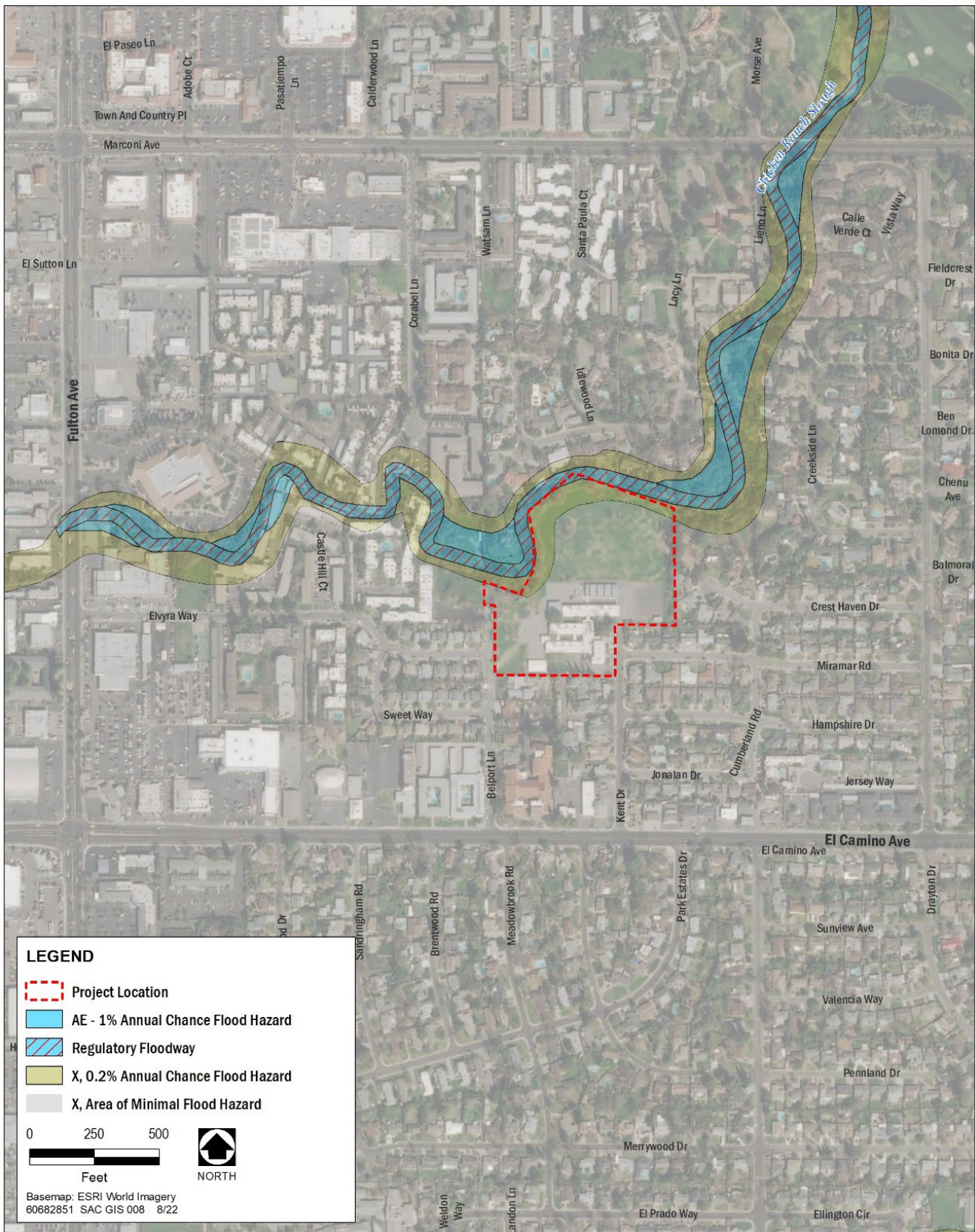
The Pacific Ocean is approximately 93 miles west of the school campuses; therefore, tsunamis would not represent a hazard. There are no large bodies of water in the immediate vicinity of the proposed Katherine Johnson Middle School site that would be subject to seiche hazards. The Sacramento River is approximately 0.8 mile southwest of the Encina High School portable classroom site; however, the project region is generally not subject to strong seismic ground shaking (Branum et al. 2016) and therefore seiches are unlikely.

SURFACE WATER QUALITY

As required by the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board (RWQCB) has designated beneficial uses for water body segments in its jurisdiction (including the Sacramento River), along with water quality criteria necessary to protect these uses, as contained in the *Sacramento and San Joaquin River Basin Plan* (Central Valley RWQCB 2019). In addition, the Clean Water Act (CWA) Section 303(d) requires states to identify waters where the permit standards, any other enforceable limits, or adopted water quality standards are still unattained. The CWA also requires states to develop total maximum daily loads (TMDLs) to improve the water quality of impaired water bodies. TMDLs are the quantities of pollutants that can be safely assimilated by a water body without violating water quality standards. TMDLs are developed for impaired water bodies to maintain beneficial uses as designated in the applicable Basin Plan, achieve water quality objectives, and reduce the potential for future water quality degradation. NPDES permits for water discharges must take into account the pollutants for which a water body is listed as impaired.

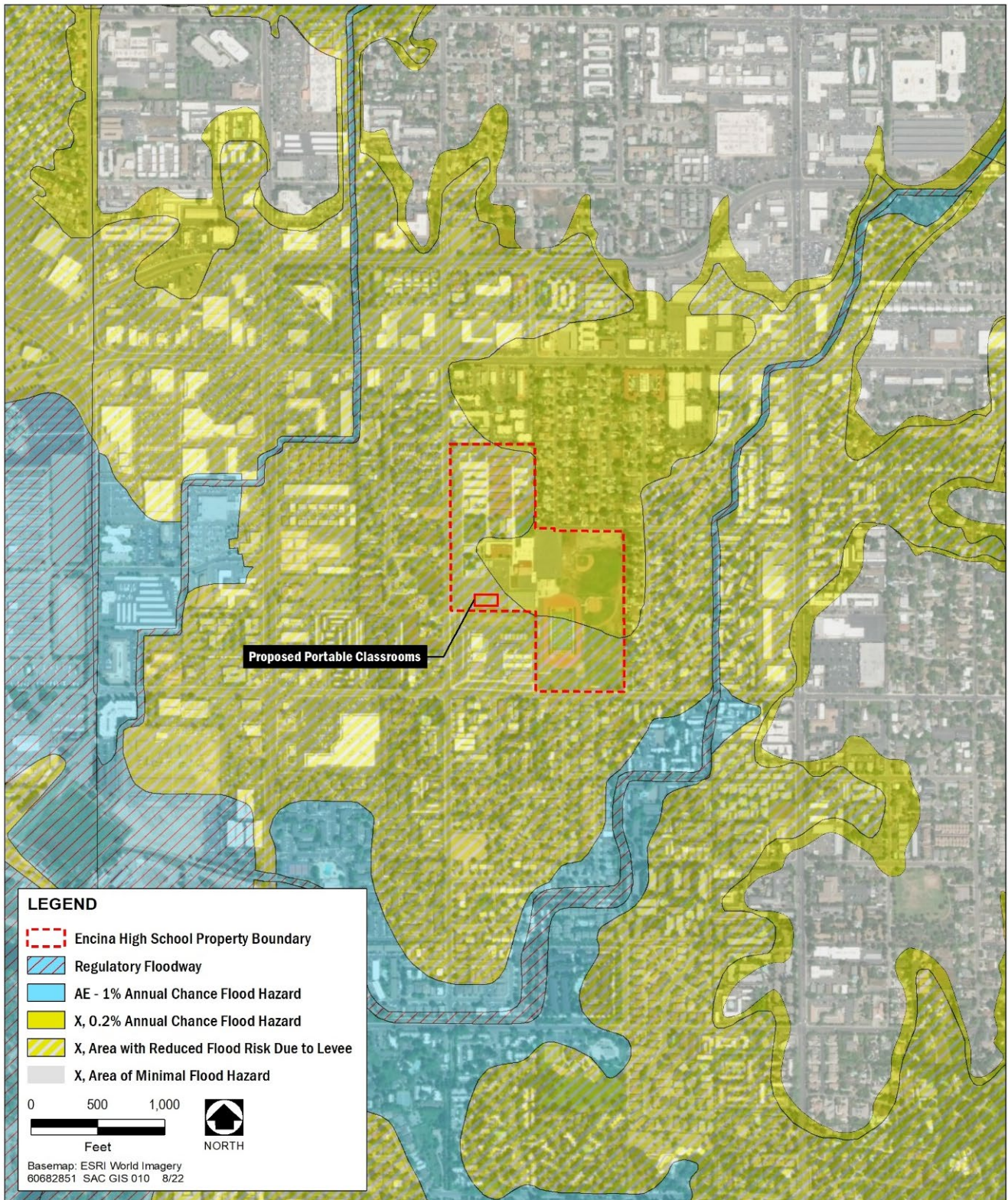
Table 3.7-1 lists impaired water bodies included in the SWRCB's 303(d) list that could receive runoff from the proposed project, including the pollutants of concern and whether they have approved TMDLs. Even if a stream is not included in the SWRCB's 303(d) list, any upstream tributary to a 303(d)-listed stream could contribute pollutants to the listed segment.

¹ A "FEMA Regulatory Floodway" is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.



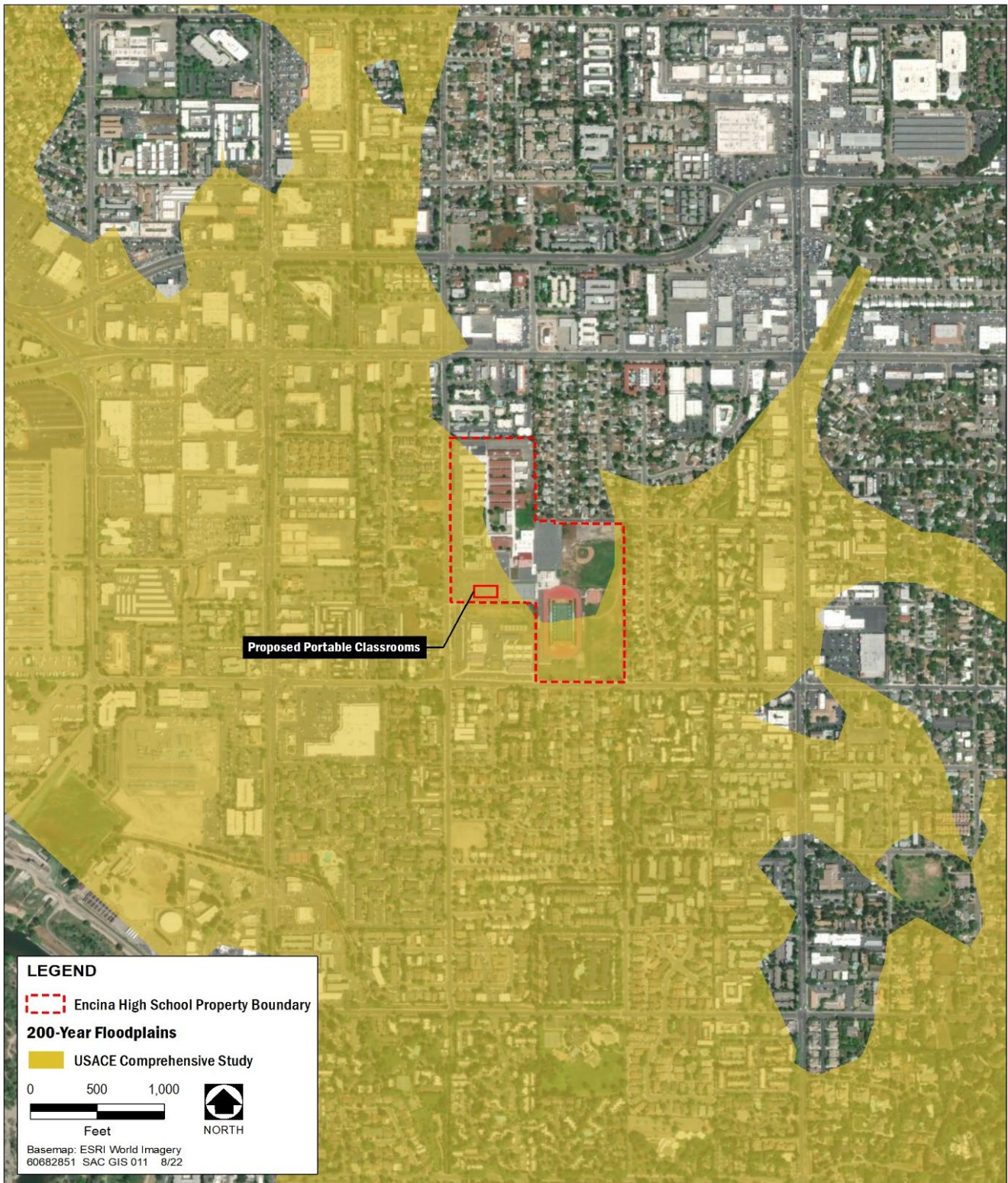
Sources: FEMA 2012, adapted by AECOM in 2022

Exhibit 3.7-1. FEMA Floodplain Map for the Proposed Katherine Johnson Middle School Site



Sources: FEMA 2012, adapted by AECOM in 2022

Exhibit 3.7-2. FEMA Floodplain Map for the Proposed Encina High School Portable Classroom Site



Sources: U.S. Army Corps of Engineers and the California Reclamation Board 2002, DWR 2022, adapted by AECOM in 2022

Exhibit 3.7-3. 200-Year Floodplain Map for the Proposed Encina High School Portable Classroom Site

Table 3.7-1. Section 303(d) List of Impaired Waterbodies

Impaired Water Body	Pollutant	Pollutant Source	TMDL Status
Chicken Ranch Slough	Toxicity	Unknown	Expected in 2021; not yet approved
	Pyrethroids	Unknown	Approved in 2019
	Diazinon	Urban runoff, storm sewers	Approved in 2004
	Chlorpyrifos	Urban runoff, storm sewers	Approved in 2004
Strong Ranch Slough	Toxicity	Unknown	Expected in 2021; not yet approved
	Pyrethroids	Unknown	Approved in 2019
	Diazinon	Urban runoff, storm sewers	Approved in 2004
	Chlorpyrifos	Urban runoff, storm sewers	Approved in 2004
Lower American River (Nimbus Dam to Sacramento River)	Mercury	Gold mining settlements and local mercury mining (historic)	Expected in 2010; not yet approved
	Polychlorinated biphenyls (PCBs)	Unknown	Expected in 2021; not yet approved
	Toxicity	Unknown	Expected in 2021; not yet approved
	Bifenthrin	Unknown	Expected in 2027
	Indicator Bacteria	Unknown	Expected in 2027
	Pyrethroids	Unknown	Expected in 2027

Notes: TMDL = total maximum daily load; NEMDC = Natomas East Main Drainage Canal

Source: State Water Resources Control Board 2021

GROUNDWATER

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are in the North American Groundwater Subbasin (Basin Code 5-021.64), which underlies northern Sacramento, southern Sutter, and western Placer counties. Groundwater in the project area is managed by the Sacramento Groundwater Authority, which is the designated Groundwater Sustainability Agency for the southern portion of the Subbasin (where the project site is situated), as required by the Sustainable Groundwater Management Act (SGMA). A draft Groundwater Sustainability Plan (GSP) for the North American Subbasin was prepared and submitted to DWR in January 2022 (GEI Consultants 2021). As required by the SGMA, the GSP for the North American Subbasin includes a description of the subbasin setting, hydrogeological conceptual model, comprehensive water budget, basin-wide monitoring network, sustainable management criteria, and projects and management actions necessary to ensure the Subbasin's sustainability.

The North American Subbasin was designated by DWR as a high-priority basin, but is not in a condition of overdraft. Generally, the quality of groundwater in the Subbasin is suitable for nearly all uses, except for localized contamination plumes and localized, naturally-occurring and human-caused quality issues. Due to the urbanized nature of Chicken Ranch Slough from Watt Avenue southwest to the American River (which includes the proposed Katherine Johnson Middle School project site), and the fact that the groundwater table is approximately 90 feet below the surface², the GSP did not consider this portion of Chicken Ranch Slough to be a potential groundwater dependent ecosystem (GEI Consultants 2021:5-62). Modeling conducted for the GSP, including the projected conditions water budget scenario (i.e., future development through 2040 with implementation of the specific management actions included in the GSP), indicates there will be greater inflows than outflows in the

² The maximum plant rooting depth is approximately 30 feet.

North American Subbasin, resulting in an increase in groundwater storage over time. However, the GSP notes that some sustainability risk in the form of modest groundwater overdraft of about 3,500 acre feet per year (AFY) may present itself when climate change is considered over a 50-year planning horizon. To avoid future potential undesirable results related to lowering of groundwater levels and depletion of groundwater storage, the GSP includes specific projects and management actions that will be undertaken in the North American Subbasin to promote groundwater sustainability (GEI Consultants 2021:Chapter 9), which includes continued conjunctive use (i.e., a mix of groundwater and surface water) in urban areas, and continued water demand management through:

- ▶ Temporary conservation measures consistent with water shortage contingency plans in Urban Water Management Plans that allow for water use reductions during periods of constrained supply; and
- ▶ Urban water use efficiency program.

3.7.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Clean Water Act

The Clean Water Act of 1972 (CWA) (33 United States Code [U.S.C.] Section 1251 et seq.) is the primary federal law that governs and authorizes water quality control activities by the U.S. Environmental Protection Agency (EPA), the lead federal agency responsible for water quality management. By employing a variety of regulatory and non-regulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA seeks to restore and maintain the chemical, physical, and biological integrity of surface waters to support the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water.

EPA is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA, and has delegated the State of California as the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 described below.

Water Quality Criteria and Standards

Pursuant to federal law, EPA published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the 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. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Section 303(d) requires states to develop lists of the water bodies and associated pollutants that exceed water quality criteria.

National Pollutant Discharge Elimination System Permit Program, Section 402

The NPDES permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Federal NPDES permit regulations have been established for broad categories of discharges, including point source municipal waste discharges and nonpoint source stormwater runoff. NPDES

permits generally identify limits on the concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

More specifically, the discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to ensure the maintenance of public health and safety, protection of receiving water resources, and safeguarding of the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life.

In November 1990, EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons.³ Phase II of the NPDES stormwater permit regulations became effective in March 2003 and required NPDES permits be issued for construction activity for projects that disturb between one and five acres. Phase II of the municipal permit system (i.e., known as the NPDES General Permit for Small Municipal Separate Storm Sewer Systems [Small MS4s], Order No. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipality areas of less than 100,000 persons (hereinafter called Phase II communities) to develop stormwater management programs.

California's RWQCBs are responsible for implementing the NPDES permit system (refer to additional details in the subsection "State Plans, Policies, Regulations, and Laws," below).

Section 401 Water Quality Certification or Waiver

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the U.S.) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirements is delegated by the SWRCB to the nine regional boards. Water quality in Sacramento County, including the project site, is under the jurisdiction of the Central Valley RWQCB.

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a TMDL for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. EPA must either approve a TMDL prepared by the state or disapprove the State's TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. The goal of the TMDL program is that, after implementation of a TMDL

³ Phase I also applies to storm water discharges from a large variety of industrial activities, including general construction activity if the project would disturb more than 5 acres.

for a given pollutant on the 303(d) list, the causes that led to the pollutant's placement on the list would be remediated.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a statewide policy to protect and maintain water quality for existing in-stream uses and waters of exceptional recreational or ecological significance.

Federal Emergency Management Agency National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP, 42 U.S.C. 4016[a]) to provide flood insurance to individuals within communities that adopt and enforce NFIP regulations that limit development in floodplains; federally-backed flood insurance is only available within NFIP communities. FEMA also develops and issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. Flood hazard zones in the community are identified within the FIRMs, at the minimum, for the 1-in-100 annual exceedance probability flood event and sometimes other flood events. The design standard for flood protection covered by the FIRMs is established by FEMA with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (AEP) (i.e., the 100-year flood event). As developments are proposed and constructed, FEMA is also responsible for issuing revisions to FIRMs, such as Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) through the local agencies that work with the National Flood Insurance Program.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (basin plans). The Central Valley RWQCB regulates water quality in Sacramento County, including the project site.

Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The act also requires waste dischargers to notify the RWQCBs of such activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD requirements and WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

State Water Resources Control Board

SWRCB and its nine RWQCBs administer water rights and enforce pollution control standards throughout the state. SWRCB is responsible for granting of water right permits and licenses through an appropriation process following public hearings and appropriate environmental review by applicants and responsible agencies. In granting water right permits and licenses, SWRCB must consider all beneficial uses, including water for downstream human and environmental needs.

Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan)

The *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2019) identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento and San Joaquin hydrologic regions. State and federal laws mandate protecting designated “beneficial uses” of water bodies. State law defines beneficial uses as “domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves” (Water Code Section 13050[f]).

The beneficial uses of any specifically identified water body generally apply to all tributary streams to that water body. Those water bodies not specifically designated for beneficial uses in the Basin Plan are assigned the Municipal and Domestic Supply (MUN) use, in accordance with the State Water Board Resolution No. 88-63. Although specific surface waters have not been identified for groundwater recharge or freshwater replenishment in the Basin Plan, these additional protected beneficial uses are designated in the Basin Plan. Unless otherwise designated by the Central Valley RWQCB, all groundwater is considered suitable or potentially suitable for municipal or domestic water supply (MUN).

The Basin Plan describes a set of designated beneficial uses for each water body. Beneficial uses help to define the resources, services, and qualities of the aquatic systems. Beneficial uses also serve as a basis for establishing water quality objectives and discharge prohibitions. The Basin Plan contains specific numeric water quality objectives that are applicable to each water body or portions of water bodies. Objectives have been established for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements. Numerous narrative water quality objectives have also been established. Finally, the Basin Plan contains a set of implementation plans, which represent the Central Valley RWQCB’s programs and specific plans of action for meeting water quality objectives and protecting beneficial uses.

National Pollutant Discharge Elimination System Permit System

Waste Discharge Requirements for Construction

The SWRCB’s statewide stormwater general permit for construction activity (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) is applicable to all construction activities that would disturb 1 acre of land or more (SWRCB 2012). Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction

General Permit, project applicants must file a notice of intent with the SWRCB to obtain coverage under the permit; prepare a SWPPP; and implement inspection, monitoring, and reporting requirements appropriate to the project's risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies Best Management Practices (BMPs) that would be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the use of post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

Municipal Regional Stormwater Discharge (MS4) Permit

Sacramento County and the Cities of Rancho Cordova, Folsom, Elk Grove, Citrus Heights, Galt, and Sacramento are co-permittees to the Sacramento Areawide NPDES MS4 permit issued and enforced by the Central Valley RWQCB (NPDES Permit No. CAS082597, WDR Order No. R5-2008-0142) (Central Valley RWQCB 2016). The permittees collectively formed the Sacramento Stormwater Quality Partnership (SSQP), to coordinate and implement permit compliance activities. A Stormwater Quality Improvement Plan (SQIP) developed for compliance with the NPDES permit is the guiding document for the permittees (SSQP 2009) and describes the activities that will be implemented to reduce pollutant discharges in urban runoff to the maximum extent practicable.

The SSQP subsequently prepared a *Hydromodification Management Plan* (SSQP 2017) that describes how the agencies intend to implement hydromodification management in accordance with the MS4 permit to protect receiving streams from increased potential for erosion and other adverse impacts. (The project site is located in an unincorporated area of the County where the requirements of the Hydromodification Management Plan do not apply [SSQP 2020].) The *Sacramento Region Stormwater Quality Design Manual* (Stormwater Quality Design Manual) (SSQP 2021) is currently the guiding technical design document for development and major redevelopment in the Sacramento region. Post-construction stormwater quality controls for new development require the use of control measures set forth in the Stormwater Quality Design Manual. This includes sizing and design criteria for regional detention basins and design and maintenance criteria for on-site stormwater quality source, treatment, and runoff reduction measures.

The MS4 Permit specifies the actions necessary to reduce the discharge of pollutants in stormwater to the maximum extent practicable, in a manner designed to achieve compliance with water quality standards and objectives, and methods to effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses within the permittees' jurisdictions. The SSQP's Stormwater Quality Design Manual describes the methods by which new development and redevelopment will achieve compliance with the MS4 Permit.

Sustainable Groundwater Management Act

In 2014, the California Legislature enacted a three-bill law (Assembly Bill-1739, Senate Bill [SB]-1168, and SB-1319), known as the SGMA. The SGMA was created to provide a framework for the sustainable management of groundwater supplies, and to strengthen local control and management of groundwater basins throughout the state with little state intervention. The SGMA is intended to empower local agencies to adopt groundwater

sustainability plans that are tailored to the resources and needs of their communities, such that sustainable management would provide a buffer against drought and climate change, and ensure reliable water supplies regardless of weather patterns. The SGMA and corresponding regulations require that each high- and medium-priority groundwater basin is operated to a sustainable yield, balancing natural and artificial groundwater recharge with groundwater use to ensure undesirable results such as chronic lowering of groundwater levels, loss of storage, water quality impacts, land subsidence, and impacts to hydraulically connected streams do not occur. The SGMA is considered part of the statewide, comprehensive California Water Action Plan that includes water conservation, water recycling, expanded water storage, safe drinking water, and wetlands and watershed restoration. The SGMA protects existing surface water and groundwater rights and does not affect current drought response measures.

The SGMA required that local agencies form one or more groundwater sustainability agencies (GSAs) by June 30, 2017. Agencies located within high- or medium-priority basins were required to adopt groundwater sustainability plans (GSP), or Alternative GSPs, by January 31, 2020 or January 31, 2022 depending on the basin priority ranking. Local agencies will have 20 years to fully implement GSPs after the plans have been adopted. Intervention by the SWRCB would occur if a GSP is not implemented. As noted previously, a GSP has been prepared for the North American Subbasin (which includes the proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site) and submitted to DWR for approval.

California's 515 groundwater basins are classified into one of four categories; high-, medium-, low-, or very low-priority based on components identified in the California Water Code Section 10933(b). The SGMA requires local agencies to develop and implement GSPs in high- and medium-priority groundwater basins; GSPs are not required for low- or very low-priority basins.

Senate Bill 5

SB 5 enacted the Central Valley Flood Protection Act of 2008. SB 5 required DWR and the CVFPB to prepare and adopt a Central Valley Flood Protection Plan (CVFPP) by 2012. The Plan was prepared by DWR and adopted in 2012, and was recently updated in 2022 (DWR 2022b). SB 5 established a 200-year flood (0.5 percent annual exceedance probability) as the minimum urban level of flood protection. It also required cities and counties in the Central Valley to amend their general plans and their zoning ordinances to conform to the Plan.

Under California Water Code sections 8534, 8608 and 8710–8723, the CVFPB is required to enforce, within its jurisdiction, on behalf of the State, appropriate standards for construction, maintenance, and protection of adopted flood control plans that will best protect the public from floods. CVFPB's jurisdiction includes the entire Central Valley, including all tributaries and distributaries of the Sacramento and San Joaquin Rivers and the Tulare and Buena Vista basins.

SB 5 restricts approval of development agreements and subdivision maps in CVFPP flood hazard zones, unless certain findings are made. Any project within 30 feet of a CVFPB Regulated Stream or within a CVFPB Designated Floodway must first obtain an encroachment permit. Permit applications are reviewed by the CVFPB (together with the U.S. Army Corps of Engineers and local floodplain authorities, as applicable), which must make a determination that the proposed encroachment would not impede flood flows, and would not increase downstream flooding (i.e., would not substantially increase downstream water surface elevations) prior to issuance of a permit. During the CVFPB permit application process, additional materials such as a hydraulic study, may be required.

Central Valley Flood Protection Plan

The CVFPP (Water Code Section 9614) guides the State's participation in managing flood risk and making infrastructure investments along the Sacramento and San Joaquin River systems, and it influences federal and local participation in managing flood risk. Originally adopted in 2012, the CVFPP must be updated every 5 years and include the following elements:

- ▶ A description of the Flood Management System, its performance, and the challenges to modifying it;
- ▶ A description of the facilities included in the State Plan of Flood Control;
- ▶ A description of probable impacts of projected climate change, land-use patterns, and other potential challenges;
- ▶ An evaluation of needed structural improvements and a list of facilities recommended for removal; and
- ▶ A description of both structural and nonstructural methods for providing an urban level of flood protection to currently urbanized areas in the Central Valley.

The CVFPP is prepared by DWR, which develops strategic goals, and near- and long-term actions to conserve, manage, develop, and sustain California's watersheds and water resources, and works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property. Planning and coordination of major implementation actions of the CVFPP include state-led Basinwide Feasibility Studies, locally-led regional flood management planning, the Central Valley Flood System Conservation Strategy, and planning for climate change resiliency. These planning efforts have been incorporated into the 2022 CVFPP Update (DWR 2022).

Urban Level of Flood Protection Criteria

The *Urban Level of Flood Protection Criteria* (ULOP) was developed by DWR in response to requirements from the Central Valley Flood Protection Act of 2008 (SB 5), to strengthen the link between flood management and land use. DWR developed the criteria as a systematic approach to assist affected cities and counties within the Sacramento-San Joaquin Valley in making findings related to an urban level of flood protection before approving certain land use decisions.

With 200-year flood zones designated by the CVFPB, development is subject to the ULOP criteria if a project site also meets all of the following three criteria:

- ▶ is located in an urban area with 10,000 or more residents, or in an urbanizing area in which 10,000 or more residents are anticipated within 10 years; and
- ▶ is located in a watershed with a contributing area greater than 10 square miles; and
- ▶ is located in an area where potential flood depths would be greater than 3 feet in the 200-year flood.

Sacramento County has designated the areas where new development is subject to the ULOP criteria as part of its Floodplain Management Ordinance. The Encina High School portable classroom site is within an area that is subject to ULOP requirements (Sacramento County 2017b: Appendix D).

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Sacramento County General Plan

The *Sacramento County General Plan of 2005–2030* (Sacramento County 2017a) includes the following policies related to hydrology and water quality, which are provided for context.

Conservation Element

- ▶ **Policy CO-7:** Support the Water Forum Agreement Groundwater Management Element. Prior to approving any new development, a water supply plan shall be approved that demonstrates consistency with an adopted groundwater management plan.
- ▶ **Policy CO-8:** Applicants proposing developments in areas with significant groundwater recharge characteristics shall evaluate the impact of said development on groundwater recharge and quality. This evaluation should recognize criteria defined in any broader Countywide determination and/or evaluation of groundwater recharge areas.
- ▶ **Policy CO-23:** Development approval shall be subject to a finding regarding its impact on valuable water-supported ecosystems.
- ▶ **Policy CO-24:** Comply with the Sacramento Areawide National Pollutant Discharge Elimination System Municipal Stormwater Permit (NPDES Municipal Permit) or subsequent permits, issued by the Central Valley Regional Water Quality Control Board (Regional Board) to the County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, Rancho Cordova, and Galt (collectively known as the Sacramento Stormwater Quality Partnership [SSQP]).
- ▶ **Policy CO-25:** Support the preservation, restoration, and creation of riparian corridors, wetlands and buffer zones.
- ▶ **Policy CO-26:** Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.
- ▶ **Policy CO-28:** Comply with other water quality regulations and NPDES permits as they apply to County projects or activities, such as the State’s Construction General Permit and Aquatic Pesticides Permit.
- ▶ **Policy CO-30:** Require development projects to comply with the County’s stormwater development/design standards, including hydromodification management and low impact development standards, established pursuant to the NPDES Municipal Permit. Low impact development design and associated landscaping may serve multiple purposes including reduction of water demand, retention of runoff, reduced flooding, and enhanced groundwater recharge.
- ▶ **Policy CO-31:** Require property owners to maintain all required stormwater measures to ensure proper performance for the life of the project.

- ▶ **Policy CO-71:** Development design shall help protect natural resources by:
 - Minimizing total built development in the floodplain, while designing areas of less frequent use that can support inundation to be permitted in the floodplain.
- ▶ **Policy CO-105a:** Encourage flood management designs that respect the natural topography and vegetation of waterways while retaining flow and functional integrity.
- ▶ **Policy CO-107:** Maintain and protect natural function of channels in developed, newly developing, and rural areas.
- ▶ **Policy CO-113:** Encourage revegetation of native plant species appropriate to natural substrate conditions and avoid introduction of nonindigenous species.
- ▶ **Policy CO-114:** Protect stream corridors to enhance water quality, provide public amenities, maintain flood control objectives, preserve and enhance habitat, and offer recreational and educational opportunities.
- ▶ **Policy CO-118:** Development adjacent to waterways should protect the water conveyance of the system, while preserving and enhancing the riparian habitat and its function.
- ▶ **Policy CO-123:** The use of native plant species shall be encouraged on revegetation plans.
- ▶ **Policy CO-126:** Prohibit obstruction or underground diversion of natural waterways.

Safety Element

- ▶ **Policy SA-14:** The County shall require, when deemed to be physically or ecologically necessary, all new urban development and redevelopment projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.
- ▶ **Policy SA-15:** The County shall regulate, through zoning and other ordinances, land use and development in all areas subject to potential flooding and prohibit urban uses on unprotected flood land.
- ▶ **Policy SA-22a:** Sacramento County will evaluate development projects and all new construction located within a defined Flood Hazard Zone (FHZ) to determine whether the 200-year Urban Level of Flood Protection or 100-year FEMA flood protection applies, and whether the proposed development or new construction is consistent with that standard. Prior to approval of development projects or new construction subject to either standard, the appropriate authority must make specific finding(s) related to the following:
 - a. Urban Level of Flood Protection standard (200-year) applies to projects in a Flood Hazard Zone that meet certain criteria, developed by the State of California Department of Water Resources, related to urbanization, watershed size, and potential flood depth.
 - b. Federal Emergency Management Agency (FEMA) standard of protection (100-year) applies to projects in a Special Flood Hazard Area that are not subject to the Urban Level of Flood Protection.

Sacramento County Floodplain Management Ordinance

Sacramento County Municipal Code Title 16, Chapter 16.02, Section 16.02.060 (Ordinance SZC-2016-0023) requires a Floodplain Management Permit for any new construction, substantial improvements, or alteration of land within a special flood hazard area (FEMA Zones A, AO, AI-A30, AE, A99, AH, or AR). These standards control filling, grading, and other development which may increase flood damage; and are intended to prevent or regulate the construction of flood barriers that would unnaturally divert flood waters or which may increase flood hazards in other areas. Per Ordinance SZC-2016-0023, Section 905-01, a project applicant must apply for a development permit for construction in a FEMA flood zone, and approval by the County's floodplain administrator is required. The permit application must include plans showing elevations of proposed structures and the elevations of areas proposed for materials and equipment storage; the proposed elevation in relation to mean sea level, of the lowest floor of all structures; the proposed elevation in relation to mean sea level to which any structure will be floodproofed; the location, volume, and depth of proposed fill and excavation within the 100-year floodplain and floodway; and a description of the extent to which any watercourse will be altered or relocated as a result of project development (Sacramento County 2017b).

The County's Floodplain Ordinance also regulates development in areas that meet the requirements for flood protection in 200-year flood zones (as described in detail above under the heading "Urban Level of Flood Protection Criteria"). The Encina High School parking lot where the portable classrooms would be installed is within a 200-year flood zone and is within the County-designated area where the ULOP requirements apply. County Floodplain Ordinance, Section 906-03, provides standards of construction that apply to floodproofing for new, non-residential construction. These standards consist of the following:

1. Either elevate the structure(s) 1.5 feet above the base flood elevation in accordance with Section 906-02, or make the building walls watertight in the area that is 1.5 feet above the base flood elevation and dry-proof the associated utility and sanitary facilities in accordance with FEMA technical bulletin(s);
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads including the effects of buoyancy; and
3. Be certified by a registered professional engineer or architect that the standards of this section are satisfied. Such certification shall be provided to the County Floodplain Administrator.

Sacramento County Land Grading and Erosion Control Ordinance

Sacramento County Municipal Code Title 16, Chapter 16.44, requires a Grading and Erosion Control Permit from the County if a project involves grading, filling, excavation, storage, or disposal of 350 cubic yards or more of soil or other earthen material, or if a project requires clearing and grubbing of 1 acre or more of land. The permit application must include proposed grading plans that include a variety of information such as location of all watercourses, wetlands, and drainage systems; proposed grading, slopes, and elevation shown by contours; quantity of material to be excavated; location, implementation schedule, and maintenance schedule of all erosion control measures and sediment control measures to be implemented; description of measures designed to control dust and stabilize the construction site road and entrance; and description of the location and methods of storage and disposal of construction materials.

3.7.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to hydrology or water quality if it would:

- ▶ violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- ▶ substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- ▶ substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i) result in substantial erosion or siltation on- or off-site;
 - ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - iii) 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; or
 - iv) impede or redirect flood flows;
- ▶ in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- ▶ conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ANALYSIS METHODOLOGY

The hydrology and water quality analyses prepared for this EIR relied on published hydrologic and water quality literature, data, and maps. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the thresholds of significance presented in this section. Impacts associated with hydrology and water quality that could result from project implementation were evaluated based on existing conditions; expected construction and operational practices; and the materials, locations, and duration of potential demolition, construction, and operational activities.

Impacts related to water supply are addressed in Section 4.8, “Utilities and Service Systems.”

ISSUES NOT EVALUATED FURTHER IN THIS EIR

Risk Release of Pollutants from Inundation in a Tsunami, Seiche, or Flood Hazard Zone—The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are not located in a tsunami or seiche hazard zone. As stated in Chapter 2, “Project Description,” temporary construction staging areas (including trailers, equipment, and materials) at the proposed Katherine Johnson Middle School site would

not be located within the area classified by FEMA as shaded Zone X (i.e., moderate flood hazard). During project operation, the new Katherine Johnson Middle School campus buildings would be outside of the area classified as shaded Zone X. Thus, there would be no temporary or permanent storage areas or buildings or other structures that would use or store chemicals or other pollutants within the area classified by FEMA as a moderate flood hazard area. At the Encina High School portable classroom site, construction would not occur during the winter rainy season, and there would be no pollutants stored during project operation at the portable classrooms. Thus, there would be no risk for release of pollutants from inundation in a tsunami, seiche, or flood hazard zone, and there would be no impact. This issue is not addressed further in this EIR.

IMPACT ANALYSIS

IMPACT 3.7-1 **Violate Water Quality Standards or Substantially Degrade Surface or Groundwater Quality.**
*Redevelopment of the proposed Katherine Johnson Middle School site and the Encina High School portable classroom site would disturb soils during construction, resulting in potential pollutant transport to receiving water bodies. The types of pollutants generated during project operation would be similar to existing conditions; there could be a minor increase the amounts of operational pollutants due to a minor increase in the amount of impervious surfaces as compared to existing conditions. However, with implementation of grading, erosion control, and municipal stormwater pollutant laws, regulations, and permit conditions; and implementation of BMPs related to construction and operation, this impact would be **less than significant**.*

The approximately 9.75-acre proposed Katherine Johnson Middle School project site is fully developed with an existing school, which was originally constructed in 1953 with various modifications and additions over time. The proposed Katherine Johnson Middle School site consists of school buildings, parking areas, and drive isles, and outdoor turf playfields. Encina High School was originally constructed in 1959 with various modifications and additions over time. The proposed adult education portable classrooms at Encina would be installed in an approximately 0.3-acre portion of the school's existing paved parking lot.

As described above in subsection 3.7-1, "Environmental Setting," Chicken Ranch Slough (which parallels the proposed Katherine Johnson Middle School project site's northern boundary), and Strong Ranch Slough (which is approximately 1,500 feet east of the Encina High School portable classroom site), are included on the SWRCB's 303(d) list of impaired water bodies for toxicity, pyrethroids, diazinon, and chlorpyrifos (SWRCB 2021). Construction activities, including excavation and grading associated with building foundations, underground utilities, parking lots, and drive isles, would disturb sediment that could be transported in stormwater runoff during the winter rainy season. In addition, disturbed sediment could be transported via wind, particularly during the summer months. Sediments, in addition to being contaminants in their own right, can transport other contaminants, such as trace metals, nutrients, and hydrocarbons that adsorb to suspended sediment particles. Redevelopment at the proposed Katherine Johnson Middle School project site with a new school would result in a minor increase in impervious surfaces, which would result in a minor addition to the existing urban stormwater runoff. Sediment, trash, organic contaminants, nutrients, trace metals, and oil and grease compounds are common urban runoff pollutants that can affect receiving water quality. Sources of these pollutants may be erosion from disturbed areas, deposition of atmospheric particles derived from automobiles or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, and accidental spills of toxic materials on surfaces that receive rainfall and generate runoff. Specifically, sources of sediment from urban development include roads and parking lots, as well as destabilized landscape areas, streambanks, unprotected slopes, and disturbed areas where vegetation has been removed during the grading process. Water quality degradation from

construction and/or operation could interfere with Basin Plan implementation and with achievement of TMDL objectives required by the CWA, and can adversely affect wetland ecosystems (such as Chicken Ranch Slough), and sensitive plant and animal species, as well as humans.

Several existing regulations would apply to the proposed project that would reduce or avoid impacts related to erosion, sedimentation, and water quality degradation. To receive a grading permit from the County, a grading and erosion control plan must be submitted to the County Engineering Department that must incorporate stormwater pollution control as well as storm drainage design features to control increased runoff from the project site. As described under the Regulatory Setting section above, the County's Land Grading and Erosion Control Ordinance requires implementation of erosion and sediment control BMPs to protect receiving water quality, which includes both surface water and groundwater. Groundwater quality can be affected either by direct contact during construction-related earthmoving activities, or by indirect contact as a result of percolation of stormwater. However, because groundwater is approximately 75–90 feet below the ground surface at the Encina and proposed Katherine Johnson Middle School campuses, respectively (DWR 2021), construction-related earthmoving activities would not encounter groundwater. Protection of surface water and groundwater quality from stormwater percolation is accomplished through implementation of the operational NPDES MS4 permit (discussed below).

Projects that disturb more than 1 acre of land during the construction process must comply with the requirements in the SWRCB General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) [Construction General Permit]. Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality. The Construction General Permit requires preparation and implementation of a SWPPP with associated BMPs that are specifically designed to reduce construction-related erosion, sedimentation, and pollutant transport. The Construction General Permit includes a numeric, two-part, risk-based analysis process. It also identifies the need to address changes in the hydrograph, defined as hydrograph modification or hydromodification, which could result from urbanization of a watershed, and requires LID controls to more closely mimic the pre-developed hydrologic condition. Examples of BMPs for erosion and sediment control relating to construction activities and stormwater runoff that could be implemented include mulch, re-seeding, straw wattles, check dams, sediment traps, silt fencing, sediment basins, placement of rip rap under drain outfalls, and stabilizing construction entrances and exits.

The County is a co-permittee in the Sacramento Stormwater Quality Partnership (SSQP), which was formed to coordinate and implement long-term operational NPDES MS4 permit compliance activities. Development projects within the County are required to address stormwater quality during development review. Projects must implement BMPs during construction to reduce impacts from construction work, and also during project operation to reduce post-construction impacts to water quality. Long-term water quality impacts must be reduced using site design and source control measures to help keep pollutants out of stormwater. Details related to these requirements are contained in the *Stormwater Quality Design Manual* (SSQP 2021). Implementing measures to protect water quality and support designated beneficial uses of waterbodies are part of the District's required compliance with the CWA and the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2019).

In conclusion, compliance with the above-listed laws, regulations, ordinances, and permit terms would require the project to reduce pollutants in construction and operational stormwater runoff generated in the proposed

development area through implementation of operation-related LID technologies, BMPs, and pollutant source control measures, along with preparation of a SWPPP with associated BMPs designed to control construction-related erosion and pollutants. These measures would protect water quality as required by the Basin Plan. Therefore, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and this impact would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.7-2 **Impede Sustainable Groundwater Management of the Basin by Substantially Decreasing Groundwater Supplies or Interfering with Groundwater Recharge.** *The proposed project does not include drilling groundwater supply wells, and only a minor decrease in the existing permeable areas (where existing on-site groundwater recharge can occur) would result from redevelopment of the proposed Katherine Johnson Middle School site. Therefore, this impact would be less than significant.*

Installation of the portable classrooms at Encina High School would occur within a 0.3-acre portion of the school's existing paved parking lot. Since this area already consists of impervious asphalt pavement, the proposed portable classrooms would have **no impact** on groundwater recharge.

Approximately 3.5 acres of the 9.25-acre proposed Katherine Johnson Middle School project site are currently covered with impermeable surfaces (i.e., buildings and pavement). The redeveloped school campus would convert a portion of the existing outdoor turf playfield in the northern portion of the project site, as well as other unused areas in the southeast and southwest portions of the project site, to classrooms and other school buildings, parking, and drive aisles, which would add approximately 2 acres of impervious surfaces. The remaining approximately 3.75 acres of outdoor turf playfield in the northern portion of the project site would continue to provide for groundwater recharge at the project site, because a portion of the applied landscape irrigation water would reach the aquifer through soil percolation. Modeling performed for the GSP for the North American Subbasin determined that with projected development through the year 2040 and implementation of projects and management actions that will be undertaken in the Subbasin to promote groundwater sustainability, there will be a net increase in groundwater storage (GEI Consultants 2021). The small, approximately 2-acre decrease in permeable surfaces at the project site is accounted for in regional development through the year 2040 as part of the GSP's Projected Conditions Groundwater Budget. Therefore, the proposed project would not interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded, and the impact from redevelopment at the proposed Katherine Johnson Middle School campus would be **less than significant**.

The Encina High School campus is served with potable water by the California American Water Company. Because approximately 550 middle school students would be transferring from Encina High School to Creekside (i.e., the proposed Katherine Johnson Middle School site), with only approximately 300 adult education students transferring from the Creekside Adult School to Encina, the demand for potable water at Encina High School would decrease. Thus, the installation of portable classrooms for adult education at Encina High School would have **no impact** related to decreases in groundwater supply.

As discussed in detail in Section 4.8, "Utilities and Service Systems," the proposed Katherine Johnson Middle School campus is served with potable water by the Sacramento Suburban Water District (SSWD). SSWD

provides a combination of groundwater pumped from a network of approximately 70 wells, and purchased surface water, as its supply sources. Groundwater is obtained from the southern portion of the North American Groundwater Subbasin. SSWD has determined that sufficient water supplies will be available in all water year types during the 2025–2045 planning horizon, to serve future projected development (Brown & Caldwell 2021). There are no on-site groundwater wells at the existing school campus, and none are planned in the future. Under the proposed project, the campus would continue to receive water from SSWD in the same manner as it does currently. Redevelopment of the existing school campus would not require the installation of on-site groundwater wells, and the small increase in student capacity at the redeveloped school campus would not result in an increase in the need for potable water such that SSWD would need to drill additional groundwater wells to support its regional supply. Furthermore, since more recent building code requirements increase both indoor and outdoor water conservation, the project could actually reduce water demand as compared to existing conditions. Therefore, the proposed project would not substantially decrease groundwater supplies such that sustainable groundwater management of the basin would be impeded, and the impact from redevelopment at the proposed Katherine Johnson Middle School site would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.7-3 Substantially Alter Drainage Patterns or Add Impervious Surfaces Resulting in Increased Erosion or Siltation. *Construction and grading activities associated with project site redevelopment could result in excess runoff, soil erosion, and stormwater discharges of suspended solids and increased turbidity. Construction and operational activities that are implemented without proper controls could violate water quality standards or cause indirect harm to aquatic organisms. However, with implementation of grading, erosion control, and stormwater pollutant laws, regulations, and permit conditions, and implementation of site-specific BMPs, this impact would be less than significant.*

Construction activities at the proposed Katherine Johnson Middle School and Encina High School campuses would not substantially alter drainage patterns because the sites are flat and are already developed with existing school facilities. However, grading and excavation associated with the proposed Katherine Johnson Middle School project site redevelopment and installation of portable classrooms at Encina, as well as increased operational stormwater runoff from redevelopment at the proposed Katherine Johnson Middle School site, could increase erosion and sedimentation that could result in degradation of waterways and conflict with beneficial uses, water quality objectives, and standards established in the Basin Plan. In addition, accidental spills of construction-related contaminants (e.g., fuels, oils, paints, solvents, cleaners, concrete) could also occur during construction, thereby degrading water quality.

As described in detail in Impact 3.7-1, several existing regulations would apply to the proposed project and would be implemented to reduce or avoid impacts related to erosion, sedimentation, and water quality degradation during construction as described above under the Regulatory Framework section. For example, the District must obtain a grading permit from the County, which will include permit terms and conditions requiring implementation of erosion and sediment control BMPs to protect receiving water quality (such as Chicken Ranch Slough). Furthermore, projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB's Construction General Permit, which requires preparation of a SWPPP and implementation of BMPs to

prevent soil erosion and discharge of other construction-related pollutants such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources.

Operation of the new portable classrooms at the Encina High School campus would not increase the amount of impervious surfaces because the site consists of a paved parking lot. The portable classrooms would be tied into the existing on-site drainage system.

Operation of the proposed Katherine Johnson Middle School would result in approximately 2 acres of new impervious surfaces (for a total of 5.5 acres of impervious surfaces) at the approximately 9.75-acre Katherine Johnson Middle School project site. The District would implement BMPs during project operation to reduce post-construction impacts to water quality. BMPs that may be implemented include those that are contained in, or are substantially similar to, the SSQP's *Stormwater Quality Design Manual* (SSQP 2021), to comply with the Sacramento Areawide MS4 Permit, the Basin Plan, and the CWA. Therefore, long-term water quality impacts would be reduced using site design and source control measures to help keep pollutants out of stormwater.

Compliance with the regulatory controls discussed above, which include implementation of a construction-related SWPPP with site-specific BMPs, and an operational stormwater drainage system that incorporates permanent BMPs similar to those contained in the SSQP's *Stormwater Quality Design Manual*, would appropriately control erosion and sedimentation from alteration of drainages and the addition of new impervious surfaces at the project site. Therefore, this impact would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 3.7-4 Substantially Alter Drainage Patterns or Add Impervious Surfaces that would Exceed Storm Drainage Systems or Result in Increased Flooding. *Redevelopment of the proposed Katherine Johnson Middle School project site would result in an increase in impervious surfaces that could potentially exceed the existing on-site storm drainage system thereby resulting in increased potential for flooding. This impact is considered potentially significant.*

Operation of the new portable classrooms at the Encina High School campus would not increase the amount of impervious surfaces because the site consists of a paved parking lot. The portable classrooms would be tied into the existing on-site drainage system. Thus, the installation of portable classrooms for adult education at Encina High School would have **no impact** related to exceedance of the storm drainage system or associated flooding.

As described previously, the proposed Katherine Johnson Middle School project site was developed as a school campus in 1953, with various additions and modifications over the years. Approximately 3.5 acres of the 9.25-acre project site are currently covered with impermeable surfaces (i.e., buildings and pavement). The redeveloped school campus would convert a portion of the existing outdoor turf playfield in the northern portion of the project site, as well as other unused areas in the southeast and southwest portions of the project site, to classrooms and other school buildings, parking, and drive aisles, which would add approximately 2 acres of impervious surfaces (for a total of approximately 5.5 acres of impervious surfaces at the project site). The increase in impervious surfaces would result in a minor increase in the total volume and the peak discharge rate of stormwater runoff generated on the project site.

For projects located in unincorporated Sacramento County, the design criteria for storm drainage systems are contained in the *Sacramento City/County Drainage Manual Volume 2: Hydrology Standards* (Drainage Manual) (County and City of Sacramento 2006). The Drainage Manual presents the accepted methods for estimating surface water runoff peak flows and volumes for the analysis and design of drainage facilities in the City and County of Sacramento. There are three potential methods for calculating stormwater runoff and volumes. However, because the project would continue to discharge stormwater runoff to an open channel (i.e., Chicken Ranch Slough), the “Sacramento Method” may be employed for analysis, according to the guidance in the Drainage Manual. The Sacramento Method uses the Bureau of Reclamation urban unit hydrograph as a basis for estimating runoff hydrographs. This method uses U.S. Army Corps of Engineers (USACE) Flood Hydrograph Program, HEC-1, to calculate, route and combine runoff hydrographs. HEC-1 is a mathematical watershed model developed by the USACE’s Hydraulic Engineering Center. The model is primarily designed to simulate the surface water runoff response from one basin or from a network of hydraulically connected basins. The model requires an input file that contains the design storm, the hydrologic characteristics of the basins, and the hydraulic characteristics of the drainage network which conveys the flows from these basins. The model output contains computed runoff hydrographs at desired locations within the basin. These runoff hydrographs are used to calculate stormwater runoff rates and volumes, which are then used to design a suitable drainage system.

Potential changes to the hydrologic and geomorphic processes in a watershed as a result of impervious surfaces and drainage infrastructure from urbanization include increased runoff volumes and dry weather flows, increased frequency and number of runoff events, increased long-term cumulative duration of flows, as well as increased peak flows. These changes are referred to as “hydromodification.” Hydromodification intensifies the erosion and sediment transport process, and often leads to changes in stream channel geometry, and streambed and streambank properties, which can result in degradation and loss of riparian habitat, and downgradient sediment deposition causing flooding problems. Typically, three broad approaches are used to manage and reduce the impacts of hydromodification:

- ▶ **Flow Control Approach.** The use of modified storm detention basins (often called Flow Duration Control Basins or FDCs) or infiltration facilities (e.g. swales with underdrains) to control the rate of discharge into receiving waters in the range that is responsible for most channel erosion. Flows are managed so that the pre- and post-development flow duration curves match within a defined tolerance.
- ▶ **Landscape Approach - Low Impact Development (LID).** In LID or source control approaches, impervious areas drain to a series of highly pervious landscaping areas that act as dispersed infiltration facilities. These infiltration facilities are sized based on pre-determined ratios (typically around 5 percent of the developed area) that have been found to infiltrate the excess runoff within the range of erosive flows.
- ▶ **In-stream Approach.** The use of stream restoration approaches to stabilize and restore already heavily anthropogenically affected receiving waters to better withstand the potential future impacts of hydromodification (e.g., reducing slope gradient by increasing sinuosity [where geomorphically appropriate] or introducing step-pool drop structures, or conducting biotechnical bank stabilization, etc.).

The project site is within the boundaries of the Sacramento Areawide NPDES MS4 Permit. The MS4 Permit requires that projects be designed such that post-development runoff does not exceed pre-development runoff. A drainage plan for the proposed Katherine Johnson Middle School project has not yet been prepared. Therefore, the appropriate hydrologic calculations necessary to determine the size and type of stormwater detention have not yet

been performed. Furthermore, hydromodification management features, including permanent operational erosion control features, BMPs, and LID techniques have not yet been identified. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 3.7-4: Prepare a Drainage Plan for the Proposed Katherine Johnson Middle School, and Implement Requirements Contained in the Plan.

SJUSD shall prepare a final drainage plan that incorporates Central Valley RWQCB requirements to appropriately convey off-site upstream runoff through the Katherine Johnson Middle School project site that demonstrates how project-related on-site runoff would be appropriately detained and managed with through other improvements (e.g., source controls) to reduce flooding and hydromodification impacts, as required by the Sacramento Areawide NPDES MS4 Permit. The drainage plan shall include, but is not limited to, the following items:

- an accurate calculation of pre-project and post-project runoff scenarios, obtained using appropriate engineering methods (which may consist of those contained in the *Sacramento City/County Drainage Manual Volume 2: Hydrology Standards*), that accurately evaluates potential changes to runoff, including increased surface runoff;
- runoff calculations for the 10-year, 100-year (0.01 AEP), and 200-year (0.005 AEP) storm events (and other, smaller storm events as required) shall be performed and the drainage pipeline sizes confirmed based on alignments and detention facility locations finalized in the design phase;
- a description of the proposed ongoing maintenance program for the on-site drainage system;
- project-specific standards for installing drainage systems;
- a description of on-site features designed to treat stormwater and maintain stormwater quality before it is discharged from the project site (e.g., vegetated swales, infiltration trenches, and constructed wetland filter strips); and
- stormwater management BMPs that are designed to limit hydromodification and maintain current stream geomorphology. These may include, but are not limited to, the following:
 - use of LID techniques to limit increases in stormwater runoff at the point of origination (these may include, but are not limited to: surface swales; replacement of conventional impervious surfaces with pervious surfaces [e.g., porous pavement]; impervious surfaces disconnection; and trees planted to intercept stormwater);
 - minimize slope differences between any stormwater or detention facility outfall channel with the existing receiving channel gradient to reduce flow velocity; and
 - minimize to the extent possible detention basin sizes, embankments, culverts, and other encroachments into the channel and floodplain corridor, and utilize open bottom box culverts to allow sediment passage on smaller drainage courses.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-4 would reduce the potentially significant impact associated with increased risk of exceedance of stormwater drainage systems, and flooding and hydromodification from increased stormwater runoff at the proposed Katherine Johnson Middle School site to a **less-than-significant** level because SJUSD would demonstrate that the project would conform with applicable State and local regulations regulating surface water runoff. Specific project design standards as required in this mitigation measure would, when implemented, safely convey on-site and off-site flows through the project site, would reduce the effects of hydromodification on stream channel geomorphology, and would prevent substantial increased flood hazard on and off the project site by limiting peak discharges of flood flows to levels that are at or below pre-project conditions.

IMPACT 3.7-5 **Impede or Redirect Flood Flows.** *Redevelopment of the proposed Katherine Johnson Middle School project site would not result in placement of school buildings within a 100- or 200-year flood hazard zone. However, the portable classrooms for adult education at the Encina High School site would be located within a 200-year flood zone regulated by the CVFPB and where the ULOP criteria apply. Therefore, the proposed portable classrooms at Encina High School could impede or redirect flood flows, and this impact is considered potentially significant.*

At the proposed Katherine Johnson Middle School project site, a small portion of Chicken Ranch Slough runs through the northern edge of the campus. The bed and bank of Chicken Ranch Slough are a designated FEMA Regulatory Floodway. No project-related work would be performed nor would any improvements be placed within the FEMA Regulatory Floodway. Proposed buildings would be set back a minimum of 100 feet from the Regulatory Floodway as required by CDE and Sacramento County Floodplain permitting requirements. Extending outward from the Regulatory Floodway is an area approximately 75 feet wide that is classified by FEMA as shaded Zone X (i.e., an areas of moderate flood hazard between the 100- and 500-year floodplains). The proposed new buildings would be set back from, and would be constructed outside of, the shaded Zone X flood zone. Thus, the proposed redevelopment for the new Katherine Johnson Middle School would not impede or redirect flood flows and there would be **no impact**.

The Encina High School portable classroom site is within a FEMA shaded Zone X where development is protected by levees from a 100-year flood. Therefore, 100-year flood flows would not represent a hazard. However, the Encina High School portable classroom site is also within a 200-year flood area that is subject to ULOP requirements (U.S. Army Corps of Engineers and California Reclamation Board 2002; Sacramento County 2017b: Appendix D). Encina High School was originally constructed in 1959, with various additions and modifications over the years. The western half of the Encina High School property, which includes approximately 50 percent of the existing campus buildings, is also within the 200-year flood area that is subject to ULOP requirements. The existing Katherine Johnson Middle School students are currently co-located with the high school students at Encina, and therefore are already exposed to the potential 200-year flood hazard. Because the existing 550 Katherine Johnson Middle School students and the associated teaching staff would relocate to the new Katherine Johnson Middle School at the redeveloped Creekside School campus, and the approximately 300 adult education students plus their associated teaching staff at the existing Creekside campus would relocate to Encina, approximately 250 fewer people would be exposed to 200-year flood hazards at the Encina High School after the proposed adult education portable classrooms are installed. Nevertheless, the new portable classrooms and the associated students and staff would be exposed to 200-year flood hazards and the classroom buildings

could impede or redirect flood flows. Hydraulic studies demonstrating that placement of the proposed portable classroom buildings within the CVFPB and County ULOP 200-year floodplain would not impede flood flows, would not substantially increase the base flood elevation, and would not result in increased upstream or downstream flooding have not yet been performed. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 3.7-5: Prepare a Hydraulic Study for the Encina High School Portable Classrooms, Incorporate Flood Control Features as Necessary.

- SJUSD shall prepare a hydraulic study that includes hydraulic modeling related to placement of the portable classrooms and portable restroom building. The study shall calculate the project's effects on the base water surface elevation, the potential increase or decrease in flood water velocities, and the potential scour depth. Modeling shall extend off site both upstream and downstream to determine impacts to surrounding properties (if any). Based on modeling results, the study shall identify recommendations, such as raised foundations, and any recommended facilities (as necessary) that provide for flood control (including any controls necessary to reduce off-site increases that may be caused by the proposed on-site development), and identify the floodproofing that is required for the proposed portable classrooms and the associated underground utilities in compliance with all relevant requirements, including those directed by the Division of the State Architect.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-5 would reduce the project's potential impacts from increased flooding at the Encina High School portable classroom site to a **less-than-significant** level, because a hydraulic study would be performed to identify recommendations necessary to demonstrate that the proposed project would not impede flood flows, would not substantially increase the base flood elevation, and would not increase upstream or downstream flooding on off-site properties.

IMPACT 3.7-6 **Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan.** *Required compliance with existing laws, regulations, ordinances, and policies would ensure that the project would not conflict with a water quality control plan or sustainable groundwater management plan. Therefore, this impact would be less than significant.*

As described in Impact 3.7-1, above, compliance with the applicable laws, regulations, ordinances, and permit terms would require the District to reduce pollutants in construction and operational stormwater runoff generated at the proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site through implementation of operation-related LID technologies, BMPs, and pollutant source control measures, along with preparation of a SWPPP with associated BMPs designed to control construction-related erosion and pollutants. These measures would protect water quality as required by the Basin Plan (Central Valley RWQCB 2019). Therefore, project implementation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and this impact would be **less than significant**.

As described in Impact 3.7-2 above, the proposed project does not include drilling groundwater supply wells to serve either school campus. The proposed Katherine Johnson Middle School site is supplied with potable water by SSWD, and SSWD has determined that sufficient water supplies will be available in all water year types during the 2025–2045 planning horizon, to serve future projected development (Brown & Caldwell 2021). The Encina

High School is served by the California American Water Company, and because approximately 250 fewer students and teachers would be present at the campus during project operation, the water demand at Encina would decrease. The proposed Katherine Johnson Middle School project site redevelopment would result in only a minor decrease in the existing permeable areas (i.e., 2 acres). The small, approximately 2-acre decrease in permeable surfaces at the project site is accounted for in regional development through the year 2040 as part of the GSP's Projected Conditions Groundwater Budget (GEI Consultants 2021). The Encina portable classrooms would result in no increase in impervious surfaces because the site is paved. Therefore, this impact would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

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3.8 NOISE AND VIBRATION

3.8.1 INTRODUCTION

This section summarizes the applicable noise regulations and describes ambient noise conditions near the proposed Katherine Johnson Middle School site and the Encina portables site. This section evaluates the noise impacts associated with the proposed project, including short-term impacts of demolition of the existing buildings, and construction of new school buildings and playgrounds, along with associated infrastructure improvements, long-term impacts from operation of school facilities, and traffic noise increases along area roadways. This section also evaluates the compatibility of on-site and surrounding land uses with projected on-site noise levels.

ACOUSTIC FUNDAMENTALS

Acoustics evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise; consequently, the perception of sound is subjective in nature and can vary substantially from person to person. Common environmental noise sources and noise levels are presented in Exhibit 3.8-1.

Outdoor Noise Source	Noise Level (dBA)	Indoor Noise Source
	— 110 —	Rock band
Jet fly-over at 1000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 mph	— 80 —	Food blender at 3 feet Garbage disposal at 3 feet
Noisy urban area, daytime	— 70 —	Vacuum cleaner at 10 feet Normal speech at 3 feet
Gas lawn mower, 100 feet	— 60 —	
Commercial area	— 50 —	Large business office Dishwasher next room
Heavy traffic at 300 feet	— 40 —	Theater, large conference room (background)
Quiet urban daytime	— 30 —	Library
Quiet urban nighttime	— 20 —	Bedroom at night, concert hall (background)
Quiet suburban nighttime	— 10 —	Broadcast/recording studio
Quiet rural nighttime	— 0 —	Lowest threshold of human hearing
Lowest threshold of human hearing		

Source: Caltrans 2013.

dBA = A-weighted decibel(s)

Exhibit 3.8-1. Typical Noise Levels

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, the diaphragm of a radio speaker). The wave is comprised of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variations occurring per second is referred to as the frequency of the sound wave and is expressed in hertz, which is equivalent to one complete cycle per second.

Directly measuring sound pressure fluctuations at different frequencies would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable measurement system, the decibel (dB) scale was introduced. The use of the decibel is a convenient way to handle the millionfold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic.¹ As such, it does not follow normal algebraic methods and cannot be directly added. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. A strong correlation exists between the way humans perceive sound and A-weighted sound levels (dBA). For this reason, the dBA can be used to predict community response to noise. Sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

Noise can be generated by a number of sources, including mobile sources (automobiles, trucks, and airplanes), and stationary sources (construction sites, machinery, commercial and industrial operations). As acoustic energy spreads through the atmosphere from the source to the receptor, noise levels attenuate (reduce) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers (walls, building façades, berms). Noise generated from mobile sources generally attenuates at a rate of 4.5 dB per doubling of distance. Stationary noise sources spread with more spherical dispersion patterns, which attenuate at a rate of 6 dB to 7.5 dB per doubling of distance.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receptor. Furthermore, the presence of a large object (barrier) between the source and the receptor can provide significant attenuation of noise levels at the receptor. The amount of noise level reduction or “shielding” provided by a barrier primarily depends on the size (height) of the barrier, the location of the barrier in relation to the source and receptors, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods, and human-made features such as buildings and walls may be used as noise barriers.

NOISE DESCRIPTORS

The intensity of environmental noise changes over time. This section uses several different descriptors of time-averaged noise levels. The selection of a proper noise descriptor for a specific source depends on the spatial and

¹ A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. For sound pressure in air, the standard reference quantity is generally considered to be 20 micropascals, which directly corresponds to the threshold of human hearing.

temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to describe environmental noise are defined below:

- ▶ L_{\max} (Maximum Noise Level): The highest A/B/C-weighted, integrated noise level occurring during a specific period of time.
- ▶ L_{\min} (Minimum Noise Level): The lowest A/B/C-weighted, integrated noise level during a specific period of time.
- ▶ Peak: The highest weighted or unweighted, instantaneous, peak-to-peak value occurring during a measurement period.
- ▶ L_n (Statistical Descriptor): The noise level exceeded n percent of a specific period of time, generally accepted as an hourly statistic. An L_{10} would be the noise level exceeded 10 percent of the measurement period.
- ▶ L_{eq} (Equivalent Noise Level): The energy mean (average) noise level, the steady state sound level in a specified period of time that contains the same acoustical energy as a varying sound level over the same time period.
- ▶ L_{dn} (Day-Night Noise Level): The 24-hour L_{eq} with a 10 dB “penalty” applied during nighttime noise-sensitive hours between 10:00 p.m. and 7:00 a.m. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- ▶ CNEL (Community Noise Equivalent Level): The CNEL is similar to the L_{dn} described above, but with an additional 5 dB “penalty” for the noise-sensitive hours between 7:00 p.m. and 10:00 p.m., which are typically reserved for relaxation, conversation, reading, and other noise-sensitive activities. If using the same 24-hour noise data, the CNEL is typically 0.5 dB higher than the L_{dn} .
- ▶ SEL (Sound Exposure Level): The SEL describes the cumulative exposure to sound energy over a stated period of time.

NOISE EFFECTS ON HUMANS

Excessive and chronic exposure to elevated noise levels can result in auditory and nonauditory effects in humans. Auditory effects of noise on people are those relating to temporary or permanent noise-induced hearing loss. Nonauditory effects of exposure to elevated noise levels are those relating to behavioral and physiological effects. The nonauditory behavioral effects of noise on humans are primarily associated with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep and learning.²

The degree to which noise results in annoyance and interference with activities is highly subjective and may be influenced by a number of nonacoustic factors. The number and effect of these nonacoustic environmental and

² The nonauditory physiological health effects of noise on humans have been the subject of considerable research efforts attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. Most research infers that noise-related health issues are predominantly the result of behavioral stressors (physiological) and not a direct noise-induced response.

physical factors vary depending on the individual characteristics of the noise environment, including sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in noise levels caused by a new noise source, relative to the environment an individual has become accustomed to, the less tolerant the individual will be to the new noise source.

With regard to the human perception of increases in sound levels expressed in dB, a change of 1 dB is generally not perceivable, excluding controlled conditions and pure tones. Outside of controlled laboratory conditions, the average human ear barely perceives a change of 3 dB. A change of 5 dB generally fosters a noticeable change in human response, and an increase of 10 dB is subjectively heard as a doubling of loudness.

Speech interruption due to noise events may reduce speech intelligibility and sentence comprehension, disrupt the signal-to-noise ratio, decrease learning and teaching motivation, and adversely affect the overall learning process. For these reasons, the CDE requires that background noise from traffic and other sources be considered in the site selection and approval process for schools (CDE 2017). According to CDE site selection criteria, the American Speech-Language-Hearing Association (ASLHA) guidelines recommend that classroom background noise not rise above 30 decibels (CDE 2017). The World Health Organization (WHO) recommends a maximum level of 35 dB L_{eq} for 100 percent speech intelligibility. Speech can be fairly well understood with background noise levels of 45 dB L_{eq} (WHO 1999: 38). Some researchers recommend of an interior noise level criterion of 64 dB SEL per event for estimating speech interference and an L_{max} of 50 dB (PSU 2009).

VIBRATION

The human body responds to the vibration velocity's average amplitude. A vibration decibel notation is commonly used to describe vibration. The vibration velocity level (VdB) is reported in decibels relative to a level of 1×10^{-6} inches per second.³

In contrast to airborne noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of human perception (around 65 VdB).

3.8.2 ENVIRONMENTAL SETTING

The proposed Katherine Johnson Middle School site is bounded by Miramar Road on the south, Belport Lane on the west, private residences adjacent to Lacy Lane on the north, and private residences adjacent to Creekside Lane and Crest Haven Drive on the east (Refer to Exhibit 2-2). The Encina High School portable classroom site is surrounded by high school classroom buildings north of the parking lot, and the school's tennis courts and outdoor track are present to the east of the parking lot. Greer Elementary School is south of the proposed portable classroom site. Bell Street is immediately adjacent to Encina High School and the paved parking lot to the west.

³ Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. Because the motion is oscillatory, no net movement of the vibration element occurs, and the average of any of the motion descriptors is zero. For vibration, velocity represents the instantaneous speed of the motion and acceleration is the speed's rate of change.

The existing noise environment is primarily influenced by vehicular traffic noise emanating from local roadways and noise from adjacent neighborhood activities. Noise from outdoor activities (e.g., people talking, landscape maintenance, dogs barking) also contribute to the noise environment.

AMBIENT NOISE SURVEY

An ambient noise survey was conducted on June 2–3, 2022, to document existing noise sources and the existing noise environment at noise-sensitive receptors in the vicinity of the proposed Katherine Johnson Middle School site. As noted, the dominant noise source identified during the ambient noise survey was vehicular traffic noise emanating from local roadways and noise from adjacent neighborhood activities. One short-term (15 minutes) measurement and two continuous 24-hour, long-term measurements (LT-01 and LT-02) were conducted within the proposed project area, and one continuous 24-hour, long-term measurement (LT-03) was conducted along the existing school boundary (Exhibit 3.8-2).⁴

The L_{eq} and L_{max} values taken at each ambient noise measurement location are presented in Table 3.8-1. During the survey, average daytime hourly noise levels in the vicinity of the project site ranged from 48.7 dB to 57.0 dB L_{eq} , with maximum noise levels that ranged from 61.3 dB to 71.0 dB L_{max} .

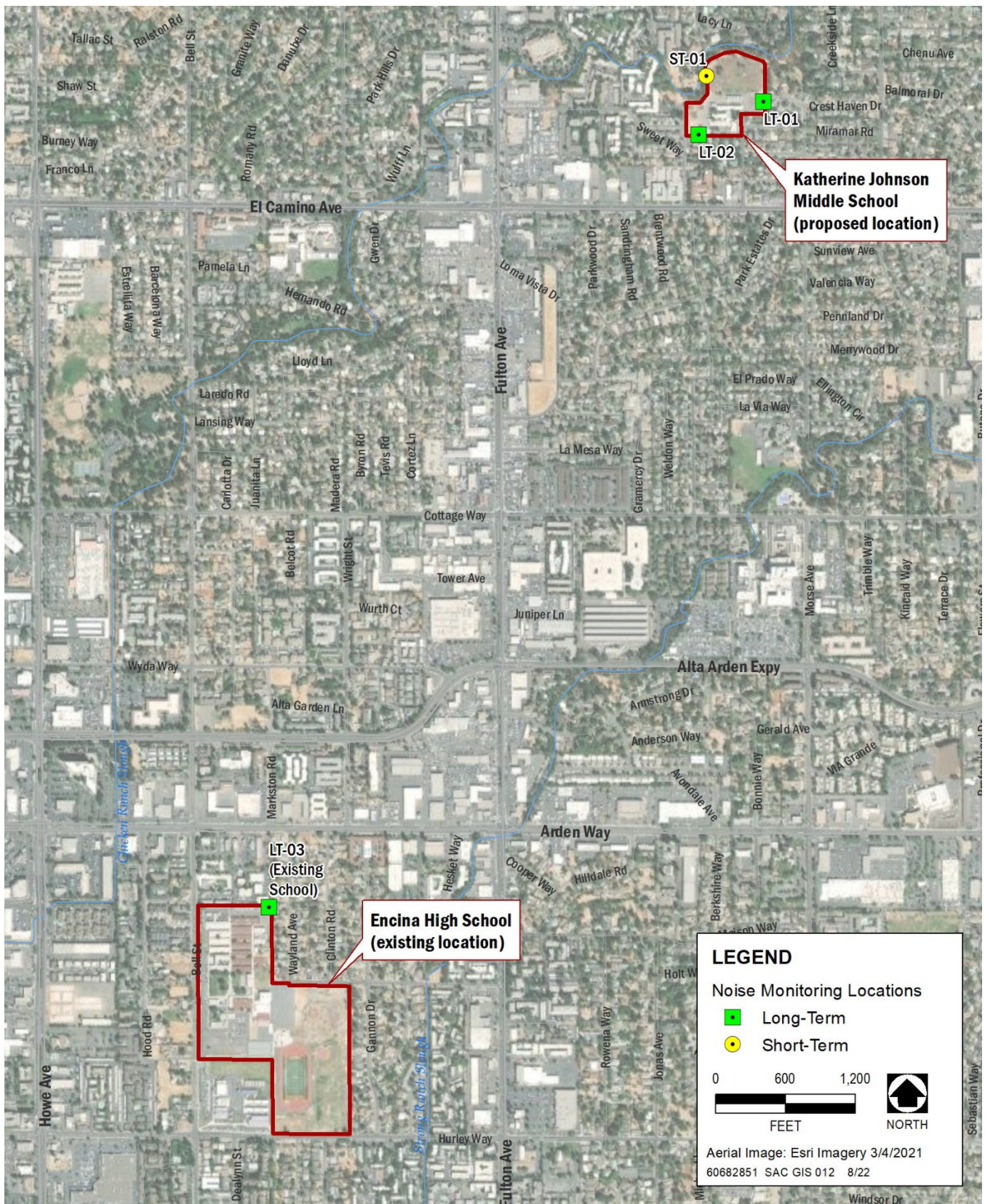
Table 3.8-1. Ambient Noise Survey Measurements

Site	Address	Date		Start Time	Duration	Daytime (7 a.m.–10 p.m.)		Nighttime (10 p.m.–7 a.m.)		L_{dn}
		From	To			L_{eq}	L_{max}	L_{eq}	L_{max}	
LT-01	Within proposed Katherine Johnson Middle School site (Eastern Boundary)	6/2/22	6/3/22	15:00	24 Hr	51.9	70.3	46.4	59.1	54.2
LT-02	Within proposed Katherine Johnson Middle School site (Southwestern Boundary, by Town & Country Pre-School and Daycare)	6/2/22	6/3/22	15:00	24 Hr	53.0	70.0	46.8	62.1	54.8
LT-03	Existing Katherine Johnson Middle School at Encina (Northeastern Corner)	6/2/22	6/3/22	16:00	24 Hour	57.0	71.0	49.1	61.6	57.9
ST-01	Within proposed Katherine Johnson Middle School site (Western Boundary)	6/2/22		15:05	15 Min.	48.7	61.3	--	--	--

Notes: CNEL = Community Noise Equivalent Level; dB = A-weighted decibels; L_{eq} = the equivalent hourly average noise level; L_{max} = maximum noise level; LT = Long-term; ST = Short-term; -- = noise measurement data not available.

Source: Data compiled by AECOM in 2022.

⁴ Short-term (15 minutes) measurements of noise levels were taken in accordance with ANSI standards at four locations using a Larson Davis Laboratories (LDL) Model 831 precision integrating sound-level meter. Continuous 24-hour, long-term monitoring of noise levels was conducted using an LDL Model 820 sound-level meter. The sound-level meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure that the measurements were accurate. The equipment used meets all pertinent ANSI specifications for Type 1 sound level meters.



Source: Adapted by AECOM in 2022

Exhibit 3.8-2. Ambient Noise Survey Measurements and Locations

TRAFFIC NOISE

Traffic noise is the dominant noise source on the project site. Bell Street is the major roadway near the Encina portables part of the project site. Major roadways near the proposed Katherine Johnson Middle School project site are El Camino Avenue and Fulton Avenue, and the nearest roadways to the project site are Belport Lane and Kent Drive extending from the project site to El Camino Avenue, and Elvyra Way extending from the project site to Fulton Avenue. Existing vehicle traffic noise levels near the project site were modeled using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic data collected to define existing traffic levels (see Section 3.9, “Transportation” of this EIR).⁵

Table 3.8-2 summarizes the modeled traffic noise levels, provides noise levels at 50 feet from the centerline of each major roadway in the immediate vicinity of the project site, and lists distances from the roadway centerlines to the 60 dB, 65 dB, and 70 dB L_{dn} traffic noise contours. These traffic noise modeling results are based on existing average daily traffic (ADT) volumes provided in the transportation analysis prepared to support this EIR. As shown in Table 3.8-2, the location of the 60 dB L_{dn} contour ranges from 0 to 239 feet from the centerline of the modeled roadways. The extent to which receptors in the vicinity of the project site are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise.

Table 3.8-2. Summary of Modeled Levels of Existing Traffic Noise

Segment			L_{dn} (dB) 50 Feet	Distance from Roadway Centerline to L_{dn} Contour		
Roadway	From	To		70 dB	65 dB	60 dB
Kent Drive	Miramar Road	North of Miramar Road	38.7	0	0	0
Kent Drive	Miramar Road	South of Miramar Road	45.1	0	1	2
Miramar Road	Kent Drive	East of Kent Drive	41.3	0	0	1
Morse Avenue	Miramar Road	North of Miramar Road	53.3	1	3	11
Morse Avenue	Miramar Road	South of Miramar Road	54.9	2	5	16
Miramar Road	Morse Avenue	West of Morse Avenue	46.0	0	1	2
Belport Lane	Elvyra Way	North of Miramar Road	42.2	0	0	1
Belport Lane	Elvyra Way	South of Miramar Road	50.9	1	2	6
Elvyra Way	Belport Lane	West of Belport Lane	50.9	1	2	6
Belport Lane	Belport Lane	North of El Camino Avenue	53.3	1	3	11
El Camino Avenue	El Camino Avenue	East of Belport Lane	62.2	8	26	83
El Camino Avenue	El Camino Avenue	West of Belport Lane	66.8	24	75	237
Kent Drive	Kent Drive	North of El Camino Avenue	51.8	1	2	8
El Camino Avenue	El Camino Avenue	East of Kent Drive	63.9	12	39	123
El Camino Avenue	El Camino Avenue	West of Kent Drive	66.8	24	76	239

Notes: dB = A-weighted decibels; L_{dn} = day-night average noise level.

Source: Data modeled by AECOM in 2022

⁵ The FHWA model is based on CALVENO reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receptor, and ground attenuation factors.

EXISTING LAND USES SENSITIVE TO NOISE

Land uses that are sensitive to noise generally include those uses where exposure to noise would result in adverse effects, and where quiet is an essential element of the intended purpose. The existing off-site land uses that would be sensitive to project-generated noise would be the single-family residences to the north, and south, east, and west of the project site. These residences could experience noise associated with project construction, increased traffic, and stationary sources emanating from school grounds (e.g., heating, ventilation, and air conditioning [HVAC], school children playing, and parking lot activities). Residences are of primary concern because residents could be exposed to increased and prolonged interior and exterior noise levels. Future on-site sensitive uses would include classrooms and offices. A sensitive outdoor area is the primary outdoor activity area associated with any given land use at which noise sensitivity exists and the location at which Sacramento County's exterior noise level standards are applied. Sensitive outdoor area for single-family residential uses are normally considered to be backyard spaces, or rear patio/deck areas of single-family residential uses. Front yard spaces, elevated balconies front courtyards, front decks, side yards, etc., are not commonly considered to be sensitive outdoor activity areas. Where the location of outdoor activity areas for large lot residential properties cannot be determined, the County's exterior noise level standards shall be applied within 50 feet of the rear of the residence (Sacramento County 2017).

There are no noise-sensitive uses close enough to the Encina portables portion of the project site to be substantially affected by the minor level of noise anticipated in relation to the installation of portables (Greer Elementary School will be out of session when the portables are installed).

3.8.3 REGULATORY FRAMEWORK

While the following regulatory regime does not directly apply to the proposed project, the underlying analysis provides a useful context for understanding the impacts of environmental noise on people.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS AND NATIONAL ORGANIZATIONS

The U.S. Environmental Protection Agency (EPA), Office of Noise Abatement and Control, was originally established to coordinate federal noise control activities. After inception, EPA's Office of Noise Abatement and Control issued the federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. Administrators of EPA determined in 1981 that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in the rulings by EPA in prior years remain upheld by designated federal agencies, while allowing more individualized control for specific issues by designated federal, state, and local government agencies.

Acoustical Society of America

The Acoustical Society of America develops, maintains, and revises its American National Standards on Acoustics in accordance with a procedure approved by the American National Standards Institute (ANSI). The use of ANSI standards is voluntary and does not apply to noise generated within the classroom (ANSI 2002:1). Table 1 of ANSI S12.60-2002 establishes an interior noise level standard of 35 dB for core learning spaces. Core learning spaces are defined by the Acoustical Society of America as spaces for educational activities where the

primary functions are teaching and learning and where good speech communication is critical to a student's academic achievement (ANSI 2002:4–5).

Federal Transit Administration (FTA) Construction Vibration Criteria

The FTA Guidance Manual recommends using local construction noise limits, if possible. The primary concern regarding construction vibration is potential damage to structures, though both thresholds related to human annoyance and structural damage are used in environmental evaluations. The thresholds for potential damage are much higher than the thresholds for evaluating potential annoyance used to assess impact from operational vibration.

Building damage criteria recommended by FTA are shown in Table 3.8-3. These limits will be used to estimate potential problems that should be addressed during final design. The vibration limits that are shown are the levels at which a risk for damage would exist for each building category, not the level at which damage would occur. These limits should be viewed as criteria to be used during the impact assessment phase, to identify problem locations.

Table 3.8-3. FTA Construction Vibration Damage Criteria

Building Category	PPV (inch/second)	Approximate RMS Vibration Velocity Level ^a
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Notes: PPV = peak particle velocity; RMS = root-mean-square

^a RMS vibration velocity level in VdB relative to 1 micro-inch/second.

Source: FTA 2018

To avoid temporary annoyance to building occupants during construction or construction interference with vibration-sensitive equipment inside special-use buildings, such as that from a magnetic resonance imaging machine, FTA recommends comparing the project construction-related VdB to the criteria shown in Table 3.8-4 for frequent, occasional, and infrequent events. FTA defines frequent events as more than 70 events per day, occasional events as 30–70 events per day, and infrequent events as fewer than 30 events per day. Construction-related, vibration-generating activities under the proposed project would fall under infrequent events as defined by FTA.

To address the human response to groundborne vibration, FTA has guidelines for maximum acceptable vibration criteria for different types of land uses. These guidelines recommend 65 VdB referenced to 1 microinch per second ($\mu\text{in}/\text{sec}$) and based on the RMS velocity amplitude for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, laboratory facilities); 80 VdB for residential uses and buildings where people normally sleep; and 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, offices) (FTA 2018). The vibration annoyance criteria are shown in Table 3.8-4.

Table 3.8-4. FTA Construction Vibration Annoyance Criteria

Land Use Category	Impact Levels (VdB)	relative to 1 micro-inch/second	
	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
Category 1: Buildings where vibration would interfere with interior operations	65 ^d	65 ^d	65 ^d
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Notes: FTA = Federal Transit Administration; VdB =vibration decibel(s)

^a “Frequent events” are those with more than 70 vibration events from the same source per day.

^b “Occasional events” is defined as 30 to 70 vibration events from the same source per day.

^c “Infrequent events” is defined as fewer than 30 vibration events from the same source per day.

^d This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes.

Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels.

Source: FTA 2018

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation.

Title 5, California Code of Regulations

The California Department of Education (CDE 2017) cites requirements for school projects and establishes noise standards in Title 5 of the California Code of Regulations, Division 1, Chapter 13, Subchapter 1, “School Facilities Construction.” The following articles are applicable to the proposed project:

Article 2, School Sites, Section 14010, Standards for School Site Selection

All districts shall select a school site that provides safety and that supports learning. The following standards shall apply:

- e) The site shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program.
- q) The district shall consider environmental factors of light, wind, noise, aesthetics, and air pollution in its site selection process.

Article 4, Standards, Planning and Approval of School Facilities, Section 14030, Standards for Development of Plans for the Design and Construction of School Facilities

The following standards for new schools are for the use of all school districts for the purposes of educational appropriateness and promotion of school safety:

- m. Acoustical. Hearing conditions shall complement the educational function by good sound control in school buildings, specifically:
 - 1. The sound-conditioning in a given space is acoustically comfortable to permit instructional activities to take place in this classroom.

2. Sound is transmitted without interfering with adjoining instructional spaces; e.g., room partitions are acoustically designed to minimize noise.
3. The ventilation system does not transmit an inordinate sound level to the instructional program.

The *State of California General Plan Guidelines 2017*, published by the California Governor's Office of Planning and Research (OPR), provides guidance for the acceptability of projects within areas of specific noise exposure ranges. Table 3.8-5 presents acceptable and unacceptable community noise exposure limits for various land use categories (OPR 2017). The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 3.8-5. OPR Land Use Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dB)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential-Low Density Single Family, Duplex, Mobile Home	<60	55–70	70–75	75+
Residential-Multiple Family	<65	60–70	70–75	75+
Transient Lodging, Motel, Hotel	<65	60–70	70–80	80+
School, Library, Church, Hospital, Nursing Home	<70	60–70	70–80	80+
Auditorium, Concert Hall, Amphitheater		<70	65+	
Sports Arenas, Outdoor Spectator Sports		<75	70+	
Playground, Neighborhood Park	<70		67.5–75	72.5+
Golf Courses, Stable, Water Recreation, Cemetery	<75		70–80	80+
Office Building, Business Commercial, and Professional	<70	67.5–77.5	75+	
Industrial, Manufacturing, Utilities, Agriculture	<75	70–80	75+	

Notes: CNEL = Community Noise Equivalent Level; dB = A-weighted decibels; L_{dn} = day-night average noise level; OPR = California Governor's Office of Planning and Research.

¹ Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

² New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

³ New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

⁴ New construction or development should generally not be undertaken.

Source: OPR 2017

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Although County policies and standards do not directly apply to the project, the research underpinning these policies is useful for understanding project impacts, and these policies and standards are used, in part, in the noise assessment provided in this section.

Sacramento County General Plan

The Noise Element of the *County of Sacramento General Plan* (Sacramento County 2017) contains specific goals and policies for evaluating a proposed project's compatibility with surrounding land uses. The following goals and policies are related to noise:

- **Policy NO-1:** The noise level standards for noise-sensitive areas of *new* uses affected by traffic or railroad noise sources in Sacramento County are shown in Table 1 [Table 3.8-6 of this DEIR]. Where the noise level standards of Table 1 [Table 3.8-6 of this DEIR] are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 [Table 3.8-6 of this DEIR] standards.

Table 3.8-6. Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Sensitive ¹ Outdoor Area - L _{dn}	Sensitive Interior ² Area - L _{dn}	Notes
All Residential	65	45	5
Transient Lodging	65	45	3,5
Hospitals & Nursing Homes	65	45	3, 4, 5
Theaters & Auditoriums	---	35	3
Churches, Meeting Halls Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	---	50	3
Playgrounds, Parks, etc.	70	---	
Industry	65	50	3

Notes: L_{dn} = day-night average noise level.

1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (L_{max}) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Source: Sacramento County 2017, Table 1.

- **Policy NO-5:** The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown in Table 2 [Table 3.8-7 of this DEIR]. Where the noise level standards of Table 2 [Table 3.8-7 of this DEIR] are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 [Table 3.8-7 of this DEIR] standards within sensitive areas.
- **Policy NO-6:** Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not to exceed the interior and exterior noise level standards of Table 2 [Table 3.8-7 of this DEIR] at existing noise-sensitive areas in the project vicinity.
- **Policy NO-7:** The “last use there” shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses that may have sensitivity to noise, then the noise-generating

use shall be responsible for mitigating its noise generation to a state of compliance with Table 2 [Table 3.8-7 of this DEIR] standards at the property line of the generating use in anticipation of the future neighboring development.

Table 3.8-7. Non-Transportation Noise Standards Median (L_{50}) / Maximum (L_{max})¹

Receiving Land Use	Outdoor Area ²	Outdoor Area ²	Interior ³	Interior ³
	Daytime	Nighttime	Day & Night	Notes
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5, 6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	6
Office Buildings	60 / 75	---	45 / 65	6
Commercial Buildings	---	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

Notes: L_{50} : Median noise level or level exceeded 50% of the time; L_{max} = The highest root-mean-square (RMS) sound level measured over a given period of time.

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: Sacramento County 2017, Table 2.

- **Policy NO-8:** Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.
- **Policy NO-9:** For capacity enhancing roadway or rail projects, or the construction of new roadways or railways, a noise analysis shall be prepared in accordance with the Table 3 [Table 3.8-8 of this DEIR] requirements. If projected post-project traffic noise levels at existing uses exceed the noise standards of Table 1 [Table 3.8-6 of this DEIR], then feasible methods of reducing noise to levels consistent with the Table 1 [Table 3.8-6 of this DEIR] standards shall be analyzed as part of the noise analysis. In the case of existing residential uses, sensitive outdoor areas⁶ shall be mitigated to 60 dB, when possible, through the application

⁶ A sensitive outdoor area is the primary outdoor activity area associated with any given land use at which noise sensitivity exists and the location at which the County's exterior noise level standards are applied. Sensitive outdoor area for single-family residential uses are normally considered to be backyard spaces or rear patio/deck areas of single-family residential uses. Front yard spaces, elevated balconies front courtyards, front decks, side yards, etc., are not commonly considered to be sensitive outdoor activity areas. Where the location of outdoor activity areas for large lot residential properties cannot be determined, the County's exterior noise level standards shall be applied within 50 feet of the rear of the residence (Sacramento County 2017).

of feasible methods to reduce noise. If 60 dB cannot be achieved after the application of all feasible methods of reducing noise, then noise levels up to 65 dB are allowed.

If pre-project traffic noise levels for existing uses already exceed the noise standards of Table 1 [Table 3.8-6 of this DEIR] and the increase is significant as defined below, feasible methods of reducing noise to levels consistent with the Table 1 [Table 3.8-6 of this DEIR] standards should be applied. In no case shall the long-term noise exposure for non-industrial uses be greater than 75 dB; long-term noise exposure above this level has the potential to result in hearing loss.

A significant increase is defined as follows:

Pre-Project Noise Environment (L_{dn})	Significant Increase
Less than 60 dB	5+ dB
60–65 dB	3+ dB
Greater than 65 dB	1.5+ dB

Table 3.8-8. Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:

1. Be the financial responsibility of the applicant.
2. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
3. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
4. Estimate projected future (20 year) noise levels in terms of the Standards of Table 1 and 2 [Table 3.8-2 and Table 3.8-3 of this DEIR] [of the Sacramento County General Plan Noise Element], and compare those levels to the adopted policies of the Noise Element.
5. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
6. Estimate noise exposure after the prescribed mitigation measures have been implemented.

Source: Sacramento County 2017, Table 3.

- **Policy NO-12:** All noise analyses prepared to determine compliance with the noise level standards contained within this Noise Element shall be prepared in accordance with Table 3 [Table 3.8-8 of this DEIR].
- **Policy NO-13:** Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.
- **Policy NO-15:** The County shall have the flexibility to consider the application of 5 dB less restrictive exterior noise standards than those prescribed in Tables 1 and 2 [Table 3.8-6 and Table 3.8-7 of this DEIR] in cases where it is impractical or infeasible to reduce exterior noise levels within infill projects to a state of compliance with the Table 1 or 2 [Table 3.8-6 and Table 3.8-7 of this DEIR] standards. In such cases, the rationale for such consideration shall be clearly presented and disclosure statements and noise easements should be included as conditions of project approval. The interior noise level standards of Tables 1 and 2 [Table 3.8-6 and Table 3.8-7 of this DEIR] would still apply. The maximum allowable long-term noise exposure permissible for non-industrial uses is 75 dB.

Exemptions

- **Policy NO-16:** The following sources of noise shall be exempt from the provisions of this Noise Element:
 - Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and generators which are activated during power outages. The routine testing of such warning devices and equipment shall also be exempt provided such testing occurs during daytime hours.
 - Activities associated with events for which a permit has been obtained from the County.

Sacramento County Code, Noise Control Ordinance

The Sacramento County Code Noise Control Ordinance contains performance standards to prevent unnecessary, excessive and offensive noise levels within the county. Table 3.8-9 includes applicable information from the Noise Control Ordinance.

Table 3.8-9. Noise Control Ordinance

Noise Area	County Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7 a.m.–10 p.m. 10 p.m.–7 a.m.	55 dB 50 dB
Cumulative Duration of the Intrusive Sound		Allowance	Decibels (dB)
1.	Cumulative period of 30 minutes per hour	0	
2.	Cumulative period of 15 minutes per hour	+5	
3.	Cumulative period of 5 minutes per hour	+10	
4.	Cumulative period of 1 minute per hour	+15	
5.	Level not to be exceeded for any time per hour	+20	

It is unlawful for any person at any location within the County to create any noise which causes the noise levels on an affected property, when measured in the designated noise area, to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by that indicated in the table above under the heading, "Cumulative Duration of the Intrusive Sound.":

Each of the noise limits specified in subdivision (b) of this section shall be reduced by five dB for impulsive or simple tone noises, or for noises consisting of speech or music.

If the ambient noise level exceeds that permitted by any of the first four noise-limit categories specified in subdivision (b), the allowable noise limit shall be increased in five dB increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

Notes: dB = A-weighted decibels.

Source: Title 6 of the Sacramento County Code, Section 6.68.070

Exemptions

Section 6.68.090 of the Sacramento County Code establishes the following conditions that are considered exempt from the provisions of the code:

- a. School bands, school athletic, and school entertainment events;
- b. Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a license or permit by the County;

- c. Activities conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity or private school;
- d. Any mechanical device, apparatus or equipment related to or connected with emergency activities or emergency work;
- e. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of eight p.m. and six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and on each Sunday after the hour of eight p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;
- f. Noise sources associated with agricultural operations, provided such operations do not take place between the hours of eight p.m. and six a.m.;
- g. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;

Schools

Section 6.68.110 of the Sacramento County Code establishes the following conditions applicable to schools:

It is unlawful for any person to create any noise which causes the noise level at any school, hospital or church, while the same is in use, to exceed the noise standards specified in Section 6.68.070 [Table 3.8-6 of this DEIR] or to create any noise which unreasonably interferes with the use of such institution or unreasonably disturbs or annoys patients in the hospital. In any disputed case, interfering noise which is ten dBA or more, greater than the ambient noise level at the building, shall be deemed excessive and unlawful.

Ambient Community Noise Environment Degradation

Using a single value to evaluate an impact relating to a noise-level increase does not account for the existing ambient noise environment (e.g., roads) to which people have become accustomed. Studies assessing the percentage of people who are highly annoyed by changes in ambient noise levels indicate that when ambient noise levels are low, a greater change is needed to cause annoyance. As ambient noise levels increase, a smaller change in noise level is required to elicit significant annoyance. In community noise assessments (e.g., general plans, noise ordinances), noise impacts are generally not considered significant under CEQA if no noise-sensitive sites are located in the vicinity of the project, or if increases in ambient noise levels associated with implementation of the project (construction and operation) would not exceed +3 dB at noise-sensitive locations near the project (Caltrans 2013).

The significance criteria outlined in Table 3.8-10 correlate to human responses to changes in ambient noise levels and assess degradation of the ambient community noise environment.

Table 3.8-10. Significant Change in Ambient Noise Levels

Existing Ambient Noise Level, L _{dn} /CNEL	Significant Increase
<60 dB	+ 5 dB or greater
>60 dB	+ 3 dB or greater

Notes: CNEL = Community Noise Equivalent Level; dB = A-weighted decibels; L_{dn} = day-night average noise level.

Source: FICON 1992, and Caltrans 2013.

3.8.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to noise if the proposed project would:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*e.g., exterior and interior noise levels detailed in the County General Plan and Sacramento County Code [Table 3.8-6 through Table 3.8-9 of this EIR];*
- Generation of excessive groundborne vibration or groundborne noise levels (*Table 3.8-3 for Building Damage and Table 3.8-4 for Annoyance*);
- For a project located within the vicinity of a private airstrip or 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 the proposed project, the environmental evaluation of potential noise impacts is based on a comparison between predicted noise levels and noise criteria defined by Sacramento County. For this project, noise impacts are considered significant if existing or proposed noise-sensitive land uses would be exposed to noise levels in excess of the County General Plan, and Sacramento County Code, as described above.

ISSUES NOT DISCUSSED FURTHER

Generation of excessive groundborne vibration or groundborne noise levels. Project operation (daily use of the school buildings) would not result in excessive groundborne vibration or groundborne noise levels and is not evaluated further.

For a project within the vicinity of an airport or a private airstrip, expose people residing or working in the project area to excessive noise levels—The proposed project would not expose people to excessive noise levels from an airport or private airstrip because the project site is not located within two miles of any airports or airstrips. Therefore, this issue is not discussed further in this EIR.

ANALYSIS METHODOLOGY

Information included in Chapter 2, “Project Description,” and data obtained during on-site noise monitoring were used to determine potential locations of noise-sensitive receptors and potential noise-generating activities and land uses in the vicinity of the project site, and within the project site. Noise-sensitive land uses and noise sources near the project site were identified based on existing documentation (e.g., aerial images) and site reconnaissance.

All of the existing buildings and facilities associated with the former Creekside Elementary School would be demolished and removed. A new middle school would be developed in place of the existing school facilities. The Encina portables aspect of the proposed project would involve trenching across an existing parking lot and placement of portables.

To assess the potential short-term noise impacts from demolition and construction, sensitive receptors and their relative exposure were identified. Construction noise was predicted using the Federal Transit Noise and Vibration Impact Assessment methodology for construction noise prediction (FTA 2018). Reference equipment noise levels and use factors are based on the Federal Highway Administration Roadway Construction Noise Model (FHWA 2006). Noise levels of specific construction equipment that would be operated and the resultant noise levels at sensitive receptor locations were calculated.

Regarding traffic noise, modeling was conducted based on traffic volumes obtained from the traffic analysis, as discussed in Section 3.9, “Transportation.” The FHWA Highway Traffic Noise Prediction Model (FHWA RD 77–108) (FHWA 1978) was used to calculate the change in traffic noise levels along affected roadway segments in the project vicinity. The school’s contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels at a reference distance of 50 feet from the roadway centerline, with and without project-generated traffic.

Potential long-term (operation-related) noise impacts from stationary sources were assessed based on existing documentation (e.g., HVAC equipment noise levels) and site reconnaissance data (e.g., distances to receptors). This analysis also evaluates the proposed on-site noise-generating uses (i.e., mechanical HVAC units, parking lots, playfields, access roadway) that could affect off-site noise-sensitive receptors near the proposed project.

IMPACT ANALYSIS

IMPACT 3.8-1 **Short-Term Noise Levels from Construction Activities.** *Construction activities associated with grading, building the new school and placement of portable classrooms on the Encina site, and infrastructure and facilities necessary to serve the school and portable classrooms could expose sensitive receptors to noise levels in excess of the applicable noise standards and/or result in a noticeable increase in ambient noise levels. This impact is considered significant.*

Construction noise levels would fluctuate depending on the particular type, number, and duration of use for the various pieces of equipment. The effects of construction noise largely depend on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the receptor’s vicinity.

All construction equipment and vehicles would be staged on the existing school campus. Demolition and grading would occur on the portion of the property as an initial stage of construction in order to accommodate an all-

weather area for construction staging and parking for construction worker vehicles. Construction generally occurs in several discrete stages, with each stage requiring different equipment that has varied noise characteristics. These stages alter the characteristics of the noise environment generated on the project site and in the surrounding community during the construction process. Project-related demolition and construction is anticipated to take 20 months, starting in January of 2023. Construction activities would be limited to the less-sensitive daytime hours between 7 a.m. and 8 p.m., Monday through Friday. Occasional daytime construction work on Saturdays and Sundays may be necessary and if this occurs, construction would be limited to the hours between 7 a.m. and 8 p.m., in accordance with the County's Noise Ordinance.

The site preparation phase typically generates the most substantial noise levels. Site preparation involves grading, compacting, and excavating, which uses the noisiest construction equipment. Site preparation equipment includes backhoes, bulldozers, loaders, excavation equipment such as graders and scrapers, and compaction equipment. Erection of large structural elements and mechanical systems could require using a crane, which may also generate substantial noise levels.

The proposed Katherine Johnson Middle School portion of the project would also include construction of a pedestrian/bicycle and emergency access way and changes to the project site access to ensure adequate circulation. A new student drop-off and pick-up area would be created as a 90-degree curve in the southeastern portion of the project site near the intersection of Kent Drive and Miramar Road. A new interior drive aisle would be extended to the west, with a new staff parking area along the project site's southern boundary. Sidewalk, curb, and gutter work associated with the new drive aisle west of Miramar Road and the east side of Belport Lane would also be conducted.

The primary sources of noise would likely include backhoes, compressors, bulldozers, excavators, and other related equipment. Table 3.8-11 depicts the noise levels generated by various types of construction equipment.

Table 3.8-11. Construction Equipment Noise Emission Levels

Equipment Type	Noise Level (L_{eq} , dBA) @ 50 Feet from Equipment	Noise Level (L_{max} , dBA) @ 50 Feet from Equipment
Dump Truck	80	84
Backhoe	76	80
Man Lift	78	85
Grader	81	85
Compactor (ground)	76	83
Scraper	81	85
Pneumatic Tools	82	85
Drill Rig Truck	77	84
Excavator	77	81
Combined Predicted Noise Level (L_{eq} dBA at 50 feet)	87^a	
Maximum Predicted Noise Level (L_{max} dBA at 50 feet)		85^b

Notes: dB = decibels; dBA = A-weighted decibels; L_{eq} = Equivalent Sound Level; L_{max} = Maximum Noise Level

Noise levels are for equipment fitted with properly maintained and operational noise control devices, per manufacturer specifications.

a. The L_{eq} level is from all equipment combined.

b. The L_{max} level is from the loudest piece of equipment.

Source: FHWA 2006, data compiled by AECOM in 2022

Construction equipment can be either mobile or stationary. Mobile equipment (e.g., loaders, graders, dozers) moves around a construction site performing tasks in a recurring manner. Stationary equipment (e.g., air compressor, generator, concrete saw) operates in a given location for an extended period of time to perform

continuous or periodic operations. Thus, determining the location of stationary sources during specific phases, or the effective acoustical center of operations for mobile equipment, during various phases of the construction process is necessary.

As indicated in Table 3.8-11, project-related construction activities would generate noise levels ranging from 76 to 82 dB L_{eq} at a distance of 50 feet from the equipment. Accounting for the use factor of individual pieces of equipment, continuous and combined noise levels generated by the simultaneous operation of the loudest pieces of equipment would result in noise levels of 87 dB L_{eq} at 50 feet. The nearest off-site noise-sensitive land uses in the vicinity of the proposed Katherine Johnson Middle School portion of the project site are single-family residences located approximately 50 to 100 feet of the project site boundaries. The pedestrian/bicycle and emergency access and the potential connections would be located approximately 100 feet from existing residences (Exhibit 2-2). Noise from localized point sources (such as construction sites) typically decreases by 7.5 dB⁷ (on the soft or unpaved ground) with each doubling of distance from the source to receptor. Assuming an attenuation rate of 7.5 dB per doubling of distance, construction would generate exterior hourly noise levels of 80 dB L_{eq} at the nearest sensitive receptors located 100 feet from the pedestrian/bicycle and emergency access way, and 87 dB L_{eq} at the nearest off-site sensitive receptors located 50 feet east of the project site.

Also, the noise level associated with Encina portables - associated with the trenching – would be 77 dB L_{eq} at 50 feet (noise from excavator in Table 3.8-11). The closest off-site sensitive use to the construction activity would be the residential uses to the north and east, located at approximately 100 feet. The resulting noise from trenching activities at the nearest noise-sensitive uses would be 70 dB L_{eq} . Trenching would occur for a relatively brief period toward the beginning of the schedule for placement of portable classrooms at the Encina campus.

The project-related construction noise level of 87 dB L_{eq} at the nearest off-site sensitive receptors of the proposed Katherine Johnson Middle School portion of the project, and the nearest construction noise level of 70 dB L_{eq} at the nearest off-site sensitive receptors of the Encina portables - portion of the project would exceed the thresholds established by the County (Table 3.8-7 and Table 3.8-8). However, the County's Noise Ordinance exempts daytime construction noise from applicable standards, as described above in Section 3.8.2.

Construction could expose existing off-site sensitive receptors to equipment noise levels that result in a substantial temporary increase in ambient noise levels. As indicated in Table 3.8-1, average daytime hourly noise levels at the Katherine Johnson Middle School portion of the project site and in the vicinity ranged from 48.7 dB to 53.0 dB L_{eq} . Therefore, the project-related construction noise level of up to 87 dB L_{eq} from project construction activities would result in a substantial temporary increase above the measured ambient noise levels at nearby noise-sensitive land uses. Existing average daytime hourly noise levels at of the Encina portable classrooms site and vicinity is 57.0 dB L_{eq} (LT-03 in Table 3.8-1). Therefore, the project-related construction noise level of up to 70 dB L_{eq} from project construction activities would result in a substantial temporary increase above the measured ambient noise levels at nearby noise-sensitive land uses. As a result, the construction-generated noise would be considered a **significant impact**.

⁷ Any highly absorptive surface in which the phase of the sound energy is changed upon reflection (Caltrans 2013).

Construction Traffic Noise

Construction equipment and activities for the proposed Katherine Johnson Middle School would primarily involve the use of Kent Drive to access El Camino Avenue. Demolition material could be removed using Belpoint Lane to El Camino Avenue or Kent Drive to El Camino Avenue. Kent Drive would be the main access route for grading and concrete work. Construction equipment and vehicle access at the Encina portable classrooms site would use Bell Street, from Arden Way. Typically, traffic volumes have to double before the associated increase in noise levels is noticeable (3 dBA L_{dn}) along roadways (Caltrans 2013). Construction-related traffic would include a total of 25 worker trips to and from the project site and up to 4 truck trips per hour for material hauling and delivery. Existing traffic volumes along Kent Drive to access El Camino Avenue from the project site are 26 trips during the morning peak hour (Traffic Analysis Memo, AECOM 2022). Project-related construction traffic would only increase the traffic noise by 3 dB. This level of noise increase is barely perceptible. The impact would be **potentially significant**.

Mitigation Measure 3.8-1: Implement Construction-Related Noise Reduction Strategies.

SJUSD will require the selected contractor to implement the following noise-reduction and noise-control measures during construction activities:

- Construction equipment will be properly maintained per manufacturers' specifications and fitted with feasible noise suppression devices (e.g., mufflers, silencers, wraps).
- All impact tools will be shrouded or shielded, and all intake and exhaust ports on power equipment will be muffled or shielded.
- Prohibit the start-up of machines or equipment between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m.
- Construction equipment will be shut down when not in use and will not idle for extended periods of time near noise-sensitive receptors.
- Fixed/stationary equipment (e.g., generators, compressors, cement mixers) will be located as far as practicable from noise-sensitive receptors.
- Restrict the use of bells, whistles, alarms, and horns for safety-warning purposes.
- Residences within 500 feet of the proposed Katherine Johnson Middle school site shall be notified of the construction schedule in writing prior to the beginning of construction. Designate a "construction liaison" that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.

- Construction worker trips and truck trips shall be distributed between El Camino to Kent and El Camino to Morse Avenue to Miramar Road to minimize impacts along each entry to the proposed Katherine Johnson Middle School site.

Significance after Mitigation

Implementation of Mitigation Measure 3.8-1 would include the use of noise-suppression devices that would provide at least a 3-dB reduction in noise. The level of noise reduction from shielding the impact tools and all intake and exhaust ports on power equipment will depend on the distance between the equipment and the noise receiver, but a 3-dB reduction would be a reasonable minimum reduction in noise to assume. With the implementation of this mitigation, construction noise would reduce to ambient levels at approximately 500 feet with the distance reduction. Residences or other noise-sensitive land uses within 500 feet of construction sites would be notified of the construction activity in writing prior to the beginning of construction. The estimated construction noise level of 85 dB at 50 feet, is based on a conservative assumption of all equipment operating at the same location and at the same time. However, not all equipment would operate at the same time. A better estimate might be that, at any given time, approximately 50 percent of the equipment would operate on-site simultaneously, which would reduce the maximum construction noise level by 3 dB compared to that conservatively reported in this EIR. The resulting noise would at the nearest-noise sensitive uses would reduce to 82 dB. Assuming a 25-dB reduction by the walls and ceilings with windows and doors closed ($82-25=57$ dB). Redistributing construction-related traffic between El Camino to Kent and El Camino to Morse Avenue to Miramar Road, would reduce traffic noise impact along Kent Drive. Also, Mitigation Measure 3.8-1 limits construction activity to less noise-sensitive hours that conform to the County Noise Ordinance, includes noise-reducing measures, limits idling⁸, and designates a construction liaison that would reduce the short-term construction noise levels. While the required mitigation would substantially reduce temporary construction-related noise levels in the vicinity of the project, the proposed project would still result in an increase in temporary noise levels above existing ambient noise levels. There is no additional feasible mitigation. The impact is considered **significant and unavoidable**.

IMPACT 3.8-2 **Short-Term Groundborne Vibration from Construction.** *The proposed project would require short-term construction activities, but these activities would not expose sensitive receptors to vibration levels that would exceed local standards and/or result in a noticeable increase in vibration levels. This impact would be less than significant.*

The proposed project would generate construction vibration from equipment use and from the transport of construction equipment, materials, and workers.

Construction-related groundborne vibration would result from the use of heavy earthmoving equipment for clearing, excavation, compaction, and grading, as well as activities for construction of the site access. These activities would produce a vibration level of approximately 87 vibration decibels (VdB) (0.089 inches per second [in/sec] peak particle velocity [PPV]) at a distance of 25 feet (which is the reference vibration level for operation of a large bulldozer [FTA 2018]). The distance between the on-site construction activities and the closest vibration-sensitive uses would be approximately 50 feet at the proposed Katherine Johnson portion of the project,

⁸ Idling noise levels would be 5- to 12-dB lower than the operating equipment noise level and would depend on equipment type (Occupational Safety and Health Research Institute [OSHR] 2017).

and approximately 100 feet at the Encina portables portion of the project. Assuming a standard reduction of 9 VdB per doubling of distance (FTA 2018), the vibration level at the nearest receivers to the project construction activities would be approximately 69 to 78 VdB. These levels of vibration would not exceed the FTA threshold of 80 VdB (Table 3.8-4) with respect to human annoyance for residential uses and would not likely be perceptible. Therefore, this impact would be **less than significant**.

The FTA’s Transit Noise and Vibration Impact Assessment technical manual provides criteria for groundborne vibration impacts with respect to building damage during construction activities (FTA 2018). The FTA guidelines provided above under Table 3.8-3 suggest a vibration-damage criterion of 0.20 in/sec PPV for nonengineered timber and masonry buildings and 0.5 in/sec PPV for structures or buildings constructed of reinforced concrete, steel, or timber. For the proposed Katherine Johnson Middle School site, the temporary and short-term project construction vibration level would be attenuated by distance at the nearest receivers and would be approximately 0.031 in/sec PPV. For the Encina portable portions of the project, the temporary and short-term project construction vibration level would be attenuated by distance at the nearest receivers and would be approximately 0.011 in/sec PPV. These levels of vibration are below the established threshold of significance of 0.50 in/sec PPV, pursuant to the FTA guidelines. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation measure is required.

IMPACT 3.8-3 **Long-Term Operational (Traffic) Noise.** *Implementation of the proposed project could result in an increase of average daily vehicle trips in the project vicinity. However, the increased traffic volumes would not result in a noticeable (3 dB or greater) increase in traffic noise along roadways within and near the project site. This impact would be less than significant.*

The project would involve the relocation of Katherine Johnson Middle School from the current location on the campus of Encina High School to the proposed location on Kent Drive. The project also involves moving the adult education activities currently housed at the proposed Katherine Johnson Middle School site to the Encina High School campus. The project is anticipated to reduce vehicular traffic at the Encina High School campus compared to existing conditions and therefore operational transportation noise is anticipated to be approximately the same or less compared to existing conditions.

Operation of the proposed Katherine Johnson Middle School would increase traffic on the local roadway network and traffic noise levels along affected segments. To examine the effect of project-generated traffic increases, traffic noise levels associated with the proposed project were calculated for roadway segments using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) and compared with existing conditions. Traffic noise levels were modeled with and without the project for opening day when part of the Katherine Johnson Middle School would be occupied (starting in 2024).

Table 3.8-12 summarize the modeled traffic noise levels at 50 feet from the centerline of affected roadway segments, accounting for day/night percentages of autos, medium trucks, and heavy trucks; vehicle speeds; ground attenuation factors; and roadway widths.

Table 3.8-12. Predicted Traffic Noise Levels, Existing with Opening Day (2024)

Roadway	Segment		L _{dn} at 50 Feet, dB	L _{dn} at 50 Feet, dB	L _{dn} at 50 Feet, dB	L _{dn} at 50 Feet, dB	L _{dn} at 50 Feet, dB
	From	To	Existing	Allowable Noise Increment ^a	Plus Project 2024	Increase above Existing	Significant Impact?
Kent Drive	Miramar Road	North of Miramar Road	38.7	-- ^b	35.7	-3.0	-- ^b
Kent Drive	Miramar Road	South of Miramar Road	45.1	5 ⁺	55.6	10.5	Yes
Miramar Road	Kent Drive	East of Kent Drive	41.3	5 ⁺	51.9	10.6	Yes
Morse Avenue	Miramar Road	North of Miramar Road	53.3	5 ⁺	53.7	0.4	No
Morse Avenue	Miramar Road	South of Miramar Road	54.9	5 ⁺	56.9	2.0	No
Miramar Road	Morse Avenue	West of Morse Avenue	46.0	5 ⁺	54.0	8.0	Yes
Belport Lane	Elvyra Way	North of Miramar Road	42.2	5 ⁺	42.6	0.5	No
Belport Lane	Elvyra Way	South of Miramar Road	50.9	5 ⁺	50.9	0.0	No
Elvyra Way	Belport Lane	West of Belport Lane	50.9	5 ⁺	51.0	0.1	No
Belport Lane	El Camino Avenue	North of El Camino Avenue	53.3	5 ⁺	53.3	0.0	No
El Camino Avenue	Belport Lane	East of Belport Lane	62.2	1.5 ⁺	62.9	0.7	No
El Camino Avenue	Belport Lane	West of Belport Lane	66.8	1.5 ⁺	67.5	0.7	No
Kent Drive	El Camino Avenue	North of El Camino Avenue	51.8	1.5 ⁺	60.4	8.6	Yes
El Camino Avenue	Kent Drive	East of Kent Drive	63.9	1.5 ⁺	64.0	0.1	No
El Camino Avenue	Kent Drive	West of Kent Drive	66.8	1.5 ⁺	67.5	0.7	No

Notes: dB = decibels; dBA = A-weighted decibels; L_{dn} = day-night average noise level.

^a County roadways. County Policy NO-9: Significant increase for a pre-project noise level of less than 60 dB L_{dn}, would be 5+ dB. 60 dB to 65 dB, would be 3+ dB, and for greater than 65 dB, the significant increase would be 1.5+ dB.

^b Roadway segment would be removed under project operation. Traffic noise levels are predicted at a standard distance of 50 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

Source: Data modeled by AECOM in 2022

With respect to increase above ambient noise condition, the proposed project would increase traffic noise levels by between 0 and 11 dB, along most of the studied roadway segments. In general, as stated above, a 1-dB increase in noise level is imperceptible, a 3-dB increase is barely perceptible, and a change of 5 dB generally fosters a noticeable change in human response.

While Sacramento County's General Plan policies do not apply to the proposed project, noise policies from the County's General Plan were used to evaluate project effects. Exterior incremental noise standards are in the Noise Element of the General Plan, Policy NO-9. Policy NO-9 references Table 1, which is reproduced above as Table 3.8-5. As shown in Table 3.8-12, predicted traffic noise levels in the project vicinity would not exceed the exterior noise standards established in the County's General Plan, except along Kent Drive south of Miramar Road, and along Miramar Road east of Kent Drive, traffic noise would increase by approximately 11 dB; however, the plus project noise levels would not exceed the County threshold of 65 dB (Table 3.8-6). Also, the pre-project traffic noise along El Camino Avenue from Belport Lane to the west of Belport Lane, and along El Camino Avenue from Kent Drive to the west of Kent Drive would exceed the County threshold of 65 dB (Table 3.8-6). Project-related traffic noise along these segments would only increase by less than 1 dB, which is below the significance threshold of 1.5 dB increase for pre-project noise levels of 60 dB to 70 dB.

Closer to the school, along Kent Drive south of Miramar Road to El Camino Avenue, and along Miramar Road east of Kent Drive, traffic noise would increase by approximately 6 dB above ambient level of 55 dB L_{dn}

(measured by LT-02, Table 3.8-1). As shown in Exhibit 3.8-1, LT-02 is measuring noise from Belport Lane with no building shielding in between the measurement location and the roadway. However, the noise-sensitive areas (backyards) of the residences along this segment of the road are shielded by the buildings of the houses. Assuming an average 7-dB reduction by the buildings, traffic noise levels at the residences along these segments would be about 7-dB lower than presented in Table 3.8-5.⁹ Therefore, long-term noise levels from project-generated traffic sources would not exceed the standards in the County's General Plan and the permanent increase in ambient noise levels would be the thresholds and would not result in disturbance of the noise-sensitive areas of residences along the affected roadways. As a result, this impact would be **less than significant**.

Mitigation Measures

No mitigation measure is required.

IMPACT 3.8-4 **Long-Term Operational (School Site) Noise Levels.** *The proposed project would add noise sources, such as mechanical HVAC equipment, surface parking, site access roads, and playfields. The project-related noise sources would not exceed the County's standards. However, operational noise levels would substantially increase ambient noise levels on temporary basis when the basketball courts are in use above the existing conditions. The impact would be significant.*

Mechanical HVAC Equipment

HVAC equipment is often mounted on rooftops, located on the ground, or located within mechanical equipment rooms. The noise sources could take the form of fans, pumps, air compressors, and chillers. Packaged rooftop units contain all necessary mechanical equipment, such as fans, pumps, condenser, and compressors, within a single enclosure. Noise levels from commercial HVAC equipment can reach 100 dBA at a distance of three feet (EPA 1971). However, these units are typically fitted with noise shielding cabinets, placed on the roof or in mechanical equipment rooms to reduce noise levels. Noise from mechanical equipment associated with operation of the proposed project is required to comply with the California Building Standards Code requirements pertaining to noise attenuation.

AECOM has measured existing noise levels from school facilities HVAC systems. HVAC equipment noise at a high schools would be approximately 70 dBA L_{eq} at a distance of 6 feet (AECOM 2013).¹⁰ This would result in noise level of 52 dBA at a distance of 50 feet. The distance between Greer Elementary School buildings and Encina High School buildings and the proposed Encina portables is more than 100 feet, so mechanical equipment noise levels would be even lower for the Encina portables part of the project.

This analysis assumes the HVAC would be located near the center of the roof of the project buildings. The closest off-site noise-sensitive land uses in the vicinity of the project site are single-family residences located approximately 100 feet from the center of the nearest building at the Katherine Johnson Middle School project site. Based on the cooling capacity of the packaged systems and their locations with respect to sensitive uses, noise levels for mechanical HVAC systems would be less than 50 dBA L_{eq} at the nearest noise-sensitive receptor east of the project site. As indicated in Table 3.8-10, average daytime hourly noise levels at the project site and in

⁹ Effective noise barriers typically reduce noise levels by 5 to 10 decibels (dB), cutting the loudness of traffic noise by as much as one half (FHWA 2017).

¹⁰ Long Beach Unified School District. Jordan High School Major Renovation Project Draft EIR. September 2013.

the vicinity ranged from 48.7 dB to 57.0 dB L_{eq} . Therefore, HVAC equipment would not exceed the County's performance standard of 55 dB L_{eq} (Table 3.8-7) for noise-sensitive land uses affected by non-transportation noise during the daytime period, and would not result in a substantial permanent increase (more than 3–5 dB) in ambient noise levels in the project vicinity above levels existing without the project. Therefore, this impact would be **less than significant**.

Parking Lot Activities

Noise level measurements of parking lot activities (conducted by AECOM acoustic specialists on similar projects) indicate that average SELs associated with a single parking event (i.e., vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, departure of the vehicle) is 71 dB SEL at distance of 50 feet. Assuming 64 peak-hour parking events and a standard attenuation rate of 6 dB per doubling of distance, the combined noise level from parking lot activities would be 53 dBA L_{eq} at the nearest noise-sensitive receptor, located approximately 50 feet south of the center of the proposed parking lot at the proposed Katherine Johnson Middle School site.

As a result, parking lot operations would neither exceed the County's performance standard of 55 dB L_{eq} for residential uses during the daytime period (Table 3.8-6) or for noise-sensitive land uses affected by non-transportation noise during the daytime period (Table 3.8-12). In addition, parking lot operations would not result in a substantial permanent increase (more than 3–5 dB) in the ambient noise level of 55 dB L_{dn} (measured by LT-02, Table 3.8-1) in the parking lot location. Therefore, this impact would be **less than significant**. The distance between the center of the parking lot adjacent to the proposed Encina portables portion of the project is at a greater distance and therefore, noise levels associated with parking activities would be even lower.

Playfield Activities

The playfields would only be used during the day and would not have lighting for nighttime use. There would be two playfields at the proposed Katherine Johnson Middle School site: a soccer field and a basketball field. The nearest noise-sensitive receptors to the proposed soccer field are located approximately 100 feet to the east from the nearest playground. AECOM measured noise levels from a soccer field and from basketball courts at Arden Middle School in August 2022 to develop a representative indication of the environmental noise conditions associated with the redevelopment of the Creekside School for the proposed Katherine Johnson Middle School project. An average noise level of 59 dB L_{eq} , can be expected at distance of 100 feet based on these noise measurements.¹¹ The nearest noise-sensitive receptor to the proposed basketball courts is located approximately 50 feet to the east from the nearest playground (Exhibit 2-2). At a distance of 50 feet, average noise level of 72 dB L_{eq} , can be expected while the basketball courts are in use.

Also, based on the County measurement data, at a distance of 100 feet from an elementary school playground being used by 100 students, average noise level of 60 dB L_{eq} , can be expected (Sacramento County 2017). The nearest noise-sensitive receptor to the proposed playfields is located approximately 50 feet to the east from the nearest playground (Exhibit 2-2). The resulting noise level at the nearest noise-sensitive receptor would be 66 dB L_{eq} based on this noise monitoring data.

¹¹ A technical appendix is posted on the District's website: <https://www.sanjuan.edu/buildkjms>. This includes measured noise levels from the soccer field and the basketball courts at Arden Middle School and other technical noise information.

The predicted noise levels from playfields activities would exceed County of Sacramento's performance standard of 55 dB L_{eq} (Table 3.8-12). Section 6.68.090 of the Sacramento County Code exempts noise from parks, public playgrounds, and school grounds, provided they are owned and operated by a public entity (such as the SJUSD) or by a private school. However, the noise level of 66-72 dB L_{eq} , associated with the playfield activities would substantially increase ambient noise levels on temporary basis when the basketball courts are in use above the existing conditions of 48.7 dB L_{eq} to 53 dB L_{eq} , at the proposed Katherine Johnson Middle School site. Playfield activities would result in a substantial permanent increase (more than 3–5 dB) in ambient noise levels in the project vicinity above levels existing without the project (Table 3.8-1). Therefore, this impact is considered **significant**. There are no playfields associated with the Encina portables part of the project.

Public Address System

The Public Address (PA) system within the school buildings would generate a noise level of up to 84 dBA L_{eq} feet at 3 feet (AECOM 2018). The nearest noise-sensitive receptor to the proposed school buildings is located approximately 100 feet to the east and south from the nearest building (Building M, Exhibit 2-2). The resulting noise level at the nearest noise-sensitive receptor would be 54 dB L_{eq} . The predicted noise levels from PA system would not exceed County of Sacramento's performance standard of 55 dB L_{eq} (Table 3.8 12). Therefore, this impact is considered **less than significant**. Mitigation 3.8-5 would further reduce the impact.

Summary

Overall, stationary-source noise levels from mechanical HVAC noise, parking lot activities, the on-site project drive, pedestrian/bicycle and emergency access, and playfield activities would not exceed applicable noise standards at nearby existing or future noise-sensitive receptors. This impact is considered **less than significant** for all activities with the exception of use of the basketball courts where use of the courts would temporarily but substantially increase noise levels above ambient conditions directly adjacent to the Katherine Johnson Middle School site. It is not feasible to construct an acoustical barrier to address this temporary condition. Other than an acoustical barrier, there is no other feasible mitigation available to address this impact. The impact is **significant and unavoidable**.

Mitigation Measure 3.8-5: Public Address System Design

The SJUSD will require the public address system for the Katherine Johnson Middle School to be designed to avoid noise impacts, as experienced by residents in the vicinity through the below or similar and equally effective means:

- Public address speakers will be placed and directed away from nearby residents.
- No public address speaker will be placed within 100 feet of an adjacent occupied residential property.
- No public address speaker will be placed north, south, or east of the proposed multi-purpose building.
- No public address speaker will be placed in the hardcourt area.
- Public address speakers will be mounted relatively low and will not be placed on poles or other structures greater than 10 feet in height.

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3.9 TRANSPORTATION

This section describes potential impacts to the transportation system associated with implementation of the proposed project. The impact analysis examines the vehicular, transit, bicycle, and pedestrian components of the overall transportation system. The information and analysis in this section is a summary of the traffic impact study for the proposed project prepared by AECOM to support this EIR.

3.9.1 ENVIRONMENTAL SETTING

The proposed project would be situated at the existing Creekside Adult Education Center site located at 2641 Kent Drive in the urbanized Arden-Arcade area of unincorporated Sacramento County. The property is comprised of 9.75 acres northwest of the intersection of Miramar Road and Kent Drive.

The current average attendance at the Creekside Adult Center is 300-500, and there is a total of 24 staff and faculty. The Creekside Adult Center operates five days a week from September 6th to June 30th, Monday through Friday, from 8 AM – 3:00 PM. The operations at the Creekside Adult Center would be moved to portables on the Encina High School campus. SJUSD is proposing to redevelop this District-owned property at 2641 Kent Drive. All of the existing buildings and facilities associated with the former Creekside Elementary School, which was constructed in 1953, would be demolished and removed. A new middle school would be developed in place of the existing elementary school facilities.

The proposed Katherine Johnson Middle School would include the construction of approximately 65,000 square feet of school building space (as compared to the current 25,928 square feet of existing school buildings, which would be demolished). The proposed project would allow for an increase in the maximum student capacity. The current capacity of Katherine Johnson Middle School, which is currently co-located with Encina High School, is 550 students. The proposed school's capacity would accommodate up to 650 students. Approximately 48 staff are projected for the new middle school. Katherine Johnson Middle School serves students in grades 6–8.

The proposed project includes installing a driveway and a parking lot in the southern portion of the project site from Kent Drive and Miramar Road to the east. Vehicles would enter from the east and either park in the parking lot or circulate through the pick-up and drop-off area and then turn back around to exit to the east onto Miramar Road or Kent Drive. Associated sidewalk, curb, and gutters would also be constructed.

Emergency access will include a route for equipment northward from Kent Drive, eastward around the new multi-purpose building, westward around the back of the basketball courts and classroom buildings, and then southward around the science buildings to Belpoint Lane. Emergency access will also be provided from the west of Elvyra Way. Sidewalk, curb, and gutter work would be conducted in accordance with Sacramento County Improvement Standards (Sacramento County 2018).

STUDY AREA

The traffic analysis studied all the access points and intersections surrounding the school area on Miramar Road and Kent Drive that would be affected by project traffic. Miramar Road provides the most direct route choice to access the school campus from north and east of the school campus, while Kent Drive provides access from west and south of the campus.

Roadways

The project site is bounded by Miramar Road on the south, Belport Lane on the west, private residences adjacent to Lacy Lane on the north, and private residences adjacent to Creekside Lane and Crest Haven Drive on the east.

Miramar Road

Miramar Road is an east-west, two-way, two-lane local road that provides direct access to the school, as well as surrounding residential and commercial development in the vicinity of the school. There is pedestrian and bicycle access to the school campus from Miramar Road that facilitates pedestrian crossing with minimum conflict with vehicles at the school driveway.

Kent Drive

Kent Drive is a north-south, two-way, two-lane local road that also provides direct access to the school, as well as residential and commercial development in the vicinity of the school. There are complete sidewalks and newly constructed curb ramps along the east side of Kent Drive and incomplete sidewalks along the west side of Kent Drive.

Bicycle Facilities

Bicycle routes and paths are typical examples of bicycle transportation facilities in the project area. Bicycle facilities are defined by the following classes¹:

- ▶ Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- ▶ Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- ▶ Class III – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.
- ▶ Class IV – Provides a separated bikeway, often at street level, for the exclusive use of bicycles.

According to the Sacramento County Bicycle Master Plan, there is an approximately 500-foot segment of Marconi Avenue between Morse Avenue south of Marconi Avenue and Morse Avenue north of Marconi Avenue that is an existing Class III facility.² Since the time when the County's Bicycle Master Plan was prepared, Class II bicycle lanes have been established on both sides of El Camino Avenue and Marconi Avenue south and north of the project site and on Fulton Avenue in the vicinity of the project site.

The County has planned Class II facilities on Marconi Avenue north of the site, on Morse Avenue east of the site, on El Camino Avenue south of the site, and on Fulton Avenue west of the site. The County's Bicycle Master Plan is phased to identify short-, medium-, and long-term projects. The Class II facility on Marconi Avenue from the

1 As detailed in Chapter 1000 of the California Department of Transportation's (Caltrans) Highway Design Manual. 2018

2 This existing facility is shown on the map of existing facilities, but not listed in the table of existing facilities on page D-5 of the County's Plan.

Capital City Freeway (west of the project site) to Fair Oaks Boulevard (east of the project site) is a short-term priority project. The Class II facility on Morse Avenue from Auburn Boulevard (north of the project site) to Marconi Avenue and from Marconi Avenue to El Camino Avenue (south of the project site) is a short-term priority project. The Class II facility on El Camino Avenue from Ethan Way (west of the project site) to Fair Oaks Boulevard (east of the project site) is a mid-term project. The Class II facility on Fulton Avenue from the Capital City Freeway (north of the project site) to Munroe Street (south of the project site) is a mid-term project.

Pedestrian Facilities

Five-foot sidewalks are provided along both sides of El Camino Avenue, Miramar Road, Elvyra Way, and Morse Avenue. Kent Drive has complete sidewalks on the east side between El Camino Avenue and the school site. Belport Lane has complete sidewalks between El Camino Avenue and the school site on the west side, but on the east side, the sidewalk is interrupted at two properties. There are standard crosswalks on north leg and east leg of Kent Drive and Miramar Road intersection. Also, there is a standard crosswalk on the south leg of Morse Avenue and Balmoral Drive intersection.

Transit Facilities

The project area is served by routes operated by the Sacramento Regional Transit District (RT). Buses operate daily from 5 a.m. to 11 p.m. every 12 to 60 minutes, depending on the route. It is also a service provider for paratransit. The nearest bus stops are located 700 feet south of the site on El Camino Avenue and are served by Routes 23. Route 25 serves the Marconi Avenue corridor and the closest stop is approximately 1,300 feet to the north of the school site. Transit service on these routes is detailed in Table 3.9-1.

Table 3.9-1. Bus Routes Serving the Study Area

Route	Serving	Day	Frequency
23	Between Sunrise Mall and Arden/Del Paso	Monday to Saturday	2 per hour
23	Between Sunrise Mall and Arden/Del Paso	Sunday and Holiday	1 per hour
25	Between Louis & Orlando and Marconi/Arcade	Monday to Saturday	1-2 per hour
25	Between Louis & Orlando and Marconi/Arcade	Sunday and Holiday	1 per hour

Source: Sacramento Regional Transit website, <http://www.sacrt.com/schedules>, accessed in June 2022

3.9.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS AND LAWS

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the proposed project.

STATE PLANS, POLICIES, LAWS, AND REGULATIONS

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS would need to be approved by Caltrans.

Caltrans' Local Development – Intergovernmental Review Program Interim Guidance (Caltrans, December 2020) provides guidance on the evaluation of traffic impacts to State highway facilities. The document recommends that CEQA reviewers comment on vehicle miles traveled (VMT), “applying local agency thresholds or absent those, thresholds recommended in adopted CEQA Guidelines or Governor’s Office of Planning and Research’s (OPR’s) approved Technical Advisory.”

Senate Bill 743

Governor Brown signed SB 743 in September 2013, which created a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the OPR to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts, as well as recommend methodologies and significance thresholds. SB 743 does not change the discretion that lead agencies have to select methodology or define significance thresholds.

Under SB 743, the focus of transportation analysis essentially shifted from the social inconvenience of traffic congestion to adverse physical effects associated with vehicular travel demand. Measurements of transportation impacts may include VMT, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. Vehicle miles traveled, or VMT, has long been a common metric to use to measure travel demand. A VMT is one vehicle traveling on a roadway for one mile. Many communities have been estimating and developing policy related to VMT for years, including estimates and goals for VMT per person, VMT per employee, or other methods of normalization. SB 743 directs revisions to the CEQA Guidelines that would create criteria for assessing travel demand, such as “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated” (PRC Section 21099[b][1]). Once the CEQA Guidelines went into effect on July 1, 2020, delay related to congestion was no longer considered a significant impact under CEQA (OPR 2018).

In other words, SB 743 changed the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. Land use projects with one or more of the following characteristics would have lesser VMT impacts:

- ▶ Higher land use densities
- ▶ Mix of project uses
- ▶ Support of a citywide jobs-housing balance (i.e., provide housing in a job rich area, or vice versa)
- ▶ Proximity to the core of a region
- ▶ Proximity to high-quality transit service
- ▶ Located in highly walkable or bikeable areas

This shift in transportation impact criteria is expected to better align transportation impact analysis and mitigation outcomes with the State’s goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation. Specific to SB 743, Section 15064.3(c) of the revised Guidelines states that, “a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.” However, Public Resources Code Section 21099(b)(2) states that, “upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the Guidelines.”

Although the State’s Office of Planning and Research provides recommendations for adopting new VMT analysis guidelines, lead agencies have the final say in designing their methodology. Lead agencies must select their preferred method of estimating and forecasting VMT, their preferred significance thresholds for baseline and cumulative conditions, and the mitigation strategies they consider feasible. Lead agencies must prove that their selected analysis methodology aligns with SB 743’s goals to promote infill development, reduce GHGs, and reduce VMT.

California Air Resources Board

The California Air Resources Board (CARB) has guidance for VMT thresholds in the CARB *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (January 2019). This document provides recommendations for VMT reduction thresholds that would be necessary to achieve the state’s GHG reduction goals and acknowledges that the sustainable communities strategies (SCS) targets alone are not sufficient to meet climate goals. CARB concluded that a 14.3-percent reduction in total VMT per capita and a 16.8-percent reduction in light-duty VMT per capita over then-current conditions (2015–2018) was needed to meet these goals.

California Complete Streets Act, AB 1358 (Statutes of 2008)

The California Complete Streets Act requires the legislative body of a city or county, upon revision of the circulation element of their general plan (after January 1, 2011), to identify how the jurisdiction will provide for the routine accommodation of all users of the roadway (i.e., complete streets) including motorists, pedestrians, bicyclists, individuals with disabilities, seniors, and users of public transportation.

REGIONAL AND LOCAL PLANS, POLICIES, LAWS, AND REGULATIONS

SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy

Sacramento Area Council of Governments (SACOG) is responsible for preparing the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) every four years in coordination with the 22 cities and 6 counties in the greater Sacramento region. The MTP/SCS proactively links land use, air quality, greenhouse gas emissions, and transportation needs. The current adopted 2020 MTP/SCS is for the years 2020 to 2040. Goals of the MTP/SCS are:

- ▶ Build vibrant places for today’s and tomorrow’s residents.
- ▶ Foster the next generation of mobility solutions.
- ▶ Modernize the way we pay for transportation infrastructure.
- ▶ Build and maintain a safe, reliable, and multimodal transportation system.

Federal law requires the MTP to conform to air quality goals for the region, satisfy financial constraints such that all proposed projects can be reasonably funded, and undergo extensive public review. State law further requires the MTP process to include careful environmental analysis and review.

The MTP/SCS indicates that VMT per capita in the SACOG region, which dipped significantly during the Great Recession, increased starting in 2011. The MTP/SCS projects a 10-percent reduction in VMT per capita by 2040 for the SACOG region. SACOG has initiated an update to the MTP/SCS, the 2024 Blueprint.

SACOG has also developed analysis and mapping showing the location of low VMT areas within the region. The proposed Katherine Johnson Middle School project site is within a low VMT area, as identified by SACOG – an area where the density, mix of land uses, access to non-vehicular transportation options, and other factors result in a reduced need for vehicular transportation compared to the balance of the region.³ This is also true of the Encina portable classrooms site – it is also in a low VMT area.

Sacramento County Transportation Analysis Guide

Local Transportation Analysis

Localized traffic congestion remains a concern to transportation engineers and planners, as well as the traveling public. Policies in the General Plan Circulation Element require that land development and transportation projects evaluate and mitigate adverse impacts to local and regional roadways. The Local Transportation Analysis (LTA) would provide that analysis, as well as evaluate the need for multimodal improvements in cases where there is the potential for the project to cause a substantial worsening of conditions for multimodal travel. Since any increases in traffic congestion or vehicular delay would not constitute a significant environmental impact, the local transportation analysis would be included in Conditions of Approval rather than as Mitigation Measures under CEQA. The purposes of the local transportation analysis may include, but are not limited to the following:

- **CI-11:** To preserve public mobility, freeways and thoroughfares should have limited access and maintain functional characteristics that predominantly accommodate through traffic.
- **CI-12:** To preserve public safety and local quality of life on collector and local roadways, land development projects shall incorporate appropriate treatments of the Neighborhood Traffic Management Program.
- **CI-19:** Collaborate with transit service providers to provide transit services within the County that are responsive to existing and future transit demands.
- **CI-32:** Develop a comprehensive, safe, convenient and accessible bicycle and pedestrian system that serves and connects the County's employment, commercial, recreational, educational, social services, housing and other transportation modes.
- **CI-35:** The applicant/developer of land development projects shall be responsible to install bicycle and pedestrian facilities in accordance with Sacramento County Improvement Standards and may be responsible to participate in the fair share funding of regional multi-use trails identified in the Sacramento County Bicycle Master Plan.
- **CI-40:** Whenever possible, the applicant/developer of new and infill development projects shall be conditioned to fund, implement, operate and/or participate in TSM programs to manage travel demand associated with the project.

³ Please see SACOG's website for more details:
<https://sacog.maps.arcgis.com/apps/webappviewer/index.html?id=0eac172e44514776b2f30e4324652f88&extent=-13567338.6225%2C4599309.7898%2C-13330078.0867%2C4789485.1162%2C102100>

- **CI-43:** The County shall promote transit-supportive programs in new development, including employer-based trip-reduction programs (employer incentives to use transit or nonmotorized modes), “guaranteed ride home” for commute trips, and car-share bike-share programs.

Sacramento County General Plan

The policies and implementation measures from the *Sacramento County General Plan* relate to transportation:

Air Quality Element

- ▶ **Policy AQ-8.** Promote mixed-use development and provide for increased development intensity along existing and proposed transit corridors to reduce the length and frequency of vehicle trips.

Circulation Element

- ▶ **Policy CI-4.** Provide multiple transportation choices to link housing, recreational, employment, commercial, educational, and social services.
- ▶ **Policy CI-5.** Land use and transportation planning and development should be cohesive, mutually supportive, and complement the objective of reducing per capita vehicle miles travelled (VMT). The standards shown in Table CI-1 shall be used as thresholds of significance for all projects subject to CEQA. Where the VMT level standards of Table CI-1 are predicted to be exceeded, all feasible mitigation measures shall be included to reduce projected VMT levels.
- ▶ **Implementation Measure I.** The County shall establish speed management policies and standards that consider appropriate operating speeds for each mode of travel that will result in a safe environment for all users.
- ▶ **Policy CI-32.** Develop a comprehensive, safe, convenient and accessible bicycle and pedestrian system that serves and connects the County's employment, commercial, recreational, educational, social services, housing and other transportation modes.
- ▶ **Policy CI-33.** Adopt, implement and periodically update the Sacramento County Bicycle Master Plan for unincorporated Sacramento County that sets forth the goals, policies, guidelines, programs and improvements necessary to accomplish the goals of this section.
- ▶ **Policy CI-34.** Construct and maintain bikeways and multi-use trails to minimize conflicts between bicyclists, pedestrians, and motorists.
- ▶ **Policy CI-37.** Pursue all available sources of funding for the development, improvement, and maintenance of bikeways, pedestrian facilities and multi-use trails, and to support bicycle and pedestrian safety, education, encouragement and enforcement programs.

Environmental Justice Element

- ▶ **Policy EJ-20.** The County will continue to support walking and bicycling by requiring smart growth streets (bike lanes, and sidewalks separated from the roadway with trees and planted landscaping) in transit priority

areas, in Environmental Justice Communities and in new communities and developments wherever practicable.

- ▶ **Policy EJ-21.** Provide safe, low stress, interesting and convenient environments for pedestrians and bicyclists, including inviting and adequately lit streetscapes, networks of trails, paths, parks, and open spaces that connects residences with key destinations, and encourages regular exercise and the reduction of vehicular emissions.
- ▶ **Implementation Measure A.** Department of Transportation will combine the Bicycle and Pedestrian Master Plans into one comprehensive document. The new document will incorporate the concept of reducing “level of stress” (LTS) for bicyclists and pedestrians.
- ▶ **Implementation Measure D.** Environmental Justice Communities will be prioritized for Smart Growth Streets programs.
- ▶ **Implementation Measure E.** Environmental Justice Communities will be prioritized for new sidewalks, particularly along major streets and near parks and schools.

Public Facilities Element

- ▶ **Policy PF-30:** New elementary schools in the urban area should be planned whenever possible so that almost all residences will be within walking distance of the school (one mile or less) and all residences are within two miles of a school.
- ▶ **Policy PF-31:** Schools shall be planned adjacent to neighborhood parks whenever possible and designed to promote joint use of appropriate facilities. The interface between the school and park shall be planned with an open design and offer unobstructed views to promote safety.
- ▶ **Policy PF-34:** All school site plans shall be designed to minimize traffic speed and maximize traffic flow around the school, allowing for several access points to and from the site.

3.9.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section provides a description of the methodology applied for the impact assessment, thresholds of significance, VMT impact assessment, local roadway network assessment, transit impact assessment, bicycle impact assessment, and pedestrian impact assessment.

ANALYSIS METHODOLOGY

To support SJUSD review, the proposed project was evaluated for trip generation and LOS impacts. LOS was calculated for signalized and unsignalized intersections using the *Highway Capacity Manual* (HCM) Sixth Edition Method published by the Transportation Research Board. Sacramento County General Plan Policy CI-9 defines the minimum acceptable operation level for its roadways and intersections to be LOS D or better for rural areas and LOS E or better for urban areas. Urban areas are those within the County’s Urban Service Boundary, as shown in the General Plan Land Use Element. The areas outside the Urban Service Boundary are considered rural. The project site is in the County’s existing Urban Services Boundary.

The following scenarios were reviewed:

- ▶ Existing No-Project Conditions
- ▶ Existing Plus Project Conditions
- ▶ Cumulative (2035) No-Project Conditions
- ▶ Cumulative (2035) Plus Project Conditions

For this EIR, project impacts were evaluated consistent with the CEQA Guidelines Appendix G checklist questions. The project was evaluated for conflicts with applicable circulation policies, relative to the project's increase in vehicular travel demand, for transportation hazards, and for impacts to temporary and long-term emergency access.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to traffic and transportation if it would:

- ▶ conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- ▶ conflict or be inconsistent with CEQA Guidelines Section 15064.3(b);
- ▶ substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- ▶ result in inadequate emergency access.

IMPACT ANALYSIS

IMPACT 3.9-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. *The project would not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. This impact would be less than significant.*

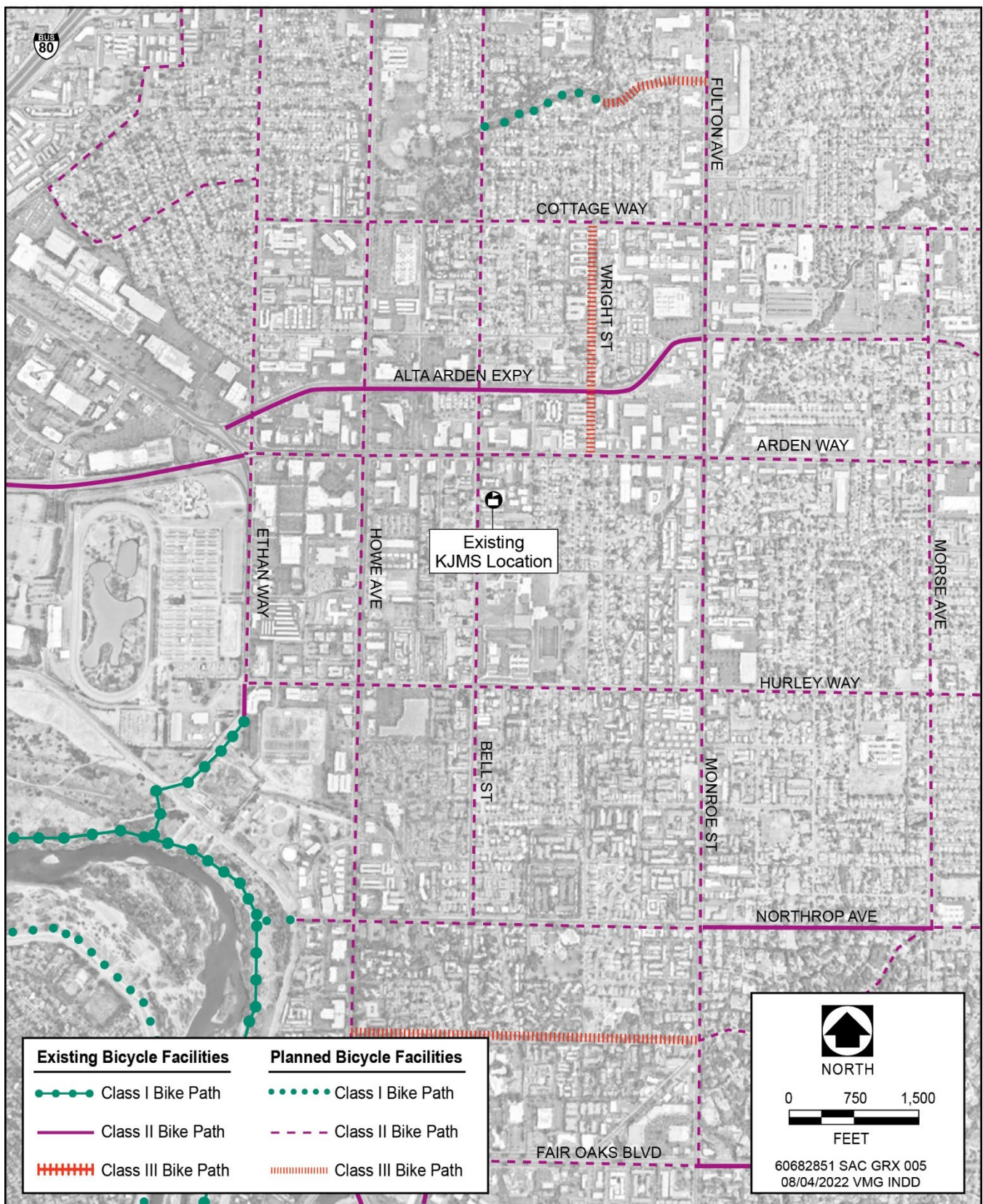
The project is proposed on two infill sites in areas with existing pedestrian, bicycle, and transit access. This is generally supportive of County land use and transportation policies. As noted in the County's Circulation Element of the General Plan, the County intends to apply the Smart Growth Streets concept to identified mixed use corridors and major transit corridors to support and encourage infill development and revitalization efforts" (Sacramento County 2020a, page 43). As noted in the County's Pedestrian Master Plan, the County's "General Plan focuses on several smart growth strategies that will make walking easier and safer in the County...[including] designating an urban policy area... to concentrate development inside the urban core area [and] [t]o help promote infill development, the County recommends revitalizing key commercial corridors."

The transportation-related goals and policies in the County General Plan and the Transportation Analysis seek to encourage alternative forms of mobility, increase walking and cycling, and make pedestrian safety a priority. The proposed project would be required to comply with the goals and policies outlined in these documents. The

proposed project will be redeveloping an existing school on the existing site, and the project would also improve access to the project site compared to the existing condition.

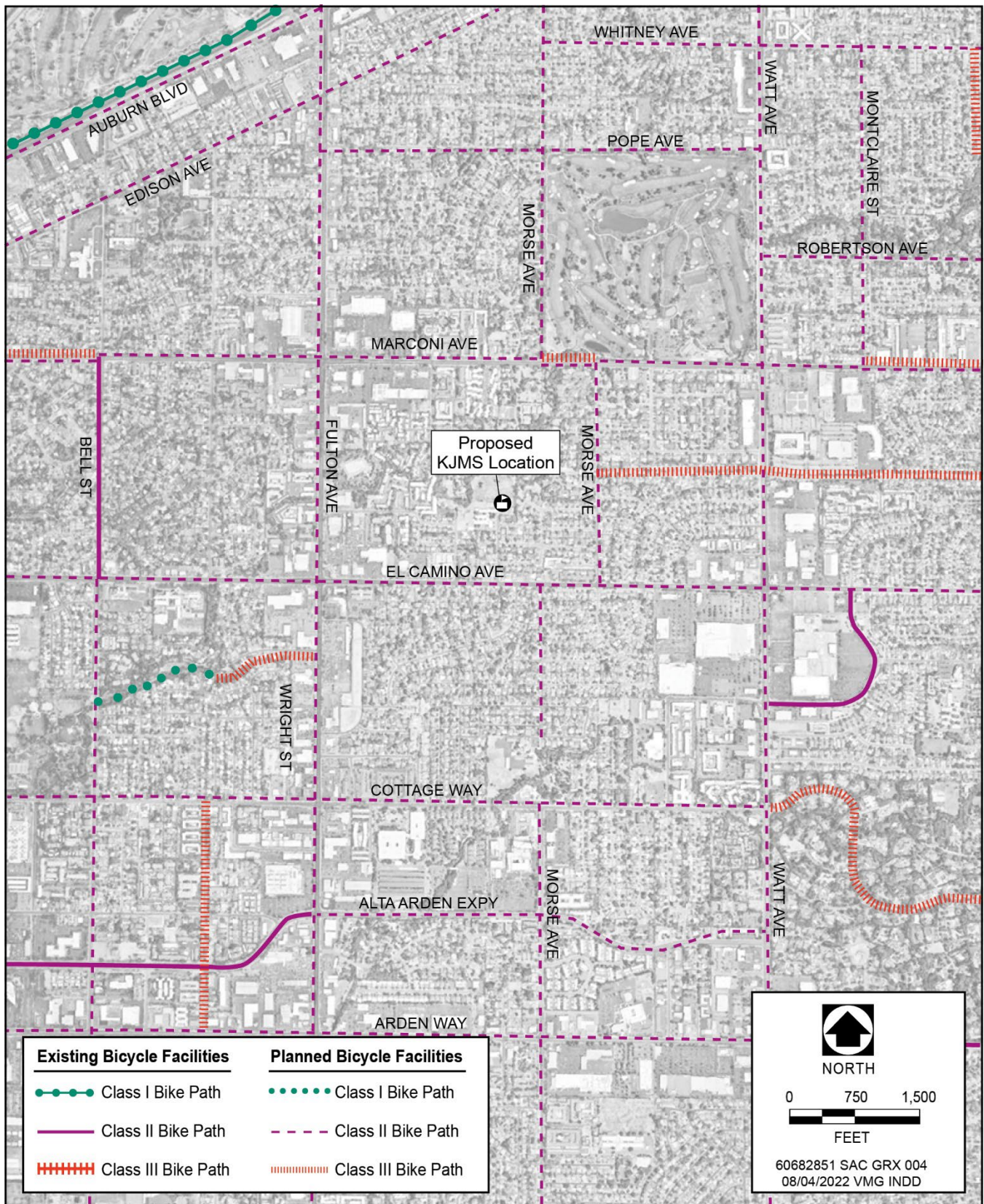
Bicycle Access

A significant impact would occur if the project hindered or eliminated an existing designated bikeway, or if the project interfered with implementation of a proposed bikeway improvement. A significant bikeway impact also could occur if the project would result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. There are existing Class II bicycle lanes on both sides of El Camino Avenue and Marconi Avenue north and south of the project site. There are relatively low-volume routes from the north and the south to reach the school site. The proposed site plan will not eliminate any existing bikeways. Sacramento County's Bicycle Master Plan shows existing and planned facilities in the vicinity of both the proposed Katherine Johnson Middle School site and the Encina portable classrooms site (Sacramento County 2011) (Exhibits 3.9-1 and 3.9-2).



Source: Sacramento County 2011

Exhibit 3.9-1: Existing and Planned Facilities, Encina Portable Classrooms Site (existing KJMS)



Source: Sacramento County 2011

Exhibit 3.9-2: Existing and Planned Facilities, Proposed Katherine Johnson Middle School Site

Pedestrian Access

A significant pedestrian circulation impact would occur if the project would result in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/motor vehicle conflicts. Full sidewalks and curb ramps are available in the vicinity of the school site along the west side of Belport Lane and the east side of Kent Drive, with some interruptions in the sidewalk network on the east side of Belport Lane and the west side of Kent Drive. Students have continuous routes from El Camino Avenue. The project will also provide pedestrian connectivity to the open space area and trail maintained by the Fulton-El Camino Recreation District. Relatively low-volume roadways with sidewalks surround the school site on the east and west.

Figure 1 in the the Sacramento County Pedestrian Master Plan, the County identifies High Priority Pedestrian Projects, including Pedestrian Districts in the vicinity of the proposed Katherine Johnson Middle School site – along Fulton Avenue west of the site between Arden Way on the south and Auburn Boulevard to the north; and along El Camino Avenue south of the site between Ethan Way on the west and past Watt Avenue on the east (Sacramento County 2007, page 18 of 172).⁴ In the vicinity of the Encina portable classrooms site, the pedestrian LOS along Bell Street and Arden Way, the LOS is D, while the LOS along Wayland Avenue and Clinton Road is A. In the vicinity of the proposed Katherine Johnson Middle School site, the pedestrian LOS along Marconi Avenue and El Camino Avenue north and south of the site is D. while the LOS for Morse Avenue east of the site ranges from A near the intersection of Morse Avenue and El Camino Avenue to LOS E closer to Marconi Avenue (Sacramento County 2007, Figure 17).

As a result of the improved trail access that would be provided by the new sidewalk on SJUSD-owned property at the project site (on the east side of Belport Lane), use of the existing Creekside Nature Trail may increase. Location of the Katherine Johnson Middle School at the project site could lead to additional use of the trail to access the school site for a limited number of students.

Transit Access

Though, based on the experience at other school sites, SJUSD does not anticipate significant use of public bus transit for the proposed Katherine Johnson Middle School site or Encina portable classrooms site, transit is available in the vicinity of both sites. Existing bus routes that serve proposed Katherine Johnson Middle School site are Route 23 and 25. Route 23 operates on El Camino Avenue, and Route 25 operates on Marconi Avenue. The nearest bus stops are located 700 feet south of site on the El Camino Avenue and is served by Routes 23. The Encino portable classrooms site is served by Route 129, the Arden Commuter, and Route 13 –both along Arden Way, approximately 1/3rd mile north. Also in the vicinity is Route 87 west along Howe Avenue, approximately 1/3rd mile to the west, as well as Route 26, which operates on Fulton Avenue approximately 1/2 mile to the east of the site.

4 According to the County's Pedestrian Master Plan, the main purpose of Pedestrian Districts is to emphasize pedestrian needs along sections of road where pedestrian demand is or could be high, based on adjacent land uses and transit activity. Some of the treatments that could be used within Pedestrian Districts include: bicycle lanes; sidewalk enhancements and curb extensions; longer pedestrian intervals at signalized intersections; midblock crossings (new and improved); on-street parking; lower speed limits to 30 miles per hour or lower; pedestrian-scaled lighting; road diets; and street trees or bus shelters.

Summary

In conclusion, as described above, the project does not conflict with any program, plan, ordinance, or policy related to circulation that would lead to any significant adverse physical environmental impact. The impact is **less than significant**.

IMPACT 3.9-2 **Conflict or Inconsistency with CEQA Guidelines section 15064.3.** *There is no adverse physical environmental impact associated with VMT that is not addressed fully in other relevant technical sections. This impact would be less than significant.*

The referenced section of the CEQA Guidelines suggests that VMT is the most appropriate measure of travel demand impacts. The Guidelines also clarify that a project's effect on automobile delay shall not constitute a significant environmental impact. VMT can be an indicator of potential adverse physical environmental effects. The actual adverse physical environmental effects associated with VMT are analyzed in other sections of this document, including Air Quality, Greenhouse Gas Emissions, Noise and Vibration, and Energy.

The Katherine Johnson Middle School serves existing and future needs in the vicinity of the site for educational services. As described in Sacramento County's Transportation Analysis Guidelines, Page 8 of 64, Section B, Screening Criteria, public K-12 schools are an example of "Local-Serving Public Facilities/Services" that "are expected to result in less-than-significant VMT impacts based on project description, characteristics, and/or location" (Sacramento County 2020b). In addition, as noted previously, the proposed Katherine Johnson Middle School site and the Encina portable classrooms site are in low VMT areas where the density, mix of land uses, access to non-vehicular transportation options, and other factors result in a reduced need for vehicular transportation compared to the balance of the region.⁵ Both sites are also in an "Environmental Justice Community" as defined within the Sacramento County General Plan Environmental Justice Element (Sacramento County 2019, page 7). As noted in the Environmental Justice Element, "Environmental Justice Communities will be prioritized for Smart Growth Streets programs...[and] for new sidewalks, particularly along major streets and near parks and schools" (Sacramento County 2019, page 50). Both the proposed Katherine Johnson Middle School site and the Encina portable classrooms site are also in "Transit Priority Areas" – areas within one-half mile of a rail station stop or a high-quality transit corridor included in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). A high-quality transit corridor has fixed route bus service with service intervals of 15 minutes or less during peak commute hours (SACOG 2020).⁶

With respect to construction traffic, any truck trips would be limited to the length of time required for the project's construction and the construction activities will not affect the long-term VMT of the proposed project.

There is no adverse physical environmental impact associated with VMT that is not addressed fully in other relevant technical sections. The impact is **less than significant**.

IMPACT **Potential for Creation of Substantial Traffic-Related Hazards due to a Design Feature.** *Roadway improvements would adhere to design standards set forth in the City of Sacramento Design and Procedures Manual and Sacramento*

⁵ Please see SACOG's website for more details:

<https://sacog.maps.arcgis.com/apps/webappviewer/index.html?id=0eac172e44514776b2f30e4324652f88&extent=-13567338.6225%2C4599309.7898%2C-13330078.0867%2C4789485.1162%2C102100>

⁶ For more details, please see SACOG's open portal GIS website: <https://data.sacog.org/datasets/SACOG::sb743-mtp-buffer/explore?location=38.611121%2C-121.380737%2C13.64>

3.9-3 *County Improvement Standards. Compliance with the County's and City's design standards would ensure roadway improvements would not increase hazards due to a design feature This impact would be less than significant.*

The proposed project includes installing a driveway and a parking lot in the southern portion of the Katherine Johnson Middle School site from Kent Drive and Miramar Road on the east (Figure 2). Vehicles would enter from the east and either park in the parking lot or circulate through the pick-up and drop-off area and then turn back around to exit to the east onto Miramar Road or Kent Drive. Associated sidewalk, curb, and gutters would also be constructed. Sidewalk, curb, and gutter work would be conducted in accordance with *Sacramento County Improvement Standards* (Sacramento County 2018). These standards address access road length, dimensions, and related design features. There is **no impact**.

IMPACT *Interference with Emergency Access. The operation of the proposed project would provide adequate emergency*
3.9-4 *access. Short-term, temporary, construction-related traffic could result in an increase in emergency response times*
 and impede emergency services. Construction-related impacts would be potentially significant.

Emergency access for the proposed Katherine Johnson Middle School site will include a route for equipment northward from Kent Drive, eastward around the new multi-purpose building, westward around the back of the basketball courts and classroom buildings, and then southward around the science buildings to Belpoint Lane. Emergency access will also be provided from the west from Elvyra Way. Emergency access to the Encina portable classrooms site will not change compared to existing conditions. Both sites will have multiple points of emergency access during operations. Emergency access to the project site would meet design standards set forth by the California Fire Code and the *Sacramento County Improvement Standards* (2018). These standards address access road length, dimensions, and finished surfaces for firefighting equipment; security gate design requirements; fire hydrant placement; and fire flow availability and requirements. Improvement plans would be reviewed and approved by the Sacramento County Department of Transportation.

All construction equipment and vehicles would be staged on the existing school campus. Demolition and grading would occur on the southern portion of the property as an initial stage of construction to accommodate an all-weather area for construction staging and parking for construction worker vehicles.

Construction equipment and activities would primarily involve the use of Kent Drive to access El Camino Avenue. Demolition material could be removed using Belpoint Lane to El Camino Avenue or Kent Drive to El Camino Avenue. Kent Drive would be the main access route for grading and concrete work.

The proposed reconstruction of the school is anticipated to generate a variety of truck and construction employee trips. The addition of construction truck vehicles onto the local street system would contribute to increased traffic in the project vicinity. However, the proposed project's construction trip traffic would be a fraction of the operational traffic and would not contribute to a significant increase in the overall congestion in the project vicinity.

To minimize construction impacts, it is recommended that the District develop and implement a construction traffic management plan in coordination with Sacramento County. The plan may include items such as: the estimated number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, location/amount of employee parking, a driveway access plan (including provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and

private vehicle access points), and the proposed use of traffic control/partial street closures on public streets. The construction traffic management plan will be to maintain a high level of safety for all roadway users.

Compliance with the California Fire Code, City of Sacramento, and Sacramento County design standards would ensure operation of the proposed project would provide adequate emergency access. However, ongoing construction activities could temporarily increase response times and impede emergency services. Construction-related impacts would be **potentially significant**.

Mitigation Measure 3.9-4: Prepare and Implement a Construction Traffic Control Plan.

The SJUSD and/or contractor/s, in collaboration with Sacramento County, shall prepare and implement a traffic control plan for construction activities that may affect road rights-of-way, in order to facilitate travel of emergency vehicles on affected roadways. The traffic control plan must 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 any 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. Measures typically used in traffic control plans include advertising of planned lane closures, warning signage, and a flag person to direct traffic flows when needed. During construction, access to the existing surrounding land uses shall be maintained at all times, with detours used, as necessary, during road closures. The plan may be modified by to eliminate or avoid traffic conditions that are hazardous to the safety of the public.

Significance after Mitigation

Implementation of Mitigation Measure 3.9-4 would reduce the potentially significant impacts associated with decreased emergency response times during construction and operation to a **less-than-significant** level by requiring preparation and implementation of a construction traffic control plan that would provide for adequate emergency access during construction activities.

3.10 TRIBAL CULTURAL RESOURCES

3.10.1 ENVIRONMENTAL SETTING

The project site is situated in the Nisenan (sometimes referred to as the Southern Maidu) sphere of influence. The Nisenan territory included the drainages of the Yuba, Bear, and American rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. In the Nisenan territory, several political divisions, constituting tribelets, each had their own respective headmen who lived in the larger villages. However, it is not known which of these larger population centers wielded more influence than others, although they were all located in the foothill areas. In general, more substantial and permanent Nisenan villages were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground (Bennyhoff 1961:204–209; Wilson and Towne 1978: 387).

PRE-COLONIAL ENVIRONMENTAL SETTING

The language of the Nisenan, which includes several dialects, is classified within the Maiduan family of the Penutian linguistic stock. Kroeber (1925:830–832) recognized three Nisenan dialects: Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. According to Bennyhoff (1961:204–209), the southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that the foothills Nisenan distrusted the valley peoples but had a mostly friendly relationship with the Washoe to the east. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33). The northern boundary has not been clearly established due to similarities in language with neighboring tribes (Wilson and Towne 1978:387–389).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Houses were domed structures measuring 10 to 15 feet in diameter and covered with earth and tule reeds or grass. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule reeds or brush, with a central hole at the top to allow the escape of smoke, and an east-facing entrance. Another common village structure was the granary, which was used for storing acorns.

Several political divisions in the Nisenan territory, constituting tribelets, had headmen in the larger villages. However, the relative levels of influence in these larger population centers are unknown. All of these larger villages were located in the foothills. More substantial and permanent Nisenan villages generally were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. One tribelet consisted of people occupying the territory between the Bear River and the Middle Fork American River (Wilson and Towne 1978). According to Kroeber (1925:831), the larger villages could have had populations exceeding 500 individuals, although small settlements consisting of 15 to 25 people and extended families were common.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna provided by the rich valley environment. The Valley Nisenan economy involved

riparian resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crops from the blue oak (*Quercus douglasii*) and black oak (*Q. kelloggii*) were carefully managed resources. Acorns were stored in granaries in anticipation of winter. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many insect and other animal species were taken when available (Wilson and Towne 1978:389).

The decimation of the Nisenan culture in the 19th century as a result of European colonization, coupled with a reluctance to discuss Nisenan spiritual beliefs and practices, makes it difficult for non-tribal people to describe these practices in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. Kuksu, the basic religious system noted throughout Central California, appeared among the Nisenan. Membership was restricted to those initiated in its spirit and deity-impersonating rites. However, Kuksu was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of Kuksu as an adaptation to the Ghost Dance religion (Wilson and Towne 1978). Today, Nisenan descendants are reinvesting in their traditions and represent a growing and thriving community.

NATIVE AMERICAN COMMUNITIES

Of the tribes contacted to participate in this study, the Wilton Rancheria and the United Auburn Indian Community actively participated. The following provides a summary of the current status provided by the tribes.

Wilton Rancheria

Wilton Rancheria is a federally recognized tribe. The land the Tribe's ancestors inhabited were located along a path of massive death and destruction of California Indians caused by Spanish, Mexican, and American military incursions, disease, and slavery, and the violence accompanying mining and settlements (Wilton Rancheria 2022). Between March 1851 and January 1852, three commissioners hastily negotiated 18 treaties with representatives of some of the indigenous population in California. The Treaty of the Forks of the Cosumnes River ceded the lands on which the Wilton Rancheria in Sacramento County was later established, but promised to establish a rancheria on the Cosumnes River.

The Tribe's ancestors came back from nearly being annihilated only to have their children taken to boarding schools that stripped their indigenous language and culture further. Finally, in July 1928, the United States acquired land in trust for the Miwok people that were living in Sacramento County. A 38.77-acre tract of land in Wilton was purchased from the Cosumnes Company which formally established the Wilton Rancheria. However, under the California Rancheria Act of 1958, the federal government terminated federal recognition of the tribe in 1964.

In 1991, surviving members of Wilton Rancheria reorganized their tribal government and in 1999 requested the United States formally restore their federal recognition. A U.S. District Court Judge restored Wilton Rancheria as a Federally Recognized Tribe in 2009 and its administrative office is located in the city of Elk Grove (Wilton Rancheria 2022).

United Auburn Indian Community

The United Auburn Indian Community (UAIC) of the Auburn Rancheria is a federally recognized tribe. The reestablishment of the United Auburn Indian Tribe began when the United States Department of Interior documented the existence of a separate, cohesive band of Maidu and Miwok Indians, occupying a village on the outskirts of the city of Auburn in Placer County. In 1917, the United States acquired land in trust for the Auburn Band near the city of Auburn and formally established a reservation, known as the Auburn Rancheria. Tribal members continued to live on the reservation as a community despite great adversity (UAIC 2022).

In 1953, the United States Congress enacted the Rancheria Act, authorizing the termination of federal trust responsibilities to a number of California Indian tribes including the Auburn Band. With the exception of a 2.8-acre parcel containing a tribal church and a park, the government sold the land comprising the Auburn Rancheria. The United States terminated federal recognition of the Auburn Band in 1967.

In 1991, surviving members of the Auburn Band reorganized their tribal government as the United Auburn Indian Community and requested the United States to formally restore their federal recognition. In 1994, Congress passed the Auburn Indian Restoration Act, which restored the Tribe's federal recognition. The Act provided that the Tribe may acquire land in Placer County to establish a new reservation (UAIC 2022). In 2002, UAIC acquired 49.21-acres under a land trust with the Bureau of Indian Affairs (BIA) to build and operate a casino (BIA 2002).

In 2018, UAIC entered into another land trust with the BIA for 1,100 acres in Placer County to build 110 single-family homes and other amenities for tribal members (Indian Country Today 2010).

NATIVE AMERICAN CONSULTATION

On behalf of SJUSD, a Sacred Lands File (SLF) search and request for AB 52 Consultation List was requested by AECOM from the Native American Heritage Commission (NAHC) on May 9, 2022. The purpose of the search was to ascertain whether additional resources or locations that may be of importance to Native Americans who traditionally have resided in the project area are known to exist. The NAHC responded on July 8, 2022 with a positive SLF result for the project site. AECOM contacted the two tribal representatives identified by the NAHC for more information on July 26, 2022. The NAHC also provided a list of Native American tribal contacts who may have additional knowledge relating to cultural resources in the area.

On July 5, 2022 AECOM, on behalf of the SJUSD, initiated AB 52 consultation by sending letters to the list of Native American tribal contacts with a description of the project and maps depicting the project site.

Wilton Rancheria responded via email on July 27, 2022 to initiate consultation under AB 52. UAIC responded via email on August 4, 2022 that the tribe responded to the NOP for the project on June 23, 2022 and expressed concerns regarding the potential sensitivity for buried tribal cultural resources to be present, specifically near Chicken Ranch Slough. UAIC indicated that if Wilton Rancheria was actively consulting on the project, UAIC will officially defer to them; however, request for the CEQA document (which were previously stated in the response to the NOP) were provided.

No other tribes responded or requested to participate in AB 52 tribal consultation during the 30-day formal notification period.

3.10.2 REGULATORY FRAMEWORK

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Environmental Quality Act (CEQA)

CEQA requires lead agencies to consider whether projects will affect Tribal Cultural Resources (TCR). Tribal Cultural Resources may or may not manifest as archaeological sites. In some cases, TCRs are viewsheds, plant gathering areas, or other sacred spaces that are not readily identifiable to non-tribal members. In many cases, TCRs also include an archaeological component, such as artifacts, features, and sites (with or without human remains). Public Resources Code Section 21074 states the following:

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

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). Public Resources Code Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the most likely descendant. With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by the NAHC. The most likely

descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains, and items associated with Native Americans.

Assembly Bill (AB) 52

AB 52 (effective July 1, 2015) added Public Resources Code Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, relating to consultation with California Native American tribes, consideration of “tribal cultural resources,” and confidentiality. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of effects on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the environment. Lead agencies must avoid damaging effects to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential.

AB 52 requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation. Section 21080.3.1(d) states that within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to requests consultation pursuant to this section.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Sacramento County General Plan

The *Sacramento County General Plan of 2005–2030* (Sacramento County 2011, as updated in 2017) Conservation Element, states under Section VI, Cultural Resources, the following goal and six objectives:

- GOAL:** Promote the inventory, protection and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic historical, religious or socio-economic importance.
1. Comprehensive knowledge of archeological and historic site locations.
 2. Attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to Native American values.
 3. Structures with architectural or historical importance preserved to maintain contributing design elements.
 4. Known cultural resources protected from vandalism unauthorized excavation, or accidental destruction.

5. Properly stored and classified artifacts for ongoing study.
6. Public awareness and appreciation of both visible and intangible historic and cultural resources.

To implement the primary goal and the objectives, the Conservation Element contains the following policies relevant to the project and tribal cultural resources:

- ▶ **CO-150.** Utilize local, state and national resources, such as the NCIC, to assist in determining the need for a cultural resources survey during project review.
- ▶ **CO-152.** Consultations with Native American tribes shall be handled with confidentiality and respect regarding sensitive cultural resources on traditional tribal lands.
- ▶ **CO-153.** Refer projects with identified archeological and cultural resources to the Cultural Resources Committee to determine significance of resource and recommend appropriate means of protection and mitigation. The Committee shall coordinate with the Native American Heritage Commission in developing recommendations.
- ▶ **CO-154.** Protection of significant prehistoric, ethnohistoric and historic sites within open space easements to ensure that these resources are preserved in situ for perpetuity.
- ▶ **CO-155.** Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinterment shall have priority. The project developer shall provide the burden of proof that off-site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.
- ▶ **CO-157.** Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.
- ▶ **CO-159.** Request a Native American Statement as part of the environmental review process on development projects with identified cultural resources.

3.10.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate a project's impacts to Tribal Cultural Resources (TCRs) under CEQA are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, features, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native Tribe that is:

- ▶ Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

- ▶ A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

IMPACT ANALYSIS

IMPACT 3.10-1 Substantial adverse change in the significance of a tribal cultural resource. *Although no significant archaeological resources are known to exist within the project site or half-mile radius, a search of the Sacred Lands File for the project by the Native American Heritage Commission was positive, the project site is adjacent to Chicken Ranch Slough, and it is possible that previously undiscovered tribal cultural resources could be inadvertently exposed during project ground-disturbing activities. Unless properly evaluated and managed, this could result in a significant impact to tribal cultural resources. This impact is considered potentially significant.*

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to TCRs, and reduce the potential for delay and conflict in the environmental review process. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the SJUSD during the project planning process to identify and protect tribal cultural resources.

As noted previously, the NAHC SLF records search response on July 8, 2022 was positive for the project site area.

Pursuant to the AB 52 consultation requirement, formal AB 52 notification letters were sent on July 5, 2022 to Native American tribal contacts who previously requested to be notified of Sacramento County projects within their traditionally and culturally affiliated area.

Responses were received from the UAIC and from the Wilton Rancheria. UAIC staff noted that UAIC officially deferred to Wilton Rancheria for consultation on this project. UAIC also requested that the EIR prepare separate Cultural Resources and Tribal Cultural Resources sections, which has been incorporated in this EIR; that the EIR avoid the word “prehistoric”; and that the Tribal Cultural Resources section is relevant to the contemporary Tribes that are consulting on the project, not a repeat of ethnohistory section in the Cultural Resources section. Wilton Rancheria requested to consult, and has requested to be involved in surveys, review cultural resource assessments, and obtain records searches for the project. The SJUSD has provided Wilton Rancheria with all available information. Wilton Rancheria also notes that, if tribal cultural resources are identified within the project area, it is their policy that tribal monitors must be present for all ground disturbing activities; that Wilton Rancheria’s strong preference is to preserve tribal cultural resources in place and avoid them whenever possible; and that subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria and receiving Wilton Rancheria’s written consent. In telephone/video conference meetings conducted on August 9 and August 16, 2022, Wilton Rancheria provided additional description of the potential for tribal cultural resources in the area surrounding Chicken Ranch Slough and provided input on draft mitigation measures that was used in this EIR.

There are no known tribal cultural resources that would be adversely affected by the project; however, a search of the SLF for the project by the NAHC was positive. It is possible that unknown TCRs could be adversely affected.

This impact is considered **potentially significant**. The Encina portables component of the proposed project would involve minor trenching and placement of portable classrooms on an existing parking lot and therefore there is no impact.

Mitigation Measure 3.10-1a: Inadvertent/Unanticipated TCR Discoveries

Although TCRs have not been identified for this project, the following mitigation measure is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential TCRs, archaeological, or cultural resources during a project's ground disturbing activities.

SJUSD shall require the following steps to be taken as a part of contracts related to construction of the project:

- If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or a distance less than 100 feet agreed to by a Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with the area. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (Public Resources Code §21074). The Tribal Representative will make recommendations for further evaluation and treatment as necessary.
- When avoidance is infeasible, preservation in place is the preferred option and every effort shall be made to preserve the resources in place, including through project redesign, if feasible.
- If preservation in place is not feasible, culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of TCRs will not take place unless approved in writing by the California Native American Tribe that is traditionally and culturally affiliated with the project area.
- The contractor shall implement any measures deemed by the SJUSD to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a TCR may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.
- Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of CEQA and AB 52 have been satisfied.

Mitigation Measure 3.10-1b: Notification, Inspection, and Native American TCR Construction Monitoring

SJUSD will provide Wilton Rancheria, which is traditionally and culturally affiliated with resources in the project area, with a schedule for ground-disturbance activities and extend an invitation for a Wilton Rancheria Tribal Representative or Tribal Monitor to observe on-site ground disturbance work contingent on compliance with construction safety measures. SJUSD will compensate a Wilton Rancheria Tribal

Representative or Tribal Monitor for up to 16 (16) hours using the established hourly rate for on-site monitoring, which may be distributed among multiple days as coordinated between SJUSD and Wilton Rancheria. The Wilton Rancheria Tribal Representative or Tribal Monitor shall also be able to observe on-site during additional ground-disturbing activities, without compensation from SJUSD.

To minimize the potential for destruction of or damage to previously undiscovered TCRs and to identify any such resources at the earliest possible time during project-related ground-disturbing activities, SJUSD/contractors shall require the following steps to be taken as a part of contracts related to construction of the project:

- A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, the SJUSD/contractor shall contact Wilton Rancheria with the proposed earthwork start date. Wilton Rancheria Tribal Representatives or Tribal Monitors shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of groundbreaking activity. During this inspection, Wilton Rancheria Tribal Representatives or Tribal Monitors shall be provided the opportunity to offer a worker awareness meeting for on-site construction personnel and to distribute worker awareness information.
- If any TCRs are encountered during this initial inspection, or during any subsequent construction activities, work shall be suspended within 100 feet of the find and the measures included in Mitigation Measure 3.10-1a, Inadvertent/Unanticipated Discoveries, shall be implemented.
- Native American Monitors from Wilton Rancheria will be invited to monitor the vegetation grubbing, stripping, grading, or other ground-disturbing activities in the project area to determine the presence or absence of any TCRs.
- Wilton Rancheria Tribal Representatives and Native American Monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted, or slowed if such sites or objects are identified within the direct impact area; however, only a Native American Representative can recommend appropriate treatment of such sites or objects.

Significance after Mitigation

With incorporation of Mitigation Measures 3.10-1a and 3.10-1b, the impact to TCRs would be **less than significant**.

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4 TOPIC AREAS DISMISSED FROM DETAILED ANALYSIS

4.0 INTRODUCTION

Consistent with the CEQA Guidelines Section 15126.2, this EIR is focused on an evaluation of topic areas where significant impacts on the physical environment associated with the proposed Katherine Johnson Middle School project may occur. Chapter 4 of this EIR contains brief discussion of topic areas where impacts on the physical environment from implementing the proposed project are clearly less than significant or no impact would occur. The following topic areas are discussed below: agriculture and forestry resources, energy, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, utilities and service systems, and wildfire. The thresholds listed below in each of the environmental topic areas are derived from Appendix G of the CEQA Guidelines, as amended.

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4.1 AGRICULTURE AND FORESTRY RESOURCES

Based on Appendix G of the CEQA Guidelines, an impact related to agriculture and forestry resources is considered significant if the proposed project would do any of the following.

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

The proposed project is an urban re-use project that consists of demolishing the existing Creekside Elementary School and constructing a new, more modern school on the existing campus (the proposed Katherine Johnson Middle School), and installing new portable classrooms for adult education at the existing Encina High School. Based on a review of the 2018 Important Farmland Map for Sacramento County produced by the California Department of Conservation (DOC) under the Farmland Mapping and Monitoring Program (FMMP), the Katherine Johnson Middle School project site and the Encina High School portable classroom site are designated as Urban and Built-Up Land (DOC 2018). There is no Farmland at either school campus or in the project vicinity, which are located in the urbanized Arden-Arcade area. Thus, the proposed project would not result in conversion of Farmland to a non-agricultural use, and there would be **no impact**.

2. Conflict with existing zoning for agricultural use or a Williamson Act contract?

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are zoned RD-5 Residential (Sacramento County 2022a). There are no Williamson Act contracts at either school campus or in the project vicinity (Sacramento County 2022b), which are located in the urbanized Arden-Arcade area. Thus, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and there would be **no impact**.

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

The existing Creekside Elementary School (at the proposed Katherine Johnson Middle School site) was constructed in 1953, and Encina High School was constructed in 1959. Both school campuses are zoned and designated for residential land uses, which includes the existing school uses (Sacramento County 2022a). Both school campuses are located in the urbanized Arden-Arcade area, and are not zoned or designated for forest land, timberland, or timberland production. Thus, there would be **no impact**.

4. Result in the loss of forest land or conversion of forest land to non-forest use?

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are located in the urbanized Arden-Arcade area, and have been developed and used as public schools since 1953 and 1959, respectively. Neither the school campuses nor the surrounding areas contain any forest land. Thus, there would be **no impact**.

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

There is no Farmland or forest land at either school campus or in the project areas. The proposed project is an urban infill project to redevelop the existing Creekside School with the Katherine Johnson Middle School, and install portable classrooms at Encina High School for adult learning. All construction and operational activities would take place on the existing school campuses. Thus, the proposed project would not result in conversion of Farmland or forest land to other uses, and there would be **no impact**.

4.2 ENERGY

Based on Appendix G of the CEQA Guidelines, an impact related to energy is considered significant if the proposed project would do any of the following.

- 1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

CONSTRUCTION-RELATED ENERGY CONSUMPTION

Implementation of the proposed project would increase the consumption of energy for the duration of construction in the form of electricity, natural gas, and fossil fuels (*e.g.*, gasoline, diesel fuel). The primary energy demands during construction would be associated with construction equipment and 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.

Table 4.2-1 presents the total fuel consumption anticipated for the proposed construction activities, shown both for the overall construction period and amortized over an assumed 30-year period of building operation. Over the anticipated 20-month demolition and construction period, the proposed project would require a total of approximately 50,159 gallons of diesel and 2,510 gallons of gasoline. When amortized over an assumed period of building operation lasting 30 years, fuel consumption would equal approximately 1,672 gallons of diesel and 84 gallons of gasoline per year. The calculations in Table 4.2-1 are based on the CalEEMod emissions calculations for proposed construction activities and application of the United States Energy Information Administration CO₂ emissions coefficients (EIA 2016) to estimate fuel consumption for each phase of construction activities.

Table 4.2-1. Modeled Construction Fuel Consumption, Total and Amortized over 25 Years

Phase	Source	MT CO ₂ e/ Year ^a	Fuel Type	Factor (MT CO ₂ /Gallon) ^b	Gallons/Year
Demolition	Off-Road Equipment	46.80	Diesel	1.02E-02	4,606
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	0.00	Gasoline	0.008887	-
Site Prep	Off-Road Equipment	36.20	Diesel	1.02E-02	3,563
	Hauling	0.00	Diesel	0.01016	-
	Vendors	0.00	Diesel	0.01016	-
	Workers	0.00	Gasoline	0.008887	-
Grading	Off-Road Equipment	53.10	Diesel	0.01016	5,226
	Hauling	0.00	Diesel	0.01016	-
	Vendors	0.00	Diesel	0.01016	-
	Workers	0.00	Gasoline	0.008887	-
Building Construction	Off-Road Equipment	376.00	Diesel	0.01016	37,008
	Hauling	0.00	Diesel	0.01016	-
	Vendors	21.90	Diesel	0.01016	2,156
	Workers	19.40	Gasoline	0.008887	2,183
Paving	Off-Road Equipment	20.60	Diesel	0.01016	2,028
	Hauling	0.00	Diesel	0.01016	-

Phase	Source	MT CO ₂ e/ Year ^a	Fuel Type	Factor (MT CO ₂ /Gallon) ^b	Gallons/Year
	Vendors	0.00	Diesel	0.01016	-
	Workers	2.18	Gasoline	0.008887	245
Architectural Coating	Off-Road Equipment	1.82	Diesel	0.01016	179
	Hauling	0.00	Diesel	0.01016	-
	Vendors	0.00	Diesel	0.01016	-
	Workers	0.73	Gasoline	0.008887	82
				Total Gallons	Diesel
Gasoline					2,510
Amortized Demands (over 30 years)				Diesel	1,672
				Gasoline	84

Notes:

CO₂ = carbon dioxide; CO₂e = carbon dioxide equivalent; MT = metric tons

Assumed amortization period is 25 years, based upon timeline used in analysis of US Green Building Council's *Green Building Costs and Financial Benefits* (US Green Building Council 2002).

Sources:

^a Modeled by AECOM in 2022

^b Sacramento Metropolitan Air Quality Management District 2016, U.S. Energy Information Administration 2016

The proposed project does not include unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites. The project takes advantage of two existing, developed sites, the proposed Katherine Johnson Middle School site and Encina High School, that would not require energy to be expended to extend utilities or roadways to reach the sites. 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.

BUILDING OPERATIONAL ENERGY CONSUMPTION

The proposed buildings would be constructed to meet all applicable energy efficiency standards at the time of construction and would be required to comply with the current energy performance standards found Title 24 of the California Code of Regulations, including the Green Building Code (Part 11 of Title 24) Building Energy Efficiency Standards.

The proposed school would include approximately 60,114 square feet of buildings including classrooms, science labs, administrative offices, a gymnasium, a multi-purpose room, and a cafeteria, in addition to outdoor space that would include hardcourts, playing fields, and a parking lot. Using CalEEMod, electrical and natural gas demands were modeled to estimate energy use based on the proposed land use (Table 4.2-2). The electrical demands created by the proposed facilities would be approximately 516,097 kWh per year. SJUSD has elected to provide and all-electric campus for this project and therefore the natural gas consumption of approximately 13,512.2 therms per year would instead be fulfilled with electricity, reducing the estimated therms of natural gas as shown in Table 4.2-2.

Table 4.2-2. Estimated Annual Electrical and Natural Gas Demands

	<i>Demands</i>	
	Electrical (kWh/year)	Natural Gas (therms)
<i>Proposed Project</i>	516,097	13,512.3
<i>Sacramento County</i>	11,063,247,071	298,393,458.00

Notes: kBtu = thousand British thermal units; kWh = kilowatt-hours

Source: Modeled by AECOM in 2022; CEC 2020a,b

Although Katherine Johnson Middle School is not pursuing environmental certification (i.e. LEED, CHPS), it will be designed to the high sustainability standards set by those programs. Building orientation to maximize natural daylighting in the learning environments was a key driver in the site development of the campus. Because of its size, the project will require commissioning of HVAC systems; this effort ensures that systems are operating at maximum efficiency. In addition, energy efficiency requirements for new construction have increased over time. In addition, older buildings tend to decrease in energy efficiency as infrastructure begins to degrade with time. Therefore, the space heating and cooling, lighting, and other operational-related energy uses for the proposed project's buildings would likely be more efficient than existing school buildings in the region.

TRANSPORTATION-RELATED ENERGY CONSUMPTION

Transportation is the largest energy consuming sector in California, accounting for approximately 39 percent of all energy use in the state (U.S. Energy Information Administration 2016). More motor vehicles are registered in California than in any other state, and commute times in California are among the longest in the country (EIA 2017a). Since transportation accounts for more energy consumption than other end-use sectors, the travel demand reducing features of the project site and design are important for consideration in an assessment of energy efficiency.

Transportation fuel has, and will continue to diversify in California and elsewhere. While historically gasoline and diesel fuel accounted for nearly all demand, there are now numerous options, including ethanol, natural gas, electricity, and hydrogen. Currently, despite advancements in alternative fuels and clean vehicle technologies, gasoline and diesel remain the primary fuels used for transportation in California, consuming 15.1 billion gallons of gasoline and 4.2 billion gallons of diesel in 2015 (CEC 2017a, b).

Operations of the proposed school would generate daily trips for students, teachers, and other staff to and from the school. Transportation related energy consumption associated with project operations includes gasoline and diesel fuel, as well as electricity, consumption due to vehicle trips for students going to and from the school (student trips), as well as school staff commuting to and from the site daily. Total operational-related vehicle miles traveled were estimated using project-specific travel distances for student trips, as well as CalEEMod defaults to inform staff commute distances and total trip rates for all student and staff trips to and from the school.

Transportation fuel consumption during operations of the proposed school was estimated using this annual VMT estimate and applying EMFAC2021 vehicle fleet mix and fuel consumption data for Sacramento County. Table 4.2-3 shows the estimated diesel and gasoline fuel consumption during proposed project operations, anticipated to begin in 2024.

Table 4.2-3. Estimated Annual Fuel Consumption for Proposed Project Operations

	Daily VMT	Gas Type	Fuel Consumption (Gallons/Year)
Proposed Project	3,216	Diesel	1,228
		Gasoline	32,482

Notes: VMT = vehicle miles traveled

Sources:

EMFAC2021 (v1.0.2) web database

Modeled by AECOM in 2022

The estimate of operational transportation-related energy consumption is conservative (tends to overestimate the actual impact), as this do not account for the fact that the majority of the students that would attend the Katherine Johnson Middle School are already attending existing facilities, including generating existing vehicle miles traveled to and from the Encino High School campus, the location of the existing Katherine Johnson Middle School, and the vehicular trips are not new to the area. In addition, both the proposed Katherine Johnson Middle School site and the Encina portables sites are in areas that promote walking, bicycling, the use of transit, and relatively shorter vehicular trips, saving transportation energy. Sacramento Area Council of Governments (SACOG), pursuant to the Sustainable Communities and Climate Protection Act of 2008 (SB 375) incorporates State-developed GHG emissions targets for passenger vehicle emissions into a “sustainable communities strategy” as part of its regional transportation plan. SACOG has also developed analysis and mapping showing the location of low VMT areas within the region. The proposed Katherine Johnson Middle School project site is within a low VMT area, as identified by SACOG – an area where the density, mix of land uses, access to non-vehicular transportation options, and other factors result in a reduced need for vehicular transportation compared to the balance of the region.¹ Encina High School is also in a low VMT area. Please refer to Section 3.9 of the EIR, “Transportation,” for additional details. The impact is **less than significant**.

ENERGY USE IN SCHOOLS

School buildings (including elementary, middle, and high schools, as well as colleges) are the third biggest energy user of all commercial building types, accounting for 10 percent of total energy consumed by commercial buildings (EIA 2017b). Activity intensity and climate are typically correlated with energy consumption. Common uses of energy associated with this sector include space heating, water heating, lighting, space cooling, running office equipment, cooking, ventilation, and running a wide variety of other equipment. According to a 2011 U.S. Environmental Protection Agency (EPA) guide to energy efficiency in kindergarten through grade 12 (K-12) schools, space heating, lighting, and water heating are the top three energy consuming activities in K-12 schools (EPA 2011). In addition, energy-related costs are the second greatest expenditure for operating costs of K-12 schools, second to personnel costs; an estimated 25 percent of those costs could be saved through energy efficiency measures (EPA 2011).

¹ Please see SACOG’s website for more details:

<https://sacog.maps.arcgis.com/apps/webappviewer/index.html?id=0eac172e44514776b2f30e4324652f88&extent=-13567338.6225%2C4599309.7898%2C-13330078.0867%2C4789485.1162%2C102100>

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Energy efficiency is a possible indicator of environmental impacts, though not in and of itself an environmental impact. The actual adverse physical environmental effects associated with energy use and the efficiency of energy use are detailed throughout this EIR in the environmental topic-specific sections. For example, the use of energy for transportation leads to air pollutant emissions, the impacts of which are addressed in Section 3.3 of this EIR. There is no physical environmental effect associated with energy use that is not addressed in the environmental topic-specific sections of this EIR.

Energy would be consumed through all phases of project construction and operations. Energy-requiring activities range from equipment operation to building operations and lighting of the parking lot, to transportation during all phases of the proposed project. Table 4.2-4 summarizes total energy requirements for the proposed project. For comparison purposes, Table 4.2-4 shows conversion of all energy requirements to a common energy unit of British thermal units (Btu).

Table 4.2-4. Summary of Proposed Project Energy Requirements

Phase	Energy Requirement ^a	Unit	Annual Energy Consumption (MMBtu) _b
Construction (amortized over 25 years)			
Diesel	1,672	gallons/year	231
Gasoline	84	gallons/year	10
		<i>Subtotal</i>	<i>241</i>
Site Operations			
Electrical	516,097	KWh/year	1,761
Natural Gas	1,351,230	kBtu/year	1,351
		<i>Subtotal</i>	<i>3,113</i>
Operational Transportation			
Diesel	1,228	gallons/year	170
Gasoline	32,482	gallons/year	4,060
		<i>Subtotal</i>	<i>4,230</i>
		Total	7,584

Notes:

kBtu/year = thousand British thermal units per year; KWh/year = kilowatt-hours per year; MMBtu = million British thermal units

Totals do not add due to rounding.

Sources:

^a Modeled by AECOM in 2022

^b U.S. Energy Information Administration 2016

Building operations would be the greatest energy-consuming factor associated with the proposed project. Compliance with existing regulations would ensure that the proposed facilities would be more energy efficient than existing, average, similar-use buildings energy efficiency requirements have become more stringent over time. As detailed within the “Transportation-Related Energy Consumption” discussion above, the proposed project would require about 1,228 gallons of diesel and 32,482 gallons of gasoline annually. This would result in energy consumption of approximately 4,478 MMBtu annually. However, both the proposed Katherine Johnson Middle School site and the Encina portables sites are in low VMT areas. Considering this information, the proposed project would not be expected to cause inefficient, wasteful, or unnecessary consumption of energy.

In addition, building orientation will be designed to maximize natural daylighting in the learning environments. Because of its size, the project will require commissioning of HVAC systems. This effort ensures that systems are operating at maximum efficiency. These features would further reduce energy consumption throughout the project construction and operational phases. The building energy, energy generation, and transportation energy features of the project would help to decrease the reliance on fossil fuels. Therefore, with consideration of the above-detailed proposed project construction, facility operations, and operational transportation energy consumption, the impact is considered **less than significant**. No mitigation is required.

HAZARDS AND HAZARDOUS MATERIALS

Based on Appendix G of the CEQA Guidelines, an impact related to hazards and hazardous materials is considered significant if the proposed project would do any of the following.

1. **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

The demolition and construction processes at the proposed Katherine Johnson Middle School site and Encina High School portable classroom site would involve the use of heavy equipment and associated small quantities of hazardous materials such as fuels, oils, lubricants, and paints. Project operation would also involve the use of small amounts of hazardous materials such as paints, solvents, herbicides, and pesticides associated with campus maintenance, similar to existing conditions. None of these materials would be acutely hazardous. Statutory requirements governing hazardous waste transportation in California are contained in the California Health and Safety Code, Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13. Hazardous waste transporters must have a valid registration permit issued by California Department of Toxic Substances Control (DTSC). In addition, hazardous waste transporters must comply with a variety of other State and federal regulations, including the California Vehicle Code (CCR Title 13); California State Fire Marshal Regulations (CCR Title 19); U.S. Department of Transportation regulations (Title 49 Code of Federal Regulations); and EPA regulations (Title 40 CFR). Handlers of hazardous materials (including construction contractors and District maintenance personnel) are required to follow the manufacturer's labelling instructions for use and disposal. Furthermore, the use and disposal of hazardous materials is heavily regulated at the federal and state level by U.S. Environmental Protection Agency (EPA) and DTSC, as outlined in CCR Title 22. Thus, this impact would be **less than significant**.

2. **Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

The demolition and construction processes at the proposed Katherine Johnson Middle School and Encina High School campuses would involve the use of heavy equipment and associated small quantities of hazardous materials such as fuels, oils, and lubricants. Project-related staging at the Katherine Johnson Middle School redevelopment site would be established in the southeastern portion of the project site near Kent Drive and Miramar Road. This location is as far as practicable from Chicken Ranch Slough, to protect water quality from accidental spills. Project-related staging for installation of the portable classrooms at Encina High School would occur within the existing paved parking lot. As discussed in more detail in Section 3.7, "Hydrology and Water Quality," coverage under the State Water Resources Control Board's (SWRCB) Construction General Permit would be obtained for the project, which would require preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is required to include BMPs that are specifically designed to minimize the risk of accidental spills of hazardous materials during construction, and to specify the procedures for prompt and efficient cleanup if an accidental spill does occur.

As described in Chapter 2, "Project Description," due to the age of the on-site structures at the proposed Katherine Johnson Middle School campus, abatement of hazardous materials including asbestos-containing materials, lead-based paint, electrical equipment containing polychlorinated biphenyls, and fluorescent tubes containing mercury vapors and lights may be necessary as part of the demolition activities. Construction worker health and safety regulations and hazardous materials removal and disposal protocols would be implemented in

accordance with applicable federal and state standards, including the California Division of Occupational Safety and Health and the Sacramento Air Quality Management District (SAQMD) regulations. The abatement contractor would be appropriately licensed and certified, and is required by law to comply with all local, state, and federal requirements regarding hazardous materials. Hazardous materials would be disposed of in an approved, off-site Class I or Class II landfill.

AECOM conducted site reconnaissance to examine possible conditions that could relate to hazardous materials. During the site visit, no visual evidence of aboveground storage tanks, underground storage tanks, evidence of underground storage tanks, irrigation or potable water wells, monitoring wells, dry wells, clarifiers, or septic systems was observed on the subject property. No evidence of discolored soil, standing surface water, stressed vegetation, or unusual odors was observed on the subject property during the site visit. No off-site sources of concern were identified, except for the former Bates Cleaners, which was located at 3007 El Camino Avenue approximately 559 feet to the south of the subject property.

The subject property was identified in the Environmental Database Resources (EDR) environmental database report obtained as part of this ESA as Creekside Adult Center and is listed as Hazardous Waste Tracking System (HWTS) and HAZNET (CAL000033748). The subject property case is listed as inactive per a survey conducted on February 22, 1995, for the HWTS listing. In 1997, the school was recorded as disposing 0.4214 tons of inorganic solid waste sent to a transfer station. In 2007 the subject property is listed as HAZNET and handled inorganic soil waste, storage, bulk, and/or transferring off-site to treatment or recovery facility less than 0.1 tons using a filter recycling service. No other records were noted in the EDR database.

Based on the presence of the historic dry cleaner, the possibility of soil contamination related to a Sacramento Municipal Utility District (SMUD) pad located on the south side of the mechanical room, and the age of structures to be demolished and the potential for asbestos containing materials (ACMs), lead-based paint, and pesticides, the impact is **potentially significant**.

Mitigation Measure 4.3-1: Perform Soil Vapor Testing, Prepare a Report of Findings, and Implement Remedial Actions as Necessary.

To minimize the potential for adverse human health and environmental effects, the District shall implement the measures listed below.

- Prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to conduct soil vapor sampling on-site to assess potential for vapor encroachment conditions associated with the historical cleaner to the south on El Camino Avenue.
- Although not a recognized environmental concern, prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to collect and analyze soil sample(s) in the area of the Sacramento Municipal Utility District (SMUD) pad on the south side of the mechanical room.
- Although not a recognized environmental concern, prior to the start of earthmoving activities at the project site, the San Juan Unified School District shall hire a qualified remediation firm to collect and

analyze soil samples throughout the subject property for asbestos, lead-based paint, and pesticide (termiticide).

- If any constituents of concern exceed the applicable environmental screening levels, the report shall include recommendations for remediation, which may include excavation of contaminated soil and replacement with clean fill dirt. The San Juan Unified School District shall consult with the California Department of Toxic Substances Control, and shall implement the selected remedy for soil cleanup.

Significance after Mitigation

Implementing Mitigation Measure 4.3-1 would reduce the project's potentially significant impact on human health and the environment because soil vapor testing would be performed, and in the event that contamination was discovered at concentrations that exceed the applicable environmental screening levels, soil contamination would be remediated prior to the start of earthmoving activities. Thus, this impact would be **less than significant with mitigation**.

3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The existing Creekside School campus would be redeveloped with a new, modern campus to house the Katherine Johnson Middle School. Because all of the existing school buildings would be demolished, classes would not be held during project demolition or construction, and project site access would be restricted to construction and District personnel only. Installation of the new portable adult education classrooms at Encina High School, and minor trenching associated with underground utility tie-ins, would occur during the summer months when classes are not in session either at Encina or at the adjacent Greer Elementary School. There are no other K–12 schools within 0.25 mile of either school campus. Thus, there would be **no impact**.

4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

AECOM performed a search of several publicly available databases maintained under Public Resources Code Section 65962.5 (i.e., the “Cortese List”) to determine whether any known hazardous materials are present either in or within 0.25 mile of the proposed Katherine Johnson Middle School project site or the Encina High School portable classroom site. These searches included the EnviroStor database maintained by DTSC (2022, and the GeoTracker database maintained by SWRCB (2022). In addition, AECOM performed a search of the EPA’s National Priorities List (Superfund) database (EPA 2021).

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are not on the Cortese List, and there are no open-active or closed Cortese List hazardous materials contamination sites within 0.25 mile of either school campus (SWRCB 2022, DTSC 2022). There is one Cleanup Program site approximately 1,200 feet northwest of the Creekside School project site. However, all releases of hazardous materials were confined to that site, remediation has occurred, and the site is eligible for case closure (SWRCB 2022).

The nearest Superfund site is the former McClellan Air Force Base (now Sacramento McClellan Airport), approximately 2.5 miles and 3.6 miles to the north, respectively, from the school campuses (EPA 2021).

Because the proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are not on the Cortese List, and there are no other hazardous materials sites within 0.25 mile that would represent a hazard to the public or the environment from project demolition, construction, or operation, there would be **no impact**.

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

The nearest airport is the Sacramento McClellan Airport (the site of the former McClellan Air Force Base) approximately 2.5 and 4.0 miles north of the proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site, respectively. Redevelopment of the existing Creekside School campus with a new, modern school (the Katherine Johnson Middle School), and the addition of portable classrooms at Encina (which would not be taller than two stories in height and would not have blinking or flashing lights that could be mistaken for airport lighting), would have no effect on airport safety hazards and would not represent an aircraft safety hazard for people working at the school campuses or for future school children and District employees. Thus, there would be **no impact**. (Please see Section 3.8, “Noise and Vibration,” for a discussion of airport noise hazards.)

6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction materials, equipment, and personnel would be staged on site during construction of the new Katherine Johnson Middle School at the Creekside School campus, and during installation of the portable classrooms and underground utility trenching at Encina High School. The proposed Katherine Johnson Middle School project site is accessible by emergency vehicles from Kent Drive and Miramar Road. The Encina High School portable classroom site is accessible by emergency vehicles from Bell Street. The relatively limited amount of proposed redevelopment and the limited amount of associated construction would result in only minor increases in short-term, temporary, construction-related traffic on local roadways, which would not impede emergency access or interfere with emergency evacuations. Operational emergency access, parent drop off, bus loading areas, and on-site parking for the new school at the proposed Katherine Johnson Middle School site would all be designed in accordance with CDE requirements (CCR Title 5, Division, Chapter 14, Section 14030), which are intended to provide for the safety of all persons during the project’s operational phase. Therefore, project-related construction and operation would not substantially impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Thus, there would be **no impact**.

7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The proposed Katherine Johnson Middle School and Encina High School campuses are located in the urbanized Arden-Arcade area, and are not within or near a State Responsibility Area or a very high fire hazard severity zone (California Department of Forestry and Fire Protection 2021). The proposed Katherine Johnson Middle School project site consists of the existing Creekside School buildings and parking lots, with turf grass playfields and a

few urban shade trees around the buildings. The surrounding area consists of trees along Chicken Ranch Slough to the north, and residences with associated landscaping to the west, south, and east. The portable classroom site at Encina High School is within an existing paved asphalt parking lot, and is surrounded by school uses and Bell Street. The proposed Katherine Johnson Middle School site and Encina High School are currently served by the Sacramento Metropolitan Fire District, and those services would continue in the future after the proposed Katherine Johnson Middle School site is redeveloped and the additional portable classrooms are installed at Encina High School. Thus, there would be **no impact**. (See Section 4.9, “Wildfire,” for additional analyses related to wildland fire hazards, which were determined to result in no impact.)

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LAND USE AND PLANNING

Based on Appendix G of the CEQA Guidelines, an impact related to land use and planning is considered significant if the proposed project would do any of the following.

1. Physically divide an established community?

The existing Creekside Elementary School (the proposed Katherine Johnson Middle School site) was originally constructed in 1953, and the Encina High School was originally constructed in 1959, in the urbanized Arden-Arcade area. The proposed Katherine Johnson Middle School project site is surrounded on all sides by single-family and multi-family residential development, with the exception of the Town & Country Pre-School and Daycare facility (at 2550 Belpoint Lane), which is immediately adjacent to and south of the project site's southwestern boundary. Construction of the proposed Katherine Johnson Middle School would provide a new, more modern school which would be better suited to meet the needs of today's students and teachers on the existing Creekside School campus, and it would not physically divide an established community. Installation of the proposed portable classrooms at Encina High School would occur within the school's existing paved parking lot. The approximately 0.3-acre Encina portable classroom site is surrounded by high school buildings and the school's tennis courts and outdoor sports track to the north and west, Greer Elementary School to the south, and Bell Street to the west. Therefore, the portable classrooms at Encina High School would not physically divide an established community. Thus, there would be **no impact**.

2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Both the proposed Katherine Johnson Middle School project site, and the Encina High School site where the new portable classrooms for adult education would be installed, are zoned RD-5 Residential (Sacramento County 2022). The Sacramento County General Plan land use designation for both school campuses is Low Density Residential (Sacramento County 2022), and the Arden-Arcade Community Plan land use designation is RD-5/Public-Quasi Public (Sacramento County 1980). Public schools are a permitted, primary use under the current Sacramento County Zoning Code in areas zoned RD-5 (Sacramento County 2021: Table 3.1).

Both campuses would continue to be used as a school, consistent with existing land use and zoning designations. Although the District is generally not required to comply with policies in the County General Plan, the District does consider such policies during the planning process and has determined that the proposed project would not conflict with policies or objectives adopted in the Sacramento County General Plan (Sacramento County 2017) or the Arden-Arcade Community Plan. The proposed Katherine Johnson Middle School project site and Encina High School are approximately 2.5 and 4.0 miles south of McClellan Airport, respectively. Continued use of the existing campuses as schools would not conflict with policies in the McClellan Airport Land Use Compatibility Plan (ALUCP) (Sacramento Area Council of Governments 1992) because schools are consistent with allowable land uses in the ALUCP, the buildings would not be more than two stories tall, and the project would not include blinking or flashing lights that could be mistaken for airport lighting. Thus, there would be **no impact**.

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4.5 MINERAL RESOURCES

Based on Appendix G of the CEQA Guidelines, an impact related to mineral resources is considered significant if the proposed project would do any of the following.

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Under the Surface Mining and Reclamation Act (SMARA), the State Mining and Geology Board may designate certain mineral deposits as being regionally significant to satisfy future needs. The board's decision to designate an area is based on a classification report prepared by the California Geological Survey (CGS) and on input from agencies and the public. The proposed Katherine Johnson Middle School and Encina High School campuses are situated within the designated Sacramento-Fairfield Production-Consumption Region for Portland cement concrete aggregate. CGS has classified both school campuses as Mineral Resource Zone (MRZ)-1: areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence (O'Neal and Gius 2018). The proposed Katherine Johnson Middle School project site has been developed as a school since 1953, and the Encina High School campus was developed as a school in 1959; neither school campus is located in a designated state or regionally important area of known mineral resources (i.e., MRZ-2). Thus, there would be **no impact**.

2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The proposed Katherine Johnson Middle School and Encina High School campuses are not located within a designated locally important area of known mineral resources under the Sacramento County General Plan (Sacramento County 2017). Thus, there would be **no impact**.

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4.6 POPULATION AND HOUSING

Based on Appendix G of the CEQA Guidelines, an impact related to population and housing is considered significant if the proposed project would do any of the following.

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

As described in Chapter 2, “Project Description,” the proposed Katherine Johnson Middle School site and the Encina High School are developed with existing school buildings. As part of the proposed project, all existing buildings and facilities at the proposed Katherine Johnson Middle School site would be demolished and removed. Creekside Elementary School, now Creekside Adult Center, has occupied the site since 1953, and the proposed new Katherine Johnson Middle School would provide modernization of learning facilities. Several buildings would be constructed, including administration, library, and student services; general classrooms; science, art, maker, and special education classrooms; a multi-purpose building including food service, music, gymnasium, and locker rooms; and several outdoor areas. Current staff and faculty total 24, with approximately 48 staff projected for the new middle school. The proposed Katherine Johnson Middle School would accommodate up to 650 students. At Encina High School, nine portable classrooms and a small portable restroom building, to accommodate the adult education students currently at the Creekside site, would be installed within the Encina High School’s existing parking lot. The proposed project does not include a residential component. No new homes or businesses would be built as a result of the project. The project is planned to accommodate existing and forecast demand for educational services within the San Juan Unified School District – this project is a part of the District’s overall facilities master planning, which is geared to serve existing and forecast future needs.

Modifications to the existing on-site utilities systems would be sized to only serve the proposed project. Existing larger capacity off-site utility lines would continue to be used, as they are now. Based on location of the project site in an area with existing school facilities, the proposed project would not indirectly induce an unplanned increase in the city’s population or other project features that would lead to any potentially significant adverse environmental effect related to planned population growth beyond what is addressed in detail in the environmental topic-specific sections of this EIR.

For the reasons described above, project implementation would result in **no impact** related to direct or indirect inducement of substantial unplanned population growth.

2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The existing Creekside Adult Center, located at 2641 Kent Drive, would move to the Encina High School campus and the site would be redeveloped as Katherine Johnson Middle School. The Creekside Adult Center would move into nine proposed portable classrooms to be constructed in an existing parking lot within the existing Encina High School campus. As discussed in Chapter 2, “Project Description,” the proposed project would be constructed entirely on the existing school campuses. Therefore, it would not displace any homes. Because no homes would be displaced, a substantial number of people would also not be displaced. Therefore, project implementation would not displace existing people or housing that would require the construction of replacement housing elsewhere, and there would be **no impact**.

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4.7 PUBLIC SERVICES

Based on Appendix G of the CEQA Guidelines, an impact related to public services is considered significant if the proposed project would do any of the following.

1. **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?

The existing Creekside school campus (i.e., the proposed Katherine Johnson Middle School) and the Encina High School are currently served by the Sacramento Metropolitan Fire District. Both school campuses would continue to be served by this provider, and would not increase the need for additional fire-fighting personnel, facilities, or equipment. The project would be required to incorporate California Fire Code requirements into project designs. These standards address access emergency vehicle access, road length, dimensions, and finished surfaces for firefighting equipment; fire hydrant placement; fire flow availability and requirements; and plan submittal requirements. The California Fire Code requires that every public or private school building having an occupant load of 50 or more students or more than one classroom have an automatic fire alarm system using the California Fire Code Signal outlined in the California Education Code (Sections 32000–32004). Furthermore, the California Education Code requires new schools to install an automatic fire sprinkler system (Section 17074.52). Incorporation of all California Fire Code and California Education Code requirements into project designs would reduce the dependence on fire department equipment and personnel by reducing fire hazards. Thus, there would be **no impact**.

Police protection?

The existing Creekside school campus (i.e., the proposed Katherine Johnson Middle School) and the Encina High School are currently served by the North Division of the Sacramento County Sheriff's Department. The redeveloped school would continue to be served by this provider. The proposed project would not increase the population as a result of new housing; therefore, the proposed project would not require additional Sacramento County Sheriff's Department staffing to maintain its officer-to-population service ratio. Given the type and scale, it is not expected that the proposed project would substantially increase the Sheriff's Department calls for service. Operation of the proposed project would not affect the Sacramento County Sheriff's Department performance objectives and would not result in the construction of new or expansion of existing police protection facilities that could result in a significant adverse physical environmental impact. There would be **no impact**.

Schools?

The proposed project is a school project. The existing Creekside school facilities would be demolished, and the new, more modern Katherine Johnson Middle School would be constructed on the current school campus. In addition, portable classrooms for the adult learners currently at the Creekside campus would be installed at Encina High School. The proposed project would enable the District to better meet the needs of today's students and teachers. The proposed Katherine Johnson Middle School's capacity would accommodate up to 650 students. The proposed portable classrooms at Encina High School would not increase the District's adult learning capacity.

Environmental impacts associated with the proposed school facilities on the existing campuses are evaluated in the individual topic areas throughout this EIR. Where necessary, mitigation measures are included as part of each topic area analysis to reduce all project impacts to a **less-than-significant** level.

Parks?

Please see Section 3.1, “Aesthetics and Recreation,” of this EIR for the analysis of impacts related to parks and recreation.

Other public facilities?

The proposed project entails redevelopment of the existing Creekside school campus with the Katherine Johnson Middle School and adding new portable classrooms for adult learning at Encina High School. The new, more modern Katherine Johnson Middle School and the portable classrooms for adult education at Encina High School would not require other public services or facilities, the construction of which could have a significant environmental effect. There would be **no impact**.

4.8 UTILITIES AND SERVICE SYSTEMS

Based on Appendix G of the CEQA Guidelines, an impact related to utilities and service systems is considered significant if the proposed project would do any of the following.

- 1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

The proposed Katherine Johnson Middle School project site is served with potable water by the Sacramento Suburban Water District (SSWD). SSWD provides a combination of groundwater pumped from a network of approximately 70 wells, and purchased surface water, as its supply sources. Groundwater is obtained from the southern portion of the North American Groundwater Subbasin (identified as the North Basin in the Water Forum Agreement), which is managed by the Sacramento Groundwater Authority. SSWD also purchases surface water from the Placer County Water Agency, U.S. Bureau of Reclamation, San Juan Water District, and the City of Sacramento. The water demands for all types of land uses, as projected in SSWD's *Urban Water Management Plan* (UWMP) (Brown and Caldwell 2021), are anticipated to remain relatively constant from 2025 through 2045, primarily because the SSWD service area is already urbanized. The Encina High School campus, where the proposed portable adult education classrooms would be installed, is served with potable water from the California American Water Company.

The Sacramento Area Sewer District (SASD) provides wastewater collection and conveyance to the urbanized, unincorporated areas of Sacramento County, the cities of Citrus Heights, Elk Grove, and Rancho Cordova, portions of the cities of Sacramento and Folsom, and the delta communities of Freeport, Courtland, and Walnut Grove. The existing service area covers 278 square miles and serves 1.2 million people (SASD 2020). SASD owns and operates sewer trunk gravity pipelines (10 inches or greater) on El Camino Avenue and Watt Avenue, in the vicinity of the proposed Katherine Johnson Middle School site. SASD has prepared a *System Capacity Plan* (SASD 2020) to evaluate existing sewer system service areas that require upgrades or improvements, propose projects to achieve the identified upgrade and improvement goals, and size facilities in new areas where wastewater conveyance will be needed in the future. The *System Capacity Plan* includes projects and estimated capital costs to upgrade capacity in existing sewer pipelines, where necessary.

Wastewater from SASD is discharged into the Sacramento Regional County Sanitation District (Regional San) interceptor system and subsequently treated at the Sacramento Regional Wastewater Treatment Plant (WWTP) located east of the Sacramento River near Elk Grove. The WWTP is permitted to discharge an average dry-weather flow of 181 million gallons per day (mgd) of treated wastewater to the Sacramento River (Central Valley Regional Water Quality Control Board 2021).

The Sacramento County Department of Water Resources manages stormwater drainage in the project area. The County's drainage and flood control system consists of 1,443 miles of storm drain pipe, 400 miles of creeks and open channels, 33 pump stations, and 18 detention basins.

Katherine Johnson Middle School (which is currently co-located with Encina High School) serves students in grades 6–8, and has a maximum capacity of 550 students. The proposed project would increase the school's capacity to 650 students (at the existing Creekside Elementary School site). The minor projected increase in the

student population (100 students) at the redeveloped school on the existing Creekside Elementary School campus would not be large enough to require any off-site capacity expansions for water, wastewater conveyance or treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. Because approximately 550 middle school students would be transferring from Encina High School to the proposed Katherine Johnson Middle School (at Creekside), with only approximately 300 adult education students transferring from Creekside to Encina, the demands at Encina High School would decrease overall. Furthermore, since more recent building code requirements increase both indoor and outdoor water conservation, the project could actually reduce water and wastewater treatment demand compared to existing conditions. The proposed project includes relocation of on-site connections to utility infrastructure for the new buildings at both the proposed Katherine Johnson Middle School and Encina High School campuses. The environmental effects of on-site utility modifications are evaluated in the individual topic areas throughout this EIR, and mitigation measures are recommended (where necessary) to reduce all environmental impacts to a less-than-significant level. Therefore, this impact is considered **less than significant**.

2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

SSWD currently provides water to the existing Creekside Elementary School, and would continue to supply water to the proposed Katherine Johnson Middle School in the future. The SSWD UWMP determined that in normal water years, the combination of purchased surface water and pumped groundwater will be sufficient to meet demand in SSWD's service area. SSWD also determined that in single and multiple dry years during the 2025–2045 planning horizon, groundwater will be able to meet demands when surface water supplies are reduced or not available (Brown and Caldwell 2021). Thus, sufficient water supplies will be available to meet existing and projected future demand throughout the 20-year planning horizon in SSWD's service area. Therefore, the minor projected increase in the student population would not adversely affect SSWD's ability to provide the necessary water supply to the redeveloped school in the future. Since more recent building code requirements increase both indoor and outdoor water conservation, the project could actually reduce water demand compared to existing conditions. This impact is considered **less than significant**.

The existing Encina High School campus, where the proposed portable adult education classrooms would be installed, is served with potable water by the California American Water Company. Because approximately 550 middle school students would be transferring from Encina High School to the proposed Katherine Johnson Middle School (at Creekside), with only approximately 300 adult education students transferring from Creekside to Encina, the demand for potable water at Encina High School would decrease. Thus, the installation of portable classrooms for adult education at Encina High School would have **no impact** related to water supply.

3. 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?

SASD currently conveys wastewater generated by the existing Creekside Elementary School (the proposed Katherine Johnson Middle School project site) and the existing Encina High School, in existing sewer lines adjacent to the project site, and would continue to do so in the future. The reconfigured and remodeled school on the existing campus would include minor on-site renovations or replacements, as necessary, of on-site conveyance pipelines that tie-in to SASD collectors off the project site. SASD's *System Capacity Plan* determined that the existing sewer trunk pipelines in El Camino Avenue and Watt Avenue in the proposed Katherine Johnson Middle

School project vicinity currently have capacity for existing development, but would have insufficient capacity under the future projected development conditions of full buildout of the SASD service area (which encompasses 278 square miles and serves approximately 1.2 million people). With projected future capital improvement projects throughout its service area, to which new development is required to contribute funding through the County permitting process, SASD would have capacity in its sewer conveyance lines through full buildout of the regional SASD service area (SASD 2020). Furthermore, Regional San expects per-capita consumption to fall 25 percent in the future through the ongoing installation and use of water meters and compliance with conservation mandates such as the state Water Conservation Act of 2009 (SB X7-7). Therefore, Regional San expects that water conservation measures throughout its service area would allow the existing 181 mgd average dry-weather flow capacity at the Sacramento Regional WWTP to be adequate for at least 40 years (Ascent Environmental 2014:6-2). Therefore, the minor projected increase in the student population would not adversely affect SASD's conveyance capacity or the ability of Regional San to provide the necessary wastewater conveyance and treatment at the Sacramento Regional WWTP for the proposed Katherine Johnson Middle School in the future. This impact is considered **less than significant**.

The Encina High School campus, where the proposed portable adult education classrooms would be installed, is also served by SASD and Regional San. Because approximately 550 middle school students would be transferring from Encina High School to the proposed Katherine Johnson Middle School (at Creekside), with only approximately 300 adult education students transferring from Creekside to Encina, the demand for wastewater conveyance and treatment from Encina High School would decrease. Thus, the installation of portable classrooms for adult education at Encina High School would have **no impact** related to wastewater.

4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Sacramento County Department of Waste Management & Recycling (DWMR) manages the operations, maintenance, and development of the solid waste management system within unincorporated Sacramento County, including the project area. DWMR operates and manages the North Area Recovery Station and the Kiefer Landfill. The North Area Recovery Station in North Highlands (approximately 2.3 miles north of the proposed Katherine Johnson Middle School project site and approximately 4.0 miles northeast of the Encina High School portable classroom site) accepts business and household waste (Sacramento County Waste Management and Recycling 2022). Waste from the North Area Recovery Station is ultimately transported to Kiefer Landfill, southeast of Sacramento near Sloughhouse. Standard refuse collection service in the project area is provided by Sacramento County Waste Management. Collection of recycling and organics recycling materials (which is mandatory for schools as required by SB 1383) is available from a variety of locally licensed franchise service providers.

The Florin Perkins Public Disposal Center (approximately 5 miles south of the proposed Katherine Johnson Middle School project site and approximately 3.5 miles southeast of the Encina High School portable classroom site) is a certified facility that handles recycling of construction and demolition debris (Florin Perkins Sacramento 2022). Any materials that Florin Perkins is not able to recycle are transported to the North Area Recovery Station. The L&D Landfill (approximately 6 miles south of the proposed Katherine Johnson Middle School project site and approximately 4.5 miles southeast of the Encina High School portable classroom site), accepts business, commercial, and household wastes and is also a certified facility that handles recycling of construction and demolition debris (L&D Landfill 2022).

The North Area Recovery Station is permitted to receive up to 2,400 tons per day (California Department of Resources Recycling and Recovery [CalRecycle] 2019a). Kiefer Landfill is permitted to accept a maximum of 10,815 tons per day, has a remaining capacity of 112,900,000 cubic yards, and an estimated closure date of 2064 (CalRecycle 2019b). The Florin Perkins Public Disposal Center is permitted to receive up to 1,000 tons per day (CalRecycle 2019c). The L&D Landfill is permitted to receive 4,125 tons per day, and the remaining maximum landfill capacity is 3,115,900 cubic yards, with an estimated landfill closure date of December 2030 (CalRecycle 2019d).

The proposed project includes demolition of the existing Creekside School buildings for development of the proposed Katherine Johnson Middle School (approximately 25,928 square feet of floor space), and all of the existing pavement. Approximately 0.3 acre of asphalt pavement would be demolished at the Encina High School campus for the new portable classrooms. Both the Florin Perkins Public Disposal Center and the L&D Landfill are permitted to receive and handle recycling of construction and demolition debris. During the project's operational phase, the North Area Recovery Station in North Highlands (which transfers waste to the Kiefer Landfill) is the closest facility that accepts standard business and household wastes. The L&D Landfill also accepts standard business and household wastes. Because all of these solid waste facilities have capacity to receive project waste (CalRecycle 2019a, 2019b, 2019c, 2019d) during the demolition, construction, and operational phases, and because the District would continue to implement a recycling program, the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Thus, this impact is considered **less than significant**.

5. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

The District already has and would continue to implement recycling programs during the project's operational phase. During the demolition phase, construction and demolition debris would be recycled at local facilities, which may include the Florin Perkins Public Disposal Center or the L&D Landfill, or other permitted facilities at the discretion of the contractor(s). The California Green Building Code requires that at least 65 percent of construction and demolition waste be diverted from landfills. The project will divert at least 75 percent of construction and demolition waste using a waste management plan. The proposed project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste, and thus there would be **no impact**.

4.9 WILDLAND FIRE HAZARDS

Based on Appendix G of the CEQA Guidelines, an impact related to wildfire is considered significant if the proposed project would be located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and if the project would also:

- ▶ substantially impair an adopted emergency response plan or emergency evacuation plan;
- ▶ due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- ▶ require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- ▶ expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The proposed Katherine Johnson Middle School project site and the Encina High School portable classroom site are located in the urbanized Arden-Arcade Community and are not in or near state responsibility areas or lands classified as very high fire hazard severity zones (CAL FIRE 2021). Both school campuses are currently developed with, and are surrounded by, developed properties. The school campuses and the surrounding areas are in a local responsibility area, and CAL FIRE has not designated any very high fire hazard severity zones at either school campus or in the project areas (CAL FIRE 2021).

Both school campuses consist of flat topography and are currently fully developed with school buildings and associated paved parking lots. Fire protection services to both school campuses are currently provided by, and would continue to be provided after the proposed improvements are completed, by Sacramento Metropolitan Fire District. The nearest Sacramento Metropolitan Fire District station is Station No. 103, which is located at 3824 Watt Avenue, approximately 2.5 miles northeast of the proposed Katherine Johnson Middle School.

In summary, the school campuses are not located in or near areas designated as State Responsibility Areas or very high fire hazard severity zones. Furthermore, demolition of the existing school buildings and associated parking lots, and redevelopment of the proposed Katherine Johnson Middle School site and the addition of portable classrooms to the Encina High School site would not exacerbate existing conditions related to urban or wildland fires. Thus, project implementation would result in **no impact** related to wildland fire hazards.

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5 ALTERNATIVES

5.1 INTRODUCTION

CEQA requires the consideration and analysis of alternatives to a proposed project. According to the CEQA Guidelines, the range of alternatives “shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts” (CEQA Guidelines Section 15126.6[c]; see also CEQA Guidelines Section 15126.6[a]).

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe:

“...a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.”

In defining “feasibility,” CEQA Guidelines Section 15126.6(f)(1) states, in part:

“Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.”

Each alternative was evaluated according to the “rule of reason” and general feasibility criteria suggested by the CEQA Guidelines Section 15126.6 as follows:

“The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.”

The inclusion of an alternative in an EIR does not necessarily mean the alternative is actually feasible. Rather, the inclusion of an alternative in an EIR indicates that lead agency staff has determined that the alternative is potentially feasible. The District Board of Trustees will make the ultimate determination of feasibility of the alternatives in findings of fact when they consider whether to certify the Final EIR and approve the proposed project.

The CEQA Guidelines further require that the alternatives be compared to a proposed project's environmental impacts, and that a "no project" alternative be considered (CEQA Guidelines Section 15126.6[e]). The CEQA Guidelines provide guidance on defining and analyzing alternatives. Section 15126.6[b] states:

"... the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

5.2 SELECTION OF ALTERNATIVES

5.2.1 CRITERIA

Alternatives were selected for evaluation in this EIR based on criteria in the CEQA Guidelines Section 15126.6. These criteria include:

- 1) ability of the alternative to attain most of the basic project objectives;
- 2) potential feasibility of the alternative; and
- 3) ability of the alternative to avoid or substantially reduce one or more significant environmental effects of the proposed project.

SJUSD has evaluated potential alternatives relative to the objectives of the proposed project. For the purpose of alternatives analysis under CEQA, project objectives may not be defined so narrowly that the range of alternatives is unduly constrained. Alternatives that would impede to some degree the attainment of the project objectives or would be more costly may also be considered.

5.2.2 PROJECT PURPOSE AND OBJECTIVES

SJUSD has identified the following Project Objectives to guide planning for the project site, as well as the analysis included within the EIR:

- ▶ Implement SJUSD educational facility requirements in a manner that provides a learning environment that meets the needs of today's student body.
- ▶ Provide for the educational needs of up to approximately 650 middle school (grades 6–8) students and up to 300 adult education students within the Arden-Arcade area.
- ▶ Meet SJUSD geographical needs for school facilities within its service boundary and the surrounding community, based on the District's demographic studies.
- ▶ Provide school capacity in a central location relative to the anticipated student body to facilitate and promote walking and bicycling to school.
- ▶ Provide safe and efficient school site access for students and SJUSD staff.

5.3 ALTERNATIVES CONSIDERED BUT REJECTED FROM DETAILED ANALYSIS

5.3.1 OFF-SITE ALTERNATIVE

The Arden-Arcade community was developed in the 1950s through the 1980s, and is fully built-out. An off-site alternative was considered to be infeasible due to the lack of available sites in the Arden-Arcade area that could both accommodate the proposed facilities and meet the project objectives. The location and capacity for the Katherine Johnson Middle School is related to the District's medium- and long-term demographics forecasting and facilities master planning. In particular, the District is focused on creating a better match in the western portion of the District service area between middle school capacities and student generation. Furthermore, developing the proposed project in a different location may not avoid or substantially lessen the significant environmental impacts of the project (CEQA Guidelines Section 15126.6(f)(2)(A)).

5.4 DESCRIPTION OF ALTERNATIVES CONSIDERED IN DETAIL IN THIS EIR

5.4.1 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) states that a discussion of the "No Project" alternative must consider "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans."

The proposed Katherine Johnson Middle School (Creekside) project site is zoned and designated for school uses, and the Creekside Adult School is currently operated at the site. Under the No Project Alternative, the existing land uses, buildings, parking lots, and landscaping would remain unchanged, and the proposed site redevelopment would not occur. Therefore, the education of the Katherine Johnson Middle School's current population of approximately 550 middle school students would continue to occur at Encina High School. Because the Creekside Adult School students would not need to be relocated, the proposed portable classrooms at Encina for adult education would not be installed. However, to account for projected future local increased population and demand for educational services, this alternative assumes that four new portable classrooms would be installed at Encina High School to serve the projected increase in middle school students (which would otherwise be accommodated by redevelopment at the Creekside site as part of the proposed project). The four portable classrooms for middle school student education would be located in the same place on the Encina High School campus as identified in Exhibit 2-3; namely, at the southern end of the existing high school's paved parking area.

Because redevelopment at the Creekside School site for the proposed Katherine Johnson Middle School would not occur, the SJUSD's existing school perimeter fence would remain in place and would not be set back to provide additional width for improved Fulton-El Camino Recreation and Park District (Park District) access and maintenance of the Creekside Nature Trail. Furthermore, the proposed sidewalk along Belpoint Lane to provide improved connectivity for trail users would not be installed, and the trail would remain essentially "land-locked" as it is now. Finally, the proposed new public tot lot adjacent to the existing community garden and south of the Creekside Nature Trail would not be installed. The project site would continue to be operated by SJUSD as the Creekside Adult School.

ABILITY OF ALTERNATIVE TO MEET PROJECT OBJECTIVES

The No Project Alternative would not meet any of the project's objectives. The No Project Alternative would not allow for the SJUSD to implement educational facility requirements in a manner that provides a learning environment that meets the needs of today's student body, meet SJUSD's geographical needs for additional schools within its service boundary, slow enrollment growth at nearby overcrowded middle schools, or provide school capacity in a central location relative to the anticipated student body to facilitate and promote walking and bicycling to school.

5.4.2 ALTERNATIVE 2: REDUCED SIZE KATHERINE JOHNSON MIDDLE SCHOOL

This alternative was developed to reduce the scale of the project's environmental impacts related to generation of criteria air pollutant emissions, greenhouse gases, noise, and traffic.

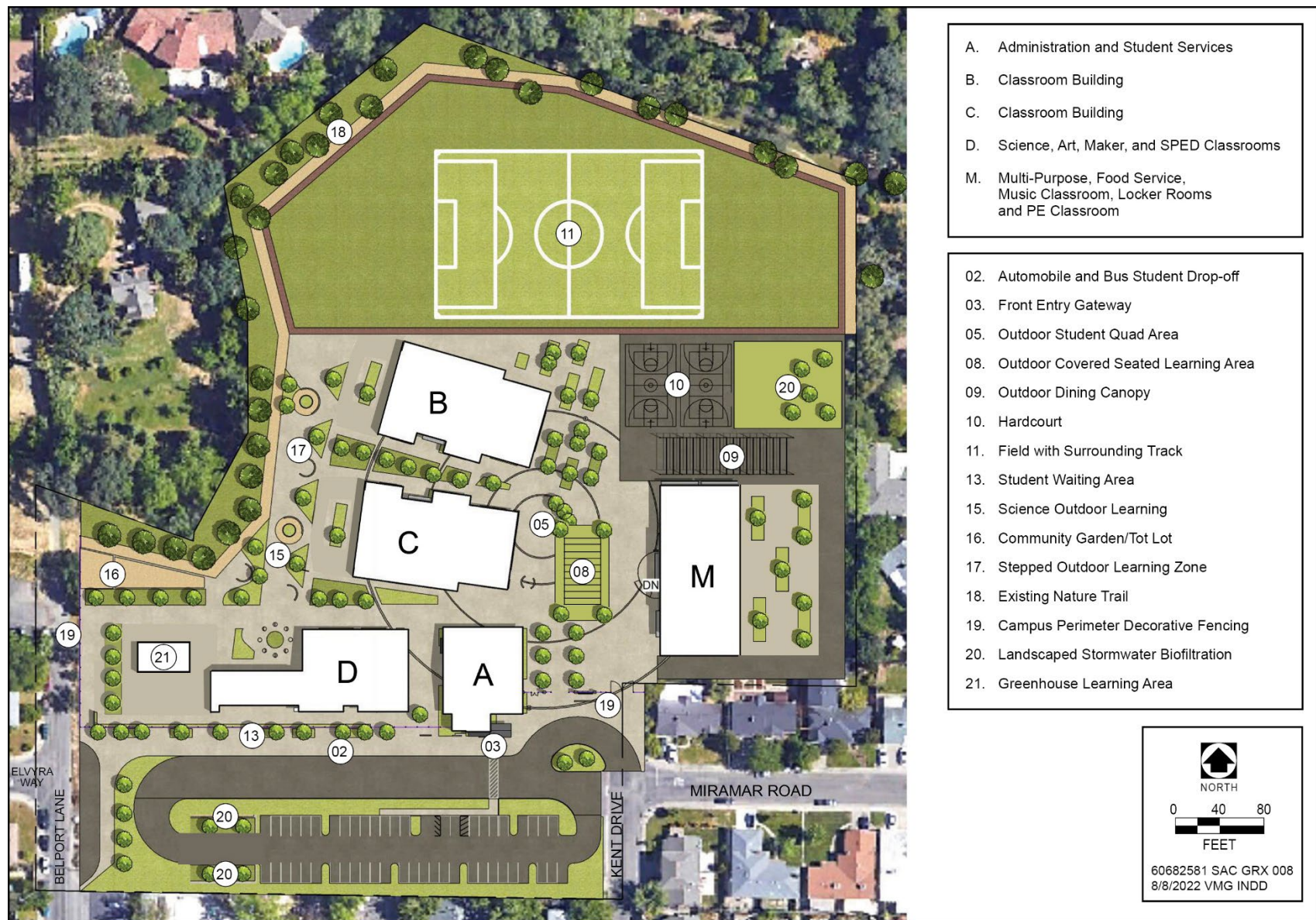
Under this alternative, the proposed redevelopment of the Creekside School site for the Katherine Johnson Middle School would be reduced in size, as shown in Exhibit 5-1. The size of the proposed new buildings would be reduced by 25 percent. The outdoor amphitheater in the center of the quad would be replaced by a covered seating area for outdoor learning. A new greenhouse building would be installed to foster student learning opportunities. Approximately 50 percent of the area planned for basketball courts would be devoted to landscaped bioswales for stormwater pre-treatment as a Low Impact Development (LID) technique, which would also function as a learning opportunity for students. The proposed parking area would be reduced, with a portion of this area used instead for landscaped bioswales for stormwater pretreatment. Because the school buildings would be reduced by approximately 25 percent, the school capacity would also be reduced, with a projected capacity of approximately 400 students and 32 faculty and staff members. Since the capacity would be reduced under this alternative, other District middle schools would require an increase in their capacity and/or enrollment.

All other project components would be the same as the proposed project, including demolition of all of the existing buildings, reconfiguration of parking lots and underground utilities, and removal of some of the existing on-site landscape trees. As with the proposed project, the new perimeter fence would be set back further from the Creekside Nature Trail allowing for improved Park District access and maintenance, and a new sidewalk would be constructed along the east side of Belport Lane on SJUSD school campus property to provide connectivity with the Creekside Nature Trail.

In addition, as with the proposed project, nine portable classrooms and a small portable restroom building would be installed in the paved parking area at Encina High School, to accommodate the students currently attending the Creekside Adult School.

ABILITY OF ALTERNATIVE TO MEET PROJECT OBJECTIVES

The Reduced Size Katherine Johnson Middle School Alternative would not fully meet the project's objectives. This alternative would not allow SJUSD to meet the educational needs of up to approximately 650 students. This alternative would not meet SJUSD's geographical needs for additional schools within its service boundary to the same degree as the proposed project. This alternative would not slow enrollment growth at nearby overcrowded middle schools since, with a reduced capacity at this site, other middle schools in the vicinity would need to increase their capacity and/or enrollment to accommodate the projected growth in middle school student population in the Arden-Arcade area of SJUSD's service boundary.



Source: Developed by AECOM in 2022

Exhibit 5-1. Conceptual Plan for Alternative 2: Reduced Size Katherine Johnson Middle School

5.5 ALTERNATIVES ANALYSIS

5.5.1 AESTHETICS AND RECREATION

ALTERNATIVE 1

Visual Character and Quality, and Compliance with Regulations Governing Visual Quality

Under Alternative 1, the existing Creekside Adult Center would continue to operate using a portion of the existing on-site buildings. Because the existing Creekside school campus would not be redeveloped as the Katherine Johnson Middle School under Alternative 1, the existing poor visual character and visual quality would continue. Portions of the existing campus buildings, as with the existing outdoor hardcourt play areas, would continue to fall into disrepair resulting from lack of use. Over time, the visual character and quality of the campus as compared to the surrounding development would continue to worsen. Therefore, from an aesthetics perspective, over time, the campus would not contribute in a positive way to the aesthetics of the surrounding area, and thus Alternative 1 would result in a greater level of impact related to visual character and quality, and compliance with regulations governing visual quality as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Alternative 1 would require installation of four portable classrooms at the same location (i.e., in an asphalt parking lot surrounded by existing school uses) on the Encina High School campus, as compared to nine portable classrooms under the proposed project. Therefore, Alternative 1 would have a reduced level of impact related to visual character and quality, and compliance with regulations governing visual quality, as compared to the proposed project at the Encina High School portable classroom site.

Glare and Nighttime Lighting

Because the existing Creekside school campus would not be redeveloped as the Katherine Johnson Middle School under Alternative 1, there would be no minor increase in operational sources of glare and nighttime lighting as compared to the proposed project. Furthermore, Alternative 1 would require installation of fewer portable classrooms at the same location (i.e., in an asphalt parking lot surrounded by existing school uses) on the Encina High School campus, as compared to the proposed project. Therefore, Alternative 1 would have a reduced level of impact related to glare and nighttime lighting as compared to the proposed project at both the proposed Katherine Johnson Middle School site and the Encina High School portable classroom site.

Recreation

Because the existing Creekside school campus would not be redeveloped as the Katherine Johnson Middle School under Alternative 1, the existing school perimeter fence would not be set back from the Creekside Nature Trail, and the existing lack of vehicular access for Park District maintenance and personnel, and for emergency vehicle access along the off-site trail, would continue. Furthermore, the public tot lot play area south of the trail on SJUSD property, and the sidewalk to provide trail connectivity on SJUSD property, would not be installed. Finally, because the site would continue to be used as the Creekside Adult Center, there would be no need for improvements to the existing hardcourt play areas (such as the basketball courts, which are already in a state of disrepair) or the outdoor playfields. The public recreational benefits that would be provided as part of the Katherine Johnson Middle School would not occur under Alternative 1. Because the improved connectivity to the Creekside Nature Trail would not be provided, trail use would likely not increase, resulting in no increased

potential for deterioration of existing off-site recreational facilities. Furthermore, the short-term temporary impacts to recreationists on the nature trail during construction of the proposed project (i.e., noise, dust, and the visual presence of construction workers) would not occur, and thus no potential short-term, temporary displacement of recreational users to other facilities would occur. Therefore, Alternative 1 would have a reduced level of impact at the proposed Katherine Johnson Middle School project site compared to the proposed project.

Although four new portable classrooms would be installed at the Encina High School (as compared to nine under the proposed project), similar to the proposed project, no additional recreational facilities would be required at the Encina High School as a result of installation of the proposed portable classrooms. The portable classrooms would be used by the Katherine Johnson Middle School students who are currently co-located with the high school students at Encina, and recreational facilities are available at the high school for the middle school students (although the existing situation of overcrowding at Encina High School would continue to occur). Therefore, Alternative 1 would have a similar level of impact at the Encina High School portable classroom site as compared to the proposed project.

ALTERNATIVE 2

Visual Character and Quality, and Compliance with Regulations Governing Visual Quality

Similar to the proposed project, all of the existing buildings on the proposed Katherine Johnson Middle School campus would be demolished. Although the new middle school buildings would be smaller as compared to the proposed project, they would be constructed in a similar modern architectural style and would be connected to new outdoor learning spaces and outdoor eating areas. In addition to the new landscaping, the new LID bioswale areas with plantings would also provide an additional aesthetic benefit. Because the campus would be redeveloped with new buildings, new landscaping, new perimeter fencing, and the outdoor play areas would be refurbished and improved, Alternative 2 would provide a similar benefit as compared to the proposed project by improving the overall visual character and visual quality. In addition, similar to the proposed project, although the District is not subject to the County General Plan policies or the County Design Guidelines, the redeveloped and modernized Katherine Johnson Middle School campus would generally be consistent with County General Plan policies and the County Design Guidelines related to visual quality. The design of all K–12 public schools is subject to the requirements of the Division of the State Architect. Alternative 2 would require installation of the same number of portable classrooms at the same location (i.e., in an asphalt parking lot surrounded by existing school uses) on the Encina High School campus as the proposed project. Therefore, Alternative 2 would have a similar level of impact related to visual character and quality and compliance with regulations governing visual quality, as compared to the proposed project at both the proposed Katherine Johnson Middle School site and the Encina High School portable classroom site.

Glare and Nighttime Lighting

Because the Katherine Johnson Middle School campus would still be redeveloped under Alternative 2, a minor increase in the amount of nighttime lighting for security purposes would still occur (although the increase would be somewhat lower as compared to the proposed project). As with the proposed project, because the proposed Katherine Johnson Middle School site is not located in a “dark sky” area and is already developed with an existing school campus where nighttime lighting is present, a substantial increase in nighttime lighting or glare would not occur under Alternative 2. Nevertheless, implementation of Mitigation Measure 3.1-2 would further reduce the potential for glare and nighttime light impacts under Alternative 2 at the proposed Katherine Johnson

Middle School site, similar to the proposed project. Therefore, Alternative 2 would have a reduced level of impact related to glare and nighttime lighting as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at the Encina High School, in an asphalt parking lot surrounding by existing school buildings, a similar level of impact would occur under Alternative 2 as compared to the proposed project at the Encina High School portable classroom site.

Recreation

Because there would be fewer students at the new Katherine Johnson Middle School campus, fewer outdoor basketball courts would be installed and instead, part of this area would become a landscape bioswale area for stormwater pre-treatment and student learning opportunities. However, as with the proposed project, on-site recreational facilities at the proposed Katherine Johnson Middle School under Alternative 2 would be sufficient to meet the needs of the Katherine Johnson Middle School students, as required by the CDE, and would include an indoor gymnasium, refurbishing the outdoor turf playfields and hardcourt play areas, and installing a new walking path. Similar to the proposed project, Alternative 2 would include a new on-site public tot lot next to the existing on-site community garden, and a new on-site sidewalk to provide connectivity to the Park District's off-site Creekside Nature Trail. Therefore, the same public recreational benefits would be provided under Alternative 2 as compared to the proposed project. As with the proposed project, recreationists on the off-site Creekside Nature Trail would experience short-term indirect impacts during construction of Alternative 2, including noise, dust, and the visual presence of construction workers, which could result in short-term displacement of off-site recreationists to other off-site recreational facilities. However, as with the proposed project, numerous other local and regional recreational facilities are available in the project area to accommodate any recreationists from the off-site nature trail such that short-term physical deterioration of off-site facilities would not occur. Similar to the proposed project, under Alternative 2 the new school's perimeter fence would be set back further from the Creekside Nature Trail to permit Park District vehicular access for maintenance and upkeep, and emergency service provider vehicular access along the trail. As with the proposed project, improving connectivity to the off-site Creekside Nature Trail could result in increased trail use; however, the Park District receives funds through developer fees, as well as public grants, which are used for public facility improvements and maintenance and upkeep of recreational facilities, and therefore substantial deterioration of off-site recreational facilities would not occur. Alternative 2, as with the proposed project, does not include any improvements to the off-site Creekside Nature Trail itself, which is under the jurisdiction of the Park District. The physical environmental impacts from construction of the proposed on-site recreational facilities are evaluated throughout all of the topic area sections in this EIR, and mitigation measures are identified for potentially significant and significant impacts, where necessary. Therefore, Alternative 2 would have a similar level of impact related to recreation as compared to the proposed project at the proposed Katherine Johnson Middle School site.

As with the proposed project, no additional recreational facilities would be required at the Encina High School as a result of installation of the proposed portable classrooms under Alternative 2. The portable classrooms would be used by adult learners, and recreational facilities are available at the high school, as well as throughout the surrounding area as described above in the Environmental Setting, for existing Sacramento County residents who attend adult education classes. Therefore, Alternative 2 would have a similar level of impact related to recreation as compared to the proposed project at the Encina High School portable classroom site.

5.5.2 AIR QUALITY

ALTERNATIVE 1

Under Alternative 1, the Creekside School campus would not be redeveloped as the proposed Katherine Johnson Middle School; thus, there would be no demolition or construction activities at the site, and there would be no potential impacts from construction-related emissions of criteria air pollutants and ozone precursors including nitrogen oxides (NO_x), reactive organic gases (ROG), particulate matter equal to or less than 10 micrometers in diameter (PM₁₀), and particulate matter equal to or less than 2.5 micrometers in diameter (PM_{2.5}). These are the pollutants for which the project region is designated as nonattainment under either the national ambient air quality standards (NAAQS) or the California ambient air quality standards (CAAQS). Ozone precursor emissions of ROG and NO_x are associated primarily with construction equipment exhaust and the application of architectural coatings. Dust (PM) generation is dependent on soil type and soil moisture, as well as the amount of total acreage of clearing, grubbing, and grading activities. PM emissions are also generated by equipment exhaust. Because there would be no construction and no increase in operation of the existing Creekside Adult School, there would be no potential for conflicts with regional air quality attainment plans under Alternative 1, and no potential for the project to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard at the proposed Katherine Johnson Middle School site. Because construction and operation of the proposed new middle school would not occur under Alternative 1, there would also be no potential for adverse health effects from exposure of sensitive receptors to substantial air pollutant concentrations related to toxic air contaminants (TACs) or carbon monoxide hotspots. Finally, under Alternative 1 there would no potential exposure of nearby sensitive receptors to odors emitted by construction equipment at the proposed Katherine Johnson Middle School site; the existing cafeteria at the Creekside Adult School would continue to provide school lunch services similar to existing conditions, and would not represent a source of objectionable odors that could be detected off the project site. Therefore, air quality impacts under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four portable classrooms would be installed at Encina High School under Alternative 1 (as opposed to nine portable classrooms plus a restroom building under the proposed project), construction-related emissions of criteria air pollutants and ozone precursors would occur, but at a reduced level as compared to the proposed project. Operational emissions would slightly increase, since approximately 100 additional middle school students would be accommodated at the Encina campus based on future District service area needs. The minor amount of construction and operational emissions from the four portable classrooms at Encina High School under Alternative 1 would not exceed the Sacramento Metropolitan Air Quality Management District (SMAQMD) thresholds of significance, would not conflict with regional air quality attainment plans, and would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. The small amount of construction and additional operation at the Encina High School campus from the four portable classrooms under Alternative 1 would not cause adverse health effects from exposure of sensitive receptors to substantial air pollutant concentrations related to TACs or carbon monoxide hotspots. Construction of Alternative 1 would not represent a source of objectionable odors because the construction effort is small and therefore a small amount of equipment would be used for a short period, odors would be temporary and disperse rapidly with distance from the source, and the District is required to comply with SMAQMD Rules 402 (Nuisance) and 442 (Architectural Coatings), which would ensure that odors generated by short-term construction would not affect a substantial number of people.

Therefore, air quality impacts under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Under Alternative 2, the existing Creekside School campus would still be demolished. Therefore, the same level of emissions of criteria air pollutants and ozone precursors would still occur during demolition as compared to the proposed project. However, because a smaller area of the campus would be redeveloped with approximately 25 percent less building space and approximately 250 fewer students and staff, Alternative 2 would result in an approximately 25 percent reduction in construction and operational emissions of criteria air pollutants and ozone precursors as compared to the proposed project. As with the proposed project, daily emissions generated by construction-related activities would not exceed the SMAQMD-recommended threshold of significance; nevertheless, implementation of Mitigation Measure 3.2-1 would ensure that SMAQMD's Basic Construction Emission Control Practices are implemented to further reduce the level of this impact. Because the construction- and operation-related emissions under Alternative 2 would be reduced, there would also be a reduction in the level of impact from the project's 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. Again, as with the proposed project, implementation of Mitigation Measure 3.2-1 would ensure that SMAQMD's Basic Construction Emission Control Practices are implemented to further the level of this impact. Under Alternative 2, there would also be a reduced potential for adverse health effects from exposure of sensitive receptors to substantial air pollutant concentrations related to TACs or carbon monoxide hotspots. Finally, under Alternative 2, there would be a reduced potential exposure of nearby sensitive receptors to odors emitted by construction equipment at the proposed Katherine Johnson Middle School site. The new cafeteria at the proposed Katherine Johnson Middle School site would provide school lunch services similar to the proposed project and existing conditions, and would not represent a source of objectionable odors that could be detected off the project site. Therefore, air quality impacts under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at Encina High School under Alternative 2, the same types and levels of construction and operational emissions of criteria air pollutants and ozone precursors would occur as compared to the proposed project. As with the proposed project, daily emissions generated by construction-related activities would not exceed the SMAQMD-recommended threshold of significance; nevertheless, implementation of Mitigation Measure 3.2-1 would ensure that SMAQMD's Basic Construction Emission Control Practices are implemented to further reduce the level of this impact and to reduce the project's 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. Alternative 2 would also result in the same potential for adverse health effects from exposure of sensitive receptors to substantial air pollutant concentrations related to TACs or carbon monoxide hotspots, and the same potential for odors emitted by construction equipment. Therefore, Alternative 2 would have a similar level of impact related to air quality as compared to the proposed project at the Encina High School portable classroom site.

5.5.3 BIOLOGICAL RESOURCES

ALTERNATIVE 1

Under Alternative 1, the Creekside School campus would not be redeveloped as the proposed Katherine Johnson Middle School; thus, there would be no demolition or construction activities at the site that could result in nesting tree removal or disturbance of nesting raptors or common raptors protected under California Fish and Game Code and the Migratory Bird Treaty Act (MBTA). There would also be no potential impacts from protected tree removal in conflict with the County's Tree Preservation Ordinance. Therefore, impacts related to biological resources under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

The Encina High School portable classroom site is covered with asphalt pavement, except for a small planter strip (approximately 150 feet long by 15 feet wide) adjacent to the southern perimeter fence, which is planted with grass and several young urban street trees. The site is surrounded by Encina High School buildings to the north; the high school's tennis courts and outdoor sports track and bleachers to the east; pavement and buildings associated with the Greer Elementary School to the south; and Bell Street and commercial, residential, and office uses to the west. No special-status plants or wildlife or their habitat, or nest trees or foraging habitat for protected raptors, are present at the Encina High School portable classroom site. There are no native oak trees, wetlands, or wildlife migratory corridors at the Encina High School portable classroom site. Because Alternative 1 would involve installation of four portable classrooms at Encina High School instead of nine as compared to the proposed project, there would be less ground disturbance. However, since there are no sensitive biological resources, there would be no impact from installation of portable classrooms. Therefore, Alternative 1 would have a similar level of impact related to biological resources as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Under Alternative 2, the existing Creekside School campus would still be demolished. Thus, there would be a similar potential for disturbance to nearby nesting raptors or nesting common raptors protected under California Fish and Game Code and the MBTA during demolition activities. However, because a smaller area of the proposed Katherine Johnson Middle School site would be developed under Alternative 2 as compared to the proposed project, the construction area would be reduced, resulting in a somewhat reduced potential for nesting tree removal or disturbance of nesting raptors or common raptors protected under California Fish and Game Code and the MBTA. As with the proposed project, implementation of mitigation outlined in Section 3.3 of this EIR, Biological Resources, would reduce the impacts of Alternative 2 on nesting raptors to a less-than-significant level. Alternative 2 would also result in a reduced potential for removal of protected trees (and therefore a reduced potential for conflicts with the County Tree Preservation Ordinance) as compared to the proposed project, since a smaller area of the site would be redeveloped for the proposed Katherine Johnson Middle School. As with the proposed project, implementation of mitigation outlined in Section 3.3 of this EIR, Biological Resources, would reduce the impacts of Alternative 2 on protected trees to a less-than-significant level. Therefore, impacts related to biological resources under Alternative 2 would be somewhat reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

The same number of portable classrooms would be installed in the same location at the Encina High School under Alternative 2, and since there are no sensitive biological resources at the Encina High School portable classroom

site, Alternative 2 would have a similar level of impact related to biological resources as compared to the proposed project at the Encina High School portable classroom site.

5.5.4 CULTURAL RESOURCES

ALTERNATIVE 1

Under Alternative 1, the Creekside School campus would not be redeveloped as the proposed Katherine Johnson Middle School; thus, there would be no demolition or construction activities at the site. Previous studies and the current investigation for this EIR did not result in the identification of archaeological resources (as defined by CEQA Section 15064.5) at the proposed Katherine Johnson Middle School site. The site is underlain by a Pleistocene-age landform; therefore, it is unlikely that undiscovered subsurface cultural resources are present. However, a possibility still exists that archaeological features could be present at the project site. There has been no indication or evidence that the Creekside School campus has been used for human burials in the recent or distant past. Therefore, human remains are unlikely to be encountered; however, there is still a potential for such remains to be present. As part of Assembly Bill (AB 52) consultation for this project, affiliated Native American tribal representatives expressed concerns regarding the potential for cultural resources to be present, specifically near Chicken Ranch Slough. Because there would be no construction activities at the Creekside School site under Alternative 1, there would be no potential for substantial adverse changes in the significance of an archeological resource, and no potential for disturbance of human remains including those interred outside of dedicated cemeteries. Therefore, cultural resources impacts under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

The Encina High School portable classroom site is composed of a paved asphalt parking lot underlain by compacted artificial fill. The site is surrounded by Encina High School buildings to the north; the high school's tennis courts and outdoor sports track and bleachers to the east; pavement and buildings associated with the Greer Elementary School to the south; and Bell Street and commercial, residential, and office uses to the west. Therefore, it is unlikely that archeological resources are present at the Encina High School portable classroom site. Furthermore, since Encina High School was constructed in 1959, it is unlikely that any human burial sites are present. Because Alternative 1 would involve installation of four portable classrooms at Encina High School instead of nine as compared to the proposed project, there would be less ground disturbance and therefore a reduced potential for a substantial adverse change in the significance of an archeological resource, or for disturbance of human remains including those interred outside of dedicated cemeteries. As with the proposed project, implementation of Mitigation Measures 3.4-2 and 3.4-3 would reduce the potential for adverse impacts on archaeological resources and human remains to a less-than-significant level. Therefore, cultural resources impacts under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Because a smaller area of the proposed Katherine Johnson Middle School site would be developed under Alternative 2 as compared to the proposed project, there would be a lower potential to cause a substantial adverse change in the significance of an archeological resource or to accidentally disturb human remains at the proposed Katherine Johnson Middle School site. As with the proposed project, under Alternative 2 implementation of Mitigation Measures 3.4-2 and 3.4-3 would reduce the potential for adverse impacts on archaeological resources and human remains to a less-than-significant level. Therefore, impacts related to archaeological resources and

human remains under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at the Encina High School under Alternative 2, a similar level of potential impact on archaeological resources and human remains would occur. Therefore, impacts related to archaeological resources and human remains under Alternative 2 would be similar to the proposed project at the Encina High School portable classroom site.

5.5.5 TRIBAL CULTURAL RESOURCES

ALTERNATIVE 1

There are no known tribal cultural resources at the proposed Katherine Johnson Middle School site. However, a search of the Sacred Lands File for the project by the Native American Heritage Commission was positive. Through project-related AB 52 consultation, the UAIC expressed concerns regarding the potential for buried tribal cultural resources to be present near Chicken Ranch Slough, and the Wilton Rancheria requested ongoing consultation including involvement in site surveys, review of any cultural resource assessments, and copies of records searches obtained for the project. Under Alternative 1, the Creekside School campus would not be redeveloped as the proposed Katherine Johnson Middle School; thus, there would be no demolition or construction activities at the site, and thus no potential for adverse impacts on tribal cultural resources. Therefore, impacts related to tribal cultural resources under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

For same reasons described above under the “Cultural Resources” alternatives analysis, it is unlikely that tribal cultural resources are present at the Encina High School portable classroom site. Because Alternative 1 would involve installation of four portable classrooms at Encina High School instead of nine as compared to the proposed project, there would be less ground disturbance and therefore a reduced potential for adverse effects to tribal cultural resources. As with the proposed project, implementation of Mitigation Measures 3.10-1a and 3.10-1b would reduce the potential for adverse impacts on tribal cultural resources to a less-than-significant level. Therefore, impacts related to tribal cultural resources under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Because a smaller area of the proposed Katherine Johnson Middle School site would be developed under Alternative 2 as compared to the proposed project, there would be less ground-disturbing activity and therefore a lower potential to adversely affect tribal cultural resources. As with the proposed project, under Alternative 2 implementation of Mitigation Measures 3.10-1a and 3.10-1b would reduce the potential for adverse impacts on tribal cultural resources to a less-than-significant level. Therefore, impacts related to tribal cultural resources under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at the Encina High School under Alternative 2, a similar level of potential impact on tribal cultural resources would occur. As with the proposed project, under Alternative 2 implementation of Mitigation Measures 3.10-1a and 3.10-1b would reduce the potential impacts on tribal cultural resources to a less-than-significant level. Therefore, impacts related

to tribal cultural resources under Alternative 2 would be similar to the proposed project at the Encina High School portable classroom site.

5.5.6 GEOLOGY AND PALEONTOLOGICAL RESOURCES

ALTERNATIVE 1

Because the existing Creekside School campus would not be redeveloped as the Katherine Johnson Middle School under Alternative 1, some of the existing outdated buildings would continue to be used for the Creekside Adult School. These buildings do not meet the current requirements of the California Building Standards Code (CBC) in terms of earthquake safety; however, the project site is located in a region of generally low seismic activity with a correspondingly low potential for strong seismic ground shaking. Since no new construction would occur under Alternative 1, there would be no potential impacts related to construction-related erosion, sedimentation, or associated degradation of water quality. Furthermore, since no construction-related earthmoving activities would occur under Alternative 1, there would also be no potential for damage to or destruction of unique paleontological resources at the proposed Katherine Johnson Middle School site. Therefore, impacts related to geology and paleontological resources under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms would still be installed at Encina High School under Alternative 1, a similarly low level of exposure to strong seismic ground shaking would occur, but the portable classroom buildings would meet the current requirements of the CBC (similar to the proposed project). Because the area disturbed for construction of portable classrooms installed at the Encina High School site under Alternative 1 would be reduced as compared to the proposed project, potential impacts related to construction-related erosion, sedimentation, and associated degradation of water quality would also be reduced under Alternative 1. Since the Encina High School portable classroom site has been previously disturbed during construction of the existing school, the deposits underlying the parking lot are composed of compacted artificial fill, which are not paleontologically sensitive. Furthermore, even if trenching activities for underground utilities at Encina High School for Alternative 1 were to encounter native rock formations, the native deposits consist of Holocene-age Basin Deposits, which also are not paleontologically sensitive because they are too young to contain unique paleontological resources. Therefore, impacts related to geology and paleontological resources under Alternative 1 would be similar to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Although a smaller area of the proposed Katherine Johnson Middle School site would be developed under Alternative 2 as compared to the proposed project, the same site would still be developed and thus a similarly low level of exposure to strong seismic ground shaking would occur, but with new buildings that meet the current requirements of the CBC (similar to the proposed project). Because a smaller area of the proposed Katherine Johnson Middle School site would be developed under Alternative 2 as compared to the proposed project, the potential for construction-related erosion, sedimentation, and associated degradation of water quality would be reduced. Similarly, since a smaller area would be disturbed during construction of Alternative 2, there would be a lower potential for damage to or destruction of unique paleontological resources at the proposed Katherine Johnson Middle School site. As with the proposed project, implementation of Mitigation Measure 3.5-3 would reduce the potential impacts under Alternative 2 on unique paleontological resources to a less-than-significant

level. Therefore, impacts related to geology and paleontological resources under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Installation of the same number of portable classrooms in the same location would occur at the Encina High School campus under Alternative 2 as compared to the proposed project. Therefore, a similarly low level of exposure to strong seismic ground shaking would occur under Alternative 2, but the portable classroom buildings would meet the current requirements of the CBC (similar to the proposed project). Furthermore, the same potential impacts related to construction-related erosion, sedimentation, and associated degradation of water quality could occur from installation of the portable classrooms under Alternative 2 as compared to the proposed project. Finally, since the geologic formations underlying the portable classroom site at Encina High School are not paleontologically sensitive, Alternative 2 would have the same lack of potential impacts from damage to or destruction of unique paleontological resources. Therefore, impacts related to geology and paleontological resources under Alternative 2 would be similar to the proposed project at the Encina High School portable classroom site.

5.5.7 GREENHOUSE GAS EMISSIONS

ALTERNATIVE 1

Because the existing Creekside School campus would not be demolished or redeveloped with the proposed Katherine Johnson Middle School under Alternative 1, there would be no increase in greenhouse gas (GHG) emissions generated by the combustion of fossil fuels from equipment and vehicle trips associated with demolition or construction at the proposed middle school site. Continued operation of the existing Creekside Adult School would be expected to serve the same number of students as under existing conditions; thus, there would be no operation-related increase in GHG emissions under Alternative 1 at the proposed Katherine Johnson Middle School site, and therefore Alternative 1 would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, impacts related to GHGs under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms would be installed at Encina High School under Alternative 1 as compared to nine portable classrooms under the proposed project, there would be a reduced potential for demolition- and construction-related generation of GHGs, and a similar reduced potential for conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, impacts related to GHGs under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Under Alternative 2, the existing Creekside School campus would still be demolished. Thus, there would be a similar potential for generation of GHGs from demolition activities at the proposed Katherine Johnson Middle School site as compared to the proposed project. However, because a smaller area of the campus would be redeveloped with approximately 25 percent less building space and approximately 250 fewer students and staff, Alternative 2 would result in an approximately 25 percent reduction in construction and operational GHG emissions as compared to the proposed project. There would be similar reduction in the potential for Alternative 2 to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Therefore, impacts related to GHGs under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at Encina High School under Alternative 2 as compared to the proposed project, there would be a similar potential for demolition- and construction-related generation of GHGs, and a similar potential for conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, Alternative 2 would have a similar level of impact related to GHGs as compared to the proposed project at the Encina High School portable classroom site.

5.5.8 HAZARDS AND HAZARDOUS MATERIALS

ALTERNATIVE 1

Because the existing Creekside School campus would not be demolished or redeveloped with the proposed Katherine Johnson Middle School under Alternative 1, there would be no potential for demolition- and construction-related routine transport, use, or disposal of hazardous materials. Continued operation of the Creekside Adult School under Alternative 1 would include the use of small amounts of hazardous materials such as paints, solvents, herbicides, and pesticides associated with campus maintenance, similar to existing conditions. Similarly, under Alternative 1 there would be no potential for demolition- and construction-related accidental spills of hazardous materials or demolition-related exposure to on-site hazardous materials such as asbestos and lead-based paint. Handlers of hazardous materials (including construction contractors and District maintenance personnel during project operation) are required to follow the manufacturer's labelling instructions for use and disposal. Furthermore, the use and disposal of hazardous materials is heavily regulated at the federal and state level by U.S. Environmental Protection Agency (EPA) and the California Department of Toxic Substances Control (DTSC), as outlined in the California Code of Regulations (CCR) Title 22. Therefore, impacts related to hazards and hazardous materials under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms would be installed at Encina High School under Alternative 1 as compared to nine portable classrooms under the proposed project, there would be a reduced potential for demolition- and construction-related routine transport, use, or disposal of hazardous materials, and a reduced potential for construction-related accidental spills of hazardous materials. Operation of the four portable classrooms at Encina High School would include continued use of small amounts of hazardous materials such as paints, solvents, herbicides, and pesticides associated with Encina campus maintenance, similar to existing conditions. The use and disposal of hazardous materials is heavily regulated at the federal and state level, and hazardous materials handlers must comply with all applicable requirements. Therefore, impacts related to hazards and hazardous materials under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Under Alternative 2, the existing Creekside School campus would still be demolished. Thus, there would be a similar potential for exposure of people and the environment from accidental releases of hazardous materials such as asbestos and lead-based paint during the demolition process. However, as with the proposed project, construction worker health and safety regulations and hazardous materials removal and disposal protocols would

be implemented in accordance with applicable federal and state standards, including the California Division of Occupational Safety and Health and the Sacramento Metropolitan Air Quality Management District (SMAQMD) regulations. The abatement contractor would be appropriately licensed and certified, and is required by law to comply with all local, state, and federal requirements regarding hazardous materials. Hazardous materials would be disposed of in an approved, off-site Class I or Class II landfill. Under Alternative 2, there would also be a similar potential for exposure to hazards from construction-related routine transport, use, or disposal of hazardous materials. Operation of the proposed Katherine Johnson Middle School under Alternative 2 would include the use of small amounts of hazardous materials such as paints, solvents, herbicides, and pesticides associated with campus maintenance, similar to the proposed project. All handlers of hazardous materials (during construction and operation) are required to follow federal and State regulations for proper use and disposal. Therefore, Alternative 2 would have a similar level of impact related to hazards and hazardous materials as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed at Encina High School in the same location under Alternative 2 as compared to the proposed project, there would be a similar potential for demolition- and construction-related routine transport, use, or disposal of hazardous materials, and a similar potential for construction-related accidental spills of hazardous materials. Operation of the portable classrooms at Encina High School would include continued use of small amounts of hazardous materials such as paints, solvents, herbicides, and pesticides associated with Encina campus maintenance, similar to existing conditions. The use and disposal of hazardous materials is heavily regulated at the federal and state level, and hazardous materials handlers must comply with all applicable requirements. Therefore, Alternative 2 would have a similar level of impact related to hazards and hazardous materials as compared to the proposed project at the Encina High School portable classroom site.

5.5.9 HYDROLOGY AND WATER QUALITY

ALTERNATIVE 1

Since no demolition, new construction, or additional expanded operation of the campus at the proposed Katherine Johnson Middle School site would occur, there would be no potential impacts related to construction- or operation-related erosion, sedimentation, or associated degradation of water quality and potential interference with implementation of the Sacramento and San Joaquin River Basin Plan. Similarly, there would be no potential impacts related to decrease in groundwater recharge and subsequent effects on groundwater sustainability, or substantial alteration of drainage patterns resulting in exceedance of storm drainage systems or associated flooding. Because there would be no new construction, there would also be no potential for impedance or redirection of flood flows. Therefore, impacts related to hydrology and water quality under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms and associated trenching for underground utilities would still be installed at the Encina High School site (as compared to nine portables plus a small restroom building under the proposed project), potential impacts related to construction- or operation-related erosion, sedimentation, and associated degradation of water quality and potential interference with implementation of the Sacramento and San Joaquin River Basin Plan and could occur at Encina High School, but at a lesser level. As with the proposed project, there would be no potential for substantial alteration of drainage patterns resulting in exceedance of storm drainage systems or associated flooding because the portable classroom site is already paved, and the drainage system has

capacity for the additional 100 future students. As with the proposed project, the four new portable classrooms and associated trenching for underground utilities would still be placed within a 200-year flood zone, and therefore would still be subject to the County's floodproofing requirements (as adopted in the Floodplain Management Ordinance) pursuant to the Central Valley Flood Protection Board's (CVFPB) Urban Level of Flood Protection requirements. As with the proposed project, implementation of Mitigation Measure 3.7-5 would reduce the impact of Alternative 1 related to flooding to a less-than-significant level. However, it should be noted that the existing Katherine Johnson Middle School students are already co-located at Encina High School. Since the western half of the Encina High School property (along with the existing Greer Elementary School to the south and all of the existing residential, commercial, and office development to the west) are already located within the 200-year flood zone, Alternative 1 would not increase the exposure of students and staff to flood hazards. Therefore, overall, the impacts related to hydrology and water quality under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Since the area planned for redevelopment at the proposed Katherine Johnson Middle School site under Alternative 2 would be smaller, there would be a reduced potential for impacts related to construction- or operation-related erosion, sedimentation, or associated degradation of water quality and potential interference with implementation of the Sacramento and San Joaquin River Basin Plan. Similarly, there would be a reduced potential for impacts related to a decrease in groundwater recharge and subsequent effects on implementation of the groundwater sustainability plan. The smaller campus footprint as compared to the proposed project would result in a reduced potential for substantial alteration of drainage patterns resulting in exceedance of storm drainage systems or associated flooding. As with the proposed project, implementation of Mitigation Measure 3.7-4 would reduce the impact of Alternative 2 related to drainage systems to a less-than-significant level. As with the proposed project, no new buildings at the proposed Katherine Johnson Middle School site would be placed in the FEMA Regulatory Floodway or the FEMA shaded Zone X (i.e., an area of moderate flood hazard), or within a 200-year floodplain; thus, there would be no potential for impedance or redirection of flood flows. Therefore, impacts related to hydrology and water quality under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of new portable classrooms and associated trenching for underground utilities would still be installed at the same location at the Encina High School site as compared to the proposed project, potential impacts related to construction- or operation-related erosion, sedimentation, and associated degradation of water quality and potential interference with implementation of the Sacramento and San Joaquin River Basin Plan would be similar. As with the proposed project, there would be no potential for impacts related to a decrease in groundwater recharge and subsequent effects on implementation of the groundwater sustainability plan because the portable classroom site is already paved and groundwater would not be used for water supply. There would be a similar potential for substantial alteration of drainage patterns resulting in exceedance of storm drainage systems or associated flooding. As with the proposed project, the new portable classrooms and associated trenching for underground utilities would still be placed within a 200-year flood zone, and therefore would still be subject to the County's floodproofing requirements (as adopted in the Floodplain Management Ordinance) pursuant to the CVFPB's Urban Level of Flood Protection requirements. As with the proposed project, implementation of Mitigation Measure 3.7-5 would reduce the impact of Alternative 2 related to flooding to a less-than-significant level. Furthermore, the existing Katherine Johnson Middle School students are already co-located at Encina High School; therefore, moving those students to the Creekside campus and moving the adult education students to

Encina would reduce the number of students and staff currently exposed to 200-year flood hazards at Encina High School. Furthermore, the western half of the Encina High School property (along with the existing Greer Elementary School to the south and all of the existing residential, commercial, and office development to the west) are already located within the 200-year flood zone. Therefore, overall, the impacts related to hydrology and water quality under Alternative 2 would be similar to the proposed project at the Encina High School portable classroom site.

5.5.10 NOISE AND VIBRATION

ALTERNATIVE 1

Since no demolition, new construction, or additional expanded operation of the campus at the proposed Katherine Johnson Middle School site would occur under Alternative 1, there would be no potential impacts from exposure of sensitive receptors to short-term construction-related groundborne vibration, generation of noise levels in excess of the applicable noise standards, or noticeable increases in ambient noise levels. Because there would be no anticipated increase in the number of adult students who would continue to attend the existing Creekside Adult School under Alternative 1, there would be no increased noise from increased long-term operational traffic, and no changes to the existing on-site operational noise levels. Therefore, impact related to noise and vibration under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms would be installed at Encina High School under Alternative 1 as compared to nine portable classrooms under the proposed project, there would be a reduced potential for short-term demolition- and construction-related noise and groundborne vibration, generation of noise levels in excess of the applicable noise standards, or noticeable increases in ambient noise levels. Because the number of middle school students attending the Katherine Johnson Middle School co-located at Encina High School would increase by 100 students in the future to account for projected District service area demands, there would be a minor increase in noise from increased long-term operational traffic, and from on-site operational noise levels; however, these increases would not be large enough to be perceptible. Therefore, overall, impacts related to noise and vibration under Alternative 2 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Since the existing Creekside School campus would still be demolished under Alternative 2, there would be a similar potential for short-term demolition-related noise and groundborne vibration, generation of noise levels in excess of the applicable noise standards, or noticeable increases in ambient noise levels during demolition. However, since the area planned for redevelopment at the proposed Katherine Johnson Middle School site under Alternative 2 would be smaller, there would be a reduced potential for short-term construction-related noise and groundborne vibration, generation of noise levels in excess of the applicable noise standards, or noticeable increases in ambient noise levels during construction. Because a smaller area of the campus would be redeveloped with approximately 25 percent less building space and approximately 250 fewer students and staff, Alternative 2 would result in an approximately 25 percent reduction in long-term operational noise from operational traffic and on-site operational noise sources. Therefore, impacts related to noise and vibration under Alternative 2 would be somewhat reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at Encina High School under Alternative 2, there would be a similar potential for short-term demolition- and construction-related noise and groundborne vibration, generation of noise levels in excess of the applicable noise standards, or noticeable increases in ambient noise levels as compared to the proposed project. Because the total number of students attending classes at Encina High school would decrease by approximately 150 (with only 400 middle school students transferring to the proposed Katherine Johnson Middle School site as compared to 550 under the proposed project, and the same 300 adult education students transferring to the portable classrooms at Encina High school), the operational traffic and operational on-site noise level at Encina High School would decrease, but not as much as under the proposed project. Overall, impacts related to noise and vibration under Alternative 2 would be similar to the proposed project at the Encina High School portable classroom site.

5.5.11 TRANSPORTATION

ALTERNATIVE 1

Because the existing Creekside School campus would not be demolished or redeveloped with the proposed Katherine Johnson Middle School under Alternative 1, there would be no increase in vehicle trips associated with demolition or construction at the proposed middle school site. Continued operation of the existing Creekside Adult School would be expected to serve the same number of students as under existing conditions; thus, there would be no increase in vehicular travel demand under Alternative 1 at the proposed Katherine Johnson Middle School site. Therefore Alternative 1 would not conflict with a program, plan, ordinance, or policy addressing the circulation system, would not increase traffic hazards, and would not change emergency access compared to existing conditions. Therefore, impacts under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because four new portable classrooms would be installed at Encina High School under Alternative 1 as compared to nine portable classrooms under the proposed project, there would be a reduction in vehicle trips associated compared to the proposed project. Routine and emergency access would not change. Impacts under Alternative 1 would be slightly reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Under Alternative 2, the existing Creekside School campus would still be demolished. Thus, there would be a similar potential for transportation conflicts during construction at the proposed Katherine Johnson Middle School site as compared to the proposed project. However, because a smaller area of the campus would be redeveloped with approximately 25 percent less building space and approximately 250 fewer students and staff, Alternative 2 would result in an approximately 25 percent reduction in vehicular trips as compared to the proposed project. As with the proposed project, Alternative 2 would not conflict with a program, plan, ordinance, or policy addressing the circulation system; would not increase traffic hazards; and would not involve significant impacts related to emergency access. Impacts under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Because the same number of portable classrooms would be installed in the same location at Encina High School under Alternative 2 as compared to the proposed project, there would be a similar level of vehicular travel demand. As with the proposed project, Alternative 2 would not conflict with a program, plan, ordinance, or policy addressing the circulation system; would not increase traffic hazards; and would not involve significant impacts

related to emergency access. Impacts under Alternative 2 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

5.5.12 UTILITIES AND SERVICE SYSTEMS

ALTERNATIVE 1

Since no new construction or additional expanded operation of the campus at the proposed Katherine Johnson Middle School site would occur under Alternative 1, there would be no potential off-site impacts related to increased demand for water supply, wastewater conveyance and treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities that could result in environmental effects. Similarly, under Alternative 1 there would be no potential impact related to the ability of the Sacramento Suburban Water District (SSWD) to meet the anticipated small increase in water demand in dry and multiple-dry water years. There would also be no potential for a lack of wastewater conveyance capacity by the Sacramento Area Sewer District (SASD) or a lack of treatment capacity at the Sacramento Regional County Sanitation District's (Regional San) Sacramento Regional Wastewater Treatment Plant under Alternative 1. Finally, under Alternative 1 there would be no potential increases in the need for disposal of demolition-related solid waste or operational increases in the need for solid waste disposal. The District already has and would continue to implement its existing recycling programs. Utility services would continue for the existing Creekside Adult Center adult student body at similar levels and by the same off-site local and regional service providers as they do now. Therefore, impacts related to utilities and service systems under Alternative 1 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

The existing Katherine Johnson Middle School students are currently co-located with the high school students at Encina High School, and that situation would not change. Because an additional four portable classrooms would be installed at Encina High School under Alternative 1 to serve the projected middle school student body increases (approximately 100 students), as compared to nine portable classrooms under the proposed project to serve the adult learners (approximately 300 students), Alternative 1 would result in a decrease in demand for new or expanded off-site water supply, wastewater conveyance and treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities as compared to the proposed project. Similarly, under Alternative 1 there would be reduced level of impact related to the ability of SSWD to meet the anticipated water demand in dry and multiple-dry water years. There would also be a reduced potential for a lack of wastewater conveyance capacity by SASD or a lack of treatment capacity at Regional San's Sacramento Regional Wastewater Treatment Plant under Alternative 1. Finally, under Alternative 1 there would also be a reduction in the amount of construction-related solid waste that would require disposal, and a reduction in the amount of operational solid waste disposal, and the District would continue to implement its existing solid waste recycling programs. Therefore, impacts related to utilities and service systems under Alternative 1 would be reduced as compared to the proposed project at the Encina High School portable classroom site.

ALTERNATIVE 2

Since Alternative 2 would support only 400 students plus 32 staff at the proposed Katherine Johnson Middle School site as opposed to 650 students plus 48 staff under the proposed project, potential off-site impacts related to construction of off-site water supply, wastewater conveyance and treatment, and stormwater drainage facilities from the proposed Katherine Johnson Middle School that could result in environmental effects would be reduced. Similarly, under Alternative 2 there would be a reduced level of impact related to the ability of SSWD to meet the

anticipated water demand from the proposed Katherine Johnson Middle School in dry and multiple-dry water years. There would also be a reduced potential for a lack of wastewater conveyance capacity from the proposed Katherine Johnson Middle School by SASD or a lack of treatment capacity at Regional San's Sacramento Regional Wastewater Treatment Plant under Alternative 2. Because the existing Creekside School campus would still be demolished under Alternative 2, there would be a similar amount of construction-related solid waste that would require disposal, but there would be a reduction in the amount of operational solid waste disposal since the total number of students and staff at the proposed Katherine Johnson Middle School would decrease. The District would continue to implement its existing solid waste recycling programs. Therefore, impacts related to utilities and service systems under Alternative 2 would be reduced as compared to the proposed project at the proposed Katherine Johnson Middle School site.

Under Alternative 2, because approximately 400 middle school students would be transferring from Encina High School to the proposed Katherine Johnson Middle School project site (as compared to 550 students transferring under the proposed project), with only approximately 300 adult education students transferring from Creekside to Encina, potential off-site impacts related to construction of off-site water supply, wastewater conveyance and treatment, and stormwater drainage facilities from Encina that could result in environmental effects would be reduced, but not as much as the proposed project. Similarly, under Alternative 2 there would be a similar level of impact related to the ability of SSWD to meet the anticipated water demand from the Encina High School portable classrooms in dry and multiple-dry water years. There would also be a similar potential for a lack of wastewater conveyance capacity from the Encina High School portable classrooms by SASD or a lack of treatment capacity at Regional San's Sacramento Regional Wastewater Treatment Plant under Alternative 2. Because the same number of portable classrooms would be installed in the same location under Alternative 2, there would be a similar amount of construction-related solid waste that would require disposal, but a reduction in the amount of operational solid waste disposal since the total number of students at Encina would decrease. The District would continue to implement its existing solid waste recycling programs. Therefore, impacts related to utilities and service systems under Alternative 2 would be similar as compared to the proposed project at the Encina High School portable classroom site.

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Alternative 1: No Project Alternative would have the greatest number of reduced impacts as shown in Table 5-1, therefore the No Project Alternative would be the Environmentally Superior Alternative. This alternative provides the greatest reduction in potential environmental effects of the proposed project. Other than the No Project

Alternative, Alternative 2: Reduced Size Katherine Johnson Middle School would provide the most benefit relative to reducing environmental effects compared to the proposed project.

Table 5-1. Comparison of Impacts of the Alternatives to the Proposed Project

Environmental Topic Area	Alternative 1: No Project		Alternative 2: Reduced Size Katherine Johnson Middle School	
	Katherine Johnson	Encina	Katherine Johnson	Encina
Aesthetics	Greater	Reduced	Reduced	Similar
Recreation	Reduced	Similar	Similar	Similar
Air Quality	Reduced	Reduced	Reduced	Similar
Biological Resources	Reduced	Similar	Reduced	Similar
Cultural Resources	Reduced	Reduced	Reduced	Similar
Tribal Cultural Resources	Reduced	Reduced	Reduced	Similar
Geology and Paleontological Resources	Reduced	Similar	Reduced	Similar
Greenhouse Gas Emissions	Reduced	Reduced	Reduced	Similar
Hazards and Hazardous Materials	Reduced	Reduced	Similar	Similar
Hydrology and Water Quality	Reduced	Reduced	Reduced	Similar
Noise and Vibration	Reduced	Reduced	Reduced	Similar
Transportation	Similar	Reduced	Reduced	Reduced
Utilities and Service Systems	Reduced	Reduced	Reduced	Similar
Total Reduced Impact Topics	11	10	11	1

Source: Data Compiled by AECOM in 2022

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6 CUMULATIVE IMPACTS AND OTHER CEQA CONSIDERATIONS

This chapter addresses the following CEQA considerations that are required as part of an EIR:

- ▶ Cumulative Impacts (Section 6.1);
- ▶ Growth-Inducing Impacts (Section 6.2); and
- ▶ Significant and Unavoidable Environmental Impacts (Section 6.3).

6.1 CUMULATIVE IMPACTS

6.1.1 INTRODUCTION TO CUMULATIVE IMPACTS

This section provides an analysis of the cumulative impacts of the proposed project considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the CEQA Guidelines.

Cumulative impacts are defined in CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines Section 15355[b]).

Cumulatively considerable “means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (CEQA Guidelines, Section 15065[a][3]).

CEQA Guidelines Section 15130(b) states, “the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. The analysis should be guided by the standards of practicality and reasonableness, and it should focus on the cumulative impacts to which the other identified projects contribute to the cumulative impact.”

In addition, as per the CEQA Guidelines: “The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.”

6.1.2 APPROACH TO THE CUMULATIVE ANALYSIS

The CEQA Guidelines Section 15130(b)(1) identifies two basic approaches for establishing the cumulative environment in which the proposed project is to be considered:

- ▶ **List approach**—A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the lead agency (in this case, SJUSD).

- **Plan approach**—A summary of projections contained in adopted general plans or related planning documents, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

The cumulative analysis for this EIR uses the list approach.

6.1.3 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE EFFECTS

The list of related past, present, and reasonably foreseeable future projects used for this cumulative analysis includes nearby development projects expected to occur in unincorporated Sacramento County, as well as nearby development projects in the city of Sacramento.

The projects listed in Table 6.1-1 are not intended to be an all-inclusive list of projects in the region, but rather an identification of projects approved or planned in the local area that may affect the same resources (e.g., air quality, biological and cultural resources, greenhouse gases, transportation noise) or rely on the same public service and utility providers as the proposed project.

Table 6.1-1. Related Projects in Unincorporated Sacramento County and the City of Sacramento

Project Name	Description and Distance from Proposed Katherine Johnson Middle School Campus	Status	Dwelling Units	Commercial/ Office/ Industrial Area (either building square footage or acreage)
Unincorporated Sacramento County				
Countywide Rezone Program	Rezones various properties totaling 165 acres to multi-family zoning classifications and increases the density to 30 dwelling units per acre for lower-income Regional Housing Needs Allocation. One site approximately 1,000 feet northwest of project site, three other sites approximately 0.5-mile northwest, east, and southeast of project site, respectively. Additional sites throughout the unincorporated County within a 6.5-mile radius.	Proposed	30 per acre max on 165 acres	N/A
Arcade Middle School	Proposed demolition and redevelopment of approximately 11-acre existing school campus at 3500 Edison Avenue. Approximately 1.25-mile northeast of the project site	Proposed	N/A	59,000 square feet
Arden Middle School	Demolition and redevelopment of approximately 17-acre existing school campus at 1640 Watt Avenue. Approximately 1.25 mile southeast of the project site.	Constructed	N/A	93,000 square feet
City of Sacramento				
Arden Gateway	Project to develop approximately 24 acres of vacant land with multi-family apartment buildings. Approximately 1.8 miles southwest of the project site.	Approved, under construction	731	N/A
4240 Pinell Street Development Project	Project to construct a metal shop building and associated truck yard on approximately 1 acre of vacant land in an industrial zone. Approximately 2.25 miles northwest of the project site.	Approved	N/A	5,852 square feet
Harvard Park Corporate Campus	Project to redevelop approximately 8.5 acres at 2241 Harvard Street with two new office buildings, and demolish one outbuilding and recreational facilities. Approximately 2.25 miles southwest of the project site.	Approved		253,750 square feet

Project Name	Description and Distance from Proposed Katherine Johnson Middle School Campus	Status	Dwelling Units	Commercial/ Office/ Industrial Area (either building square footage or acreage)
1143 Blumenfeld Cannabis Complex Project	Project to implement cannabis cultivation inside existing and proposed buildings on approximately 2.5 acres in a light industrial zone. Approximately 2.5 miles southwest of the project site.	Approved	N/A	49,000 square feet
Bell Avenue Warehouses Project	Project to construction two warehouse buildings on a vacant approximately 21-acre site. Approximately 2.5 miles northwest of the project site.	Approved, construction completed in 2021	N/A	339, 549
Arden Way Affordable Housing Project	Redevelopment of an existing approximately 3-acre commercial site with multi-family housing. Approximately 2.75 miles southwest of the project site.	Approved, under construction	128	N/A
Raley & Diesel Project	Project to construct two warehouse buildings on vacation land in a light industrial zone. Approximately 3 miles northwest of the project site.	Approved	N/A	66,746 square feet
Sacramento Self Storage	Development of a CubeSmart® 3-story self-storage building and a 2-story self-storage building on 2.5 acres at 500 Leisure Lane. Approximately 3 miles southwest of the project site	Approved, 3-story building completed in 2021	N/A	139,482 square feet
Dry Creek Estates	Project to develop approximately 29 acres of vacant land with residential uses. Approximately 3.6 miles northwest of the project site.	Approved	135	N/A
Taylor Street Cottages	Development of approximately 6.5 acres of vacant land with residential uses. Approximately 3.7 miles northwest of the project site.	Approved	70	N/A
Trucking Terminal Yard Project	Development of a truck terminal to be used for overnight parking and storage of trucks with sleeper cabs and 53-foot trailers on approximately 3.6 acre of vacant land at Santa Ana Avenue and Dry Creek Road. Approximately 3.8 miles northwest of the project site.	Approved	N/A	Grading on 1.6 acres; fencing; security lighting; no buildings
Morey Place Subdivision	Development of 17 acres between Morey Avenue and Morrison Avenue with residential uses. Approximately 4 miles northwest of the project site.	Approved, under construction	99	N/A
South Avenue Place	Development of 5 acres at 80 South Avenue with single-family residences. Approximately 4 miles northwest of the project site.	Approved	35	N/A
920 San Juan Road Project	Project to develop approximately 9 acres of vacant land with residential uses. Approximately 4.5 miles west of the project site.	Approved	79	N/A
Twin Rivers Project	Project to develop high-rise residential buildings on approximately 22 acres at 1209 Sitka Street. Approximately 4.9 miles southwest of the project site.	Approved, under construction	170	N/A
1039 N D Street Basketball Park	Proposed new park on 1.5 acres at 1039 North D Street to include basketball courts, benches, picnic area, landscaping, and lighting. Approximately 5 miles southwest of the project site.	Approved	N/A	N/A
Richards Blvd Office Complex	Redevelopment of approximately 17 acres with a new office complex. Approximately 5.25 miles southwest of the project site.	Approved, under construction	N/A	1.25 million square feet

Project Name	Description and Distance from Proposed Katherine Johnson Middle School Campus	Status	Dwelling Units	Commercial/ Office/ Industrial Area (either building square footage or acreage)
Mansion Inn Apartments	Proposed redevelopment at 700 16 th Street involving demolition and new construction of a 5-story mixed-use building on approximately 1.2 acres. Approximately 5.3 miles southwest of the project site.	Approved, under construction	186	181,800 square feet

Notes: N/A = not applicable

Sources: County of Sacramento 2022, City of Sacramento 2022

6.1.4 GEOGRAPHIC CONTEXT

The geographic area associated with an environmental resource analysis may vary depending on the type of environmental issue considered. For example, some issues are considered in a more local context (i.e., visual quality, construction noise) because they generally occur in close proximity to the project site. However, other topics (e.g., air quality, GHG emissions) are more appropriately considered in a larger regional context. Table 6.1-2 presents the geographic context for the topic areas addressed in this cumulative impact analysis.

Table 6.1-2. Geographic Context for Cumulative Impacts

Topic Area	Geographic Context
Aesthetics and Recreation	The immediate viewshed surrounding the project site, and recreational facilities in the project area
Air Quality	Sacramento Valley Air Basin
Biological Resources	Project site and surrounding areas corresponding with affected species and habitat
Cultural Resources	Project site and surrounding areas, as well as archeological and historic project sites within California
Geology and Paleontological Resources	Individual ground-disturbance sites, and paleontological resources throughout California
Greenhouse Gas Emissions	Global effects, with the regulatory context and cumulative considerable levels established at the state level
Hazards and Hazardous Materials	Individual ground-disturbance sites
Hydrology and Water Quality	Lower American River watershed
Noise and Vibration	Sensitive uses along studied roadway segments and adjacent land uses. Construction noise is limited to the immediate project vicinity.
Transportation and Traffic	Roadways affected by project traffic
Utilities and Service Systems	Service areas of local providers
Energy	Service areas of local providers; the wasteful and inefficient use of energy is considered in the context of California

Source: Data compiled by AECOM in 2022

6.1.5 CUMULATIVE IMPACT ANALYSIS

The following sections contain a discussion of the cumulative effects anticipated from the combination of the proposed project and the related projects, for each of the environmental topic areas evaluated in this EIR where

significant, potentially significant, or less-than-significant, project-level impacts have been identified in Chapters 3 and 4.

The cumulative analysis conforms with Section 15130 of the CEQA Guidelines, which specifies that the “discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided of the effects attributable to the project alone.”

AESTHETICS AND RECREATION

Visual Character and Quality/Lighting and Glare

The related projects considered in this cumulative analysis are located in the urbanized area of unincorporated Sacramento County and the city of Sacramento. These areas are fully developed with buildings, roadways, and other infrastructure. Furthermore, given the developed nature of the vicinity of the project site, a substantial amount of nighttime lighting is present. The related projects consist of infill development, or development of urban land uses on small vacant parcels that are designated and zoned for urban development. Furthermore, individual, site-specific projects are required to undergo County and City design review, and must comply with County and City municipal code requirements related to the types of buildings, height restrictions, setbacks, architectural designs, landscaping, lighting, and glare. Therefore, the related projects considered in this cumulative analysis would result in less-than-cumulatively considerable impacts related to degradation of visual character or quality, compliance with applicable zoning or other regulations governing scenic quality, or substantial increases in light and glare.

The proposed project would result in redevelopment of an existing older school with a new, more modern school campus, which would result in a benefit in terms of the existing visual character and quality. The Creekside School project site was developed as a school in 1953, and is zoned RD-5 (residential) and designated for residential use; public schools are a permitted, primary use under the current Sacramento County Zoning Code in areas zoned RD-5. The school layout and architectural appearance is regulated by the CDE and DSA, which consider the same visual quality concepts as Sacramento County, including consistency with surrounding neighborhood development, and providing high-quality architectural designs with features such as cantilevered roofs and landscape plantings. Therefore, although the District is not subject to the County’s design review process or the County’s municipal code requirements, the design of the proposed Creekside campus redevelopment would be substantially similar to County requirements. Therefore, the contribution of the proposed project to cumulative impacts related to degradation of visual character or quality, and compliance with applicable zoning and other regulations governing scenic quality, would be **less than cumulatively considerable**.

Because the Creekside and Encina school campuses are located in urbanized areas, substantial nighttime lighting is already present. Furthermore, both school campuses already operate existing nighttime lighting, and therefore the minor amount of additional nighttime lighting for security purposes from the proposed project would not represent a substantial increase as compared to existing conditions. Nevertheless, the District would implement Mitigation Measure 3.1-2, which requires implementation of a plan to reduce on-site lighting and glare at the redeveloped Creekside School campus (which would include a larger developed area as compared to existing conditions). Therefore, the contribution of the proposed redevelopment at the Creekside School campus related to substantial increases in light or glare would be **less-than-cumulatively-considerable with mitigation incorporated**. The addition of the new portable classrooms at the Encina High School campus would only require a few small outdoor lights for nighttime security in a 0.3-acre paved parking area surrounded by a roadway and

school uses. The nighttime security lights would be small in size, would be mounted on the buildings, and would be shielded and directed downward. Therefore, the new portable classrooms at Encina would not substantially increase light or glare, and would result in a **less-than-cumulatively-considerable** contribution.

Increased Use of Recreational Facilities Resulting in Substantial Deterioration

The related projects considered in this cumulative analysis are located near the project site, within unincorporated Sacramento County and the city of Sacramento. The related projects considered in this cumulative analysis would increase the population in the project area as a result of new housing and employment opportunities. Therefore, the related projects would increase the use of Sacramento area recreational facilities. However, park districts throughout the Sacramento area receive funds through developer fees, as well as public grants, which are used for public facility improvements and maintenance and upkeep of recreational facilities. Because a portion of each site-specific project's developer fees are used for park maintenance and upkeep, the related projects considered in this cumulative analysis would not result in a cumulatively significant impact.

Installation of the portable classrooms at Encina High School would have no effect on Encina's recreational facilities, because the portable classrooms would be used by adult learners. Furthermore, recreational facilities are available at the high school, as well as throughout the surrounding area, for existing Sacramento residents who attend adult education classes.

The existing, off-site Creekside Natural Trail would continue to be available for use by the public during redevelopment of the adjacent Creekside School campus. Short-term temporary adverse effects experienced by recreationists on the trail would include increased noise and dust, and the visual presence of personnel and equipment, during the demolition and construction process at the project site. Although some recreationists may choose to use other facilities during this period, the trail is lightly used due to the current lack of public access. Therefore, the short-term and temporary use of other local and regional recreational facilities during the project's construction phase would not result in substantial physical deterioration of those facilities.

During project operation, the outdoor turf playfields at the new Katherine Johnson Middle School (Creekside) campus would continue to be available for public use on the weekends, when school-related sporting events are not occurring, as they are now. Location of the Katherine Johnson Middle School at the Creekside project site could lead to additional use of the existing Creekside Nature Trail to access the school site for a limited number of students. However, the trail is a designated public recreational facility that is intended to provide a public benefit and there is no evidence that the limited increase in use of the trail would lead to physical deterioration that would represent an adverse environmental impact beyond that reported throughout this EIR. Therefore, the cumulative contribution of the proposed project related to physical impacts from increased use and substantial deterioration of recreational facilities would be **less than cumulatively considerable**.

Physical Impacts from Construction of Recreational Facilities

The related projects considered in this cumulative analysis are located near the project site, within unincorporated Sacramento County and the City of Sacramento. Sacramento County maintains a park standard of 3 acres of parkland per 1,000 residents. The City of Sacramento maintains a standard of 5 acres of parkland per 1,000 residents. The related projects considered in this cumulative analysis would increase the population in the project area as a result of new housing and employment opportunities. Therefore, the related projects would increase the

use of existing neighborhood or community parks or require construction of new parks to meet County or City parkland standards, and therefore a cumulatively significant impact from the related projects could occur.

The SJUSD is not subject to County parkland standards. The proposed project includes construction of on-site recreational facilities at the Creekside School campus sufficient to meet the needs of the Katherine Johnson Middle School students, as required by the CDE. The physical environmental impacts of redevelopment of the Creekside School campus, including the on-site school recreational facilities, are evaluated in each of the individual topic area sections of this EIR. No additional recreational facilities would be required at the Encina High School as a result of installation of the portable classrooms. The portable classrooms would be used by adult learners, and recreational facilities are available at the high school, as well as throughout the surrounding area for existing Sacramento residents who attend adult education classes. Therefore, the cumulative contribution of the proposed project related to this significant cumulative impact from physical impacts from construction of recreational facilities would be **less than cumulatively considerable**.

AIR QUALITY

Air quality is inherently a cumulative impact, as current emission levels and attainment status are a result of past and present projects. Sacramento County is designated as nonattainment for the State standards for Ozone (O₃), particulate matter with aerodynamic diameter less than 10 microns (PM₁₀), and particulate matter with aerodynamic diameter less than 2.5 microns (PM_{2.5}). Each additional project within the Sacramento Valley Air Basin (SVAB) has the potential to cause a net increase in emissions that would contribute to a significant cumulative air quality impact.

Construction activities throughout the region would emit criteria air pollutants from earthmoving activities and construction equipment. The operation of past, present, and future projects would contribute criteria air pollutant and precursor emissions to the region that, when added to the other emissions occurring within the region, collectively could cause an exceedance of federal or State air quality standards. The Sacramento Metropolitan Air Quality Management District (SMAQMD) considers projects that would generate air quality emissions that exceed applicable thresholds of significance to also be cumulatively considerable (SMAQMD 2021 p.8-1).

Demolition, Construction, and Operations

Ground-disturbing activities, exhaust emissions, building construction, asphalt paving, and application of architectural coatings generate criteria air pollutants and ozone precursors. Construction-related emissions would occur during demolition and redevelopment of the Creekside School campus over an approximately 5.5-acre area, and during installation of the new portable classrooms at Encina High School over an approximately 0.3-acre area. As noted above, SMAQMD thresholds are used as a proxy for determining whether impacts would be cumulatively considerable. As discussed in Impact 3.2-1, construction-related emissions would not exceed the SMAQMD-recommended thresholds of significance during construction or operation of the proposed project; therefore, the proposed project's construction- and operation-related emissions would be **less-than-cumulatively-considerable**.

Toxic Air Contaminants

Construction activities generate diesel particulate matter (DPM) emissions from the use of off-road diesel-powered equipment required for demolition, site grading and excavation, paving, and other construction activities.

These activities may expose nearby receptors to toxic air contaminant (TAC) emissions. However, none of the related projects considered in this cumulative analysis are close enough to the project site to result in cumulative TAC emissions, due to the dispersive nature of DPM at short distances from the location in which they are generated. Demolition and construction of the proposed project would be short-term and temporary, and would involve a small area of land. Furthermore, there are no high-volume roadways in close proximity to the project site that could contribute to operational TACs, and due to the small size of the school campus, substantial TAC generation from project operation would not occur. Therefore, the proposed project would not result in substantial TAC generation from construction or operation. A significant cumulative impact from the related projects would not occur, and the project **would not result in a cumulatively considerable contribution** related to TACs.

Odors

Odor impacts are generally localized and do not combine with odor impacts in nearby areas to increase the severity of impacts. Because odor emissions from various land uses differ in nature, these emissions would not cumulatively contribute to each other to expose nearby receptors. There is no significant cumulative impact from the related projects.

During demolition and construction activities, exhaust odors from diesel engines and emissions associated with asphalt paving and the application of architectural coatings may be considered offensive to some individuals. However, the proposed project is small in size (reducing the amount of odors), odors would be short-term and temporary, and would disperse rapidly with distance from the source; therefore, demolition and construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Therefore, the project **would not result in a cumulatively considerable contribution** to a significant cumulative impact from demolition and construction-related odors.

In addition, the operation of schools is not typically considered to be a source of objectionable odors. The proposed project may include minor sources of odors, such as the operation of landscaping equipment and cooking for the cafeteria at the redeveloped Creekside School campus, which would take place only intermittently each day. Furthermore, because the project site has been operated as a school since 1953, these odors are an existing condition. No operational odors would be generated by the portable classrooms at Encina High School. Due to the intermittent nature of the minor sources of odor and lack of operation of any facilities typically considered to be substantial sources of objectionable odors, and the fact that odors generated at the project site would not change from the existing school use, the project's impact from exposing sensitive receptors to substantial odors would be **less than cumulatively considerable**.

BIOLOGICAL RESOURCES

Past and present actions by humans have substantially altered biological resources in the Central Valley region of California including Sacramento County, specifically, compared to historical conditions. Among the most important of these past actions have been conversion of natural vegetation and habitats to agricultural and developed land uses; fill and alteration of aquatic habitats; flood control and water supply projects; and the introduction of nonnative species, which in many cases have competed with, preyed upon, and degraded habitat for native species. More recently, the large-scale conversion of agricultural habitats to urban land uses has resulted in substantial loss of habitat for species. Additionally, widespread habitat and hydrologic alteration in Central Valley streams and rivers has resulted in declines of federally threatened fish species. Past, present, and foreseeable future urbanization in Sacramento County has contributed substantially to the loss of grassland,

wetland, and agricultural habitats that are important to many species in the region. Past, present, and foreseeable urbanization and habitat alterations are a significant cumulative impact.

The areas affected by the project are developed properties and managed recreational fields. The proposed Katherine Johnson Middle School site is surrounded primarily by single-family and multi-family residential developments, except for the Town & Country Pre-School and Daycare facility (at 2550 Belpoint Lane), which borders the project's southwestern boundary. Due to a lack of suitable habitat combined with the highly disturbed nature of the ruderal vegetation and trees within the project site, and the proximity of this vegetation community to roadways and developed properties, it is unlikely that special-status wildlife species would occur in or near the project site. Only low-quality foraging habitat for special-status bird species is present within the project footprint. No special-status plant species were observed during the reconnaissance survey. No suitable habitat for special-status plants is present within the project footprint. There are no sensitive natural communities within the project footprint. There are no designated critical habitats in the proposed project footprint or the immediate vicinity. The riparian corridor adjacent to the project offers marginally suitable nesting habitat for birds protected by the Migratory Bird Treaty Act, but Mitigation Measure 3.3-1 would avoid impacts to special-status and common nesting birds. The project site is within 25 feet of Chicken Ranch Slough, a tributary to the American River. Construction activities could have direct or indirect impacts on the water quality of Chicken Ranch Slough and cumulative development activities along Chicken Ranch Slough could represent a cumulative impact. However, mitigation measures, including implementing avoidance and minimization measures during construction, and meeting water quality requirements, as described in Section 3.3, "Biological Resources" and Section 3.7, "Hydrology and Water Quality," would reduce impacts to a less-than-significant level. The project's incremental contribution to the cumulative impact on biological resources in the region would be **less than cumulatively considerable with mitigation**. Because the Encina portable classrooms portion of the project would involve placement of portable classrooms on an existing developed parking lot, the biological resources assessment was focused on the proposed Katherine Johnson Middle School site.

CULTURAL AND TRIBAL CULTURAL RESOURCES

Sacramento County has been inhabited by indigenous and historic peoples for thousands of years. Cultural resources in the region generally consist of prehistoric sites, historic sites, historic structures, and isolated artifacts. Urbanization and intensive agricultural use in the region has caused the destruction or disturbance of numerous prehistoric sites, and the loss of historic structures. From the latter half of the 20th century to the present, prehistoric and historic structures have been disturbed and destroyed. During this period, regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts. However, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds. Therefore, the related projects considered in this cumulative analysis would result in a significant cumulative impact.

Though federal, State, and local laws can protect cultural resources, the proposed project, in combination with other development in the region, could contribute to the loss of significant cultural resources. Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. The loss of any one archaeological site affects all others in a region since these resources are best understood in the context of the entirety of the cultural system of which they are a part. The boundaries of an archaeologically important site extend beyond the project site. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region.

The proposed project will include earthmoving activities and grading during on-site construction. As of 2022, there are no known historical resources or unique archaeological resources or human remains identified within the proposed project site as a result of the cultural resource investigations performed for this EIR. Furthermore, the project site is on a Pleistocene-aged landform (which is too old to contain remains of human civilizations); therefore, it is unlikely that undiscovered subsurface cultural resources are present. The Encina High School parking lot where the portable classrooms for the Adult Education Center would be installed, however, is comprised of artificial fill underlain by Holocene-age Basin Deposits; the Basin Deposits are young enough to have potentially supported human civilizations. Finally, the entire project site, and the Encina High School campus where the portable classrooms would be located, have been previously disturbed during construction of the present school campuses and therefore it is unlikely that cultural resources would be discovered during project implementation. However, a possibility still exists that archaeological features could be discovered in the project site. Implementing mitigation measures described in Section 3.4, “Cultural Resources,” and Section 3.10, “Tribal Cultural Resources,” would ensure that any cultural resources encountered during construction, including archaeological features, tribal cultural resources, or potential human remains, would be treated in an appropriate manner under CEQA and other applicable laws and regulations. Since the potential to encounter cultural resources is low, and since the recommended mitigation measures would further reduce the potential for adverse effects, the project’s contribution to cumulative impacts on cultural resources would be **less than cumulatively considerable with mitigation**.

ENERGY

Energy efficiency or the lack of energy efficiency is not itself an environmental impact, though it could potentially be an indicator of an environmental effect. All adverse environmental effects related to the proposed project’s energy demand are evaluated throughout the environmental topic-specific sections of this EIR and this chapter. Operations of the proposed project would continue use of the existing school campus, with an additional 100 students as compared to the current Katherine Johnson Middle School student population. The proposed redevelopment at the Creekside School site is anticipated to result in similar potential transportation-related energy consumption as compared to existing conditions. The location, density, mix of land uses, and quality of the multi-modal transportation system is directly related to the amount of travel and transportation-related energy demands. The County encourages the use of energy conservation devices and passive design concepts which make use of natural climate to increase energy efficiency. The Sacramento Area Council of Governments (SACOG) is the Sacramento region’s transportation planning agency. As a part of the Metropolitan Transportation Plan and Sustainable Communities Strategy, SACOG studies vehicular travel demand – how much vehicular transportation is required to serve the region’s communities. The proposed project site is within a “low VMT area” as identified by SACOG – an area where the density, mix of land uses, access to non-vehicular transportation options, and other factors result in a reduced need for vehicular transportation compared to the balance of the region.¹

The increased demand for electrical and natural gas supplies and infrastructure is a byproduct of development in Sacramento County and the region. Sacramento County and the City of Sacramento implement general plans and other policy documents that include goals and policies to reduce energy demands through the use design features, building materials, and building practices; encourage the use of renewable energy sources; and ensure adequate

¹ VMT is an acronym for vehicle miles traveled. Please see SACOG’s website for more details:
<https://sacog.maps.arcgis.com/apps/webappviewer/index.html?id=0eac172e44514776b2f30e4324652f88&extent=-13567338.6225%2C4599309.7898%2C-13330078.0867%2C4789485.1162%2C102100>

electricity and natural gas and related distribution systems are available to meet energy demands. In addition, many service providers encourage energy conservation through programs, such as offering rebates for installation of energy efficient appliances and lighting fixtures.

The proposed project and the related projects considered in this cumulative analysis would be required to comply with the Building Energy Efficiency Standards (Title 24 of the California Code of Regulations), including the Building Energy Efficiency Standards, and the California Green Building Standards Code, resulting in reductions in energy demand. These Codes were developed to enhance the energy efficiency of the design and construction of buildings and construction practices. Since these regulations are likely to change over time, all new development, including the proposed project and the projects considered in this cumulative analysis, will need to comply with energy regulations or standards that are in effect at the time of construction. There is no significant cumulative impact, and the project **would not result in a cumulatively considerable contribution** to a significant cumulative impact related to the wasteful, inefficient, excessive, and unnecessary consumption of energy.

GEOLOGY AND PALEONTOLOGICAL RESOURCES

The geographic scope for paleontological resources is based on a regional approach that includes rock formations throughout the Central Valley. However, the potential for unique paleontological resources to occur is site specific, and depends on the following factors: (1) the type of rock formations that are present both on and underneath the ground surface, (2) the type and amount of ground disturbance, and (3) the depth of ground-disturbing activities.

Strong Seismic Ground Shaking

The greater Sacramento region has historically not been seismically active. The nearest active faults are located approximately 37–45 miles to the northwest and southwest, respectively. The proposed Katherine Johnson Middle School campus, Encina High School, and the surrounding area are in the lowest potential shaking hazard categories as classified by the California Geological Survey (Branum et al. 2016). All project-related facilities would be designed and constructed in accordance with standard engineering practices and CDE requirements, including California Code of Regulations Title 5, Division, Chapter 14, Sections 14001-14036, which requires preparation of a site-specific geotechnical and engineering report and implementation of recommendations contained therein to reduce seismic, geologic, and soils hazards. Furthermore, the proposed and the related projects considered in this cumulative analysis are required by law to be designed and constructed in accordance with the current edition of the California Building Standards Code (CBC), which contains engineering and design requirements that are specifically intended to reduce the loss of life and property from seismic hazards to the maximum extent practicable. Therefore, implementation of the related projects considered in this cumulative analysis would not result in a cumulative impact, and the proposed project **would not result in a cumulatively considerable contribution** to cumulative impacts from strong seismic ground shaking.

Soil Erosion

Development and construction at the project sites and the related project sites considered in this cumulative analysis would involve grading and construction activities for development of institutional, residential, and business uses, infrastructure, and roadways, including vegetation removal, grading, staging, trenching, excavation, and other activities that would result in the temporary and short-term disturbance of soil and would expose

disturbed areas to storm events. In addition, soil disturbance during summer as a result of construction activities could result in soil loss due to wind erosion. However, the proposed project and the related projects considered in this cumulative analysis are required to submit grading plans and obtain and implement grading permit terms and conditions as issued by the relevant County/City jurisdictions. Furthermore, the proposed project and the related projects are required by law to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) with appropriate Best Management Practices (BMPs), such as source control, revegetation, and erosion control, to maintain surface and groundwater quality conditions in adjacent receiving waters. Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the project would result in a **less-than-cumulatively-considerable contribution** to temporary, short-term construction-related soil erosion impacts.

Paleontological Resources

Fossilized remains of vertebrate animals have been recovered throughout the Central Valley and the greater Sacramento region in a variety of paleontologically-sensitive rock formations, such as the Pleistocene-age Modesto and Riverbank Formations. These formations are widespread throughout the Sacramento region, and may occur on the ground surface and/or at shallow–moderate depths beneath the ground surface (depending on location). Therefore, any or all of the related projects considered in this cumulative analysis could be, and likely are, located in paleontologically-sensitive rock formations. Because all the related projects would require earthwork, including grading and excavation activities, they all have the potential to encounter and potentially damage or destroy unique paleontological resources during project-related construction activities. Therefore, the related cumulative projects considered in this analysis could result in cumulatively significant impacts to unique paleontological resources during construction.

As described in Section 3.5, “Geology and Paleontological Resources,” installation of the portable classrooms at Encina High School would take place primarily in an asphalt parking lot, and a small area of grass, which are comprised of artificial fill underlain by Holocene-age Basin Deposits (which are not paleontologically sensitive). However, grading and excavation activities associated with Creekside School redevelopment would occur in the Riverbank Formation, which is considered paleontologically sensitive due to the large number of vertebrate fossils that have been recovered from this formation in the Sacramento region and throughout the Central Valley. Although much of the project site has already been disturbed from construction of the existing Creekside school, redevelopment would include excavation activities on an additional approximately 2 acres of land that currently does not contain buildings or other foundations, and therefore native sediments could be encountered. Therefore, the proposed project could also result in a significant cumulative impact. However, implementation of Mitigation Measure 3.5-2 would require construction worker personnel training related to the nature and types of fossils that could be encountered and the notification procedures to be followed if fossils were encountered, including the requirement to cease work in the vicinity of any fossil find, evaluation of fossil resources by a qualified paleontologist, and preparation of a recovery plan (which may include on-site monitoring during any additional ground-disturbing activities). Thus, the proposed project’s contribution to cumulative construction impacts on unique paleontological resources would be **less-than-cumulatively-considerable with mitigation**.

GREENHOUSE GAS EMISSIONS

Greenhouse gases (GHGs) typically persist in the atmosphere for extensive periods time—long enough to be dispersed throughout the globe and result in long-term global impacts that contribute to climate change. As such, the proposed project would not, by itself, contribute significantly to climate change; however, cumulative

emissions from many projects and plans all contribute to global GHG concentrations and the climate system. Accordingly, GHG emissions are inherently cumulative. Please see Section 3.6, “Greenhouse Gas Emissions,” of this EIR for the analysis of the proposed project’s contribution to the significant cumulative impact of climate change.

HAZARDS AND HAZARDOUS MATERIALS

The health and safety impacts associated with a proposed project usually occur on a project-by-project basis, rather than cumulatively. Development associated with the proposed project and future development within the area could result in increased site-specific hazard-related impacts, because development of the proposed project and the related projects considered in this cumulative analysis would involve the storage, use, disposal, and transport of hazardous materials to varying degrees during demolition, construction, and operation. None of these materials would be acutely hazardous. The storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies, and therefore construction companies and businesses that would handle any hazardous substances during individual project-specific demolition, construction, and operation would be required by law to implement and comply with these existing hazardous-materials regulations. The proposed project and the related projects considered in this cumulative analysis would not combine together to create cumulative impacts related to the storage, use, disposal, and transport of hazardous materials. **No cumulative impact** would occur.

HYDROLOGY AND WATER QUALITY

Local hydrology, drainage, and water quality conditions are often affected by regional activities, in addition to local activities and related projects. Past and present projects from the Sierra Nevada (dams and reservoirs, mining operations, logging, urban development) to the Sacramento–San Joaquin Delta (water supply diversions, agricultural diversions, flood control projects, urban development, river channelization) affect hydrology and water quality conditions in Sacramento County, including the Lower American River Watershed where the project site and the Encina High School are located.

Construction-Related Degradation of Water Quality or Interference with Implementation of the Basin Plan

Water quality in the project region is under the jurisdiction of the Central Valley RWQCB, which is charged with protecting beneficial uses of surface water and groundwater as identified in the *Sacramento and San Joaquin River Basin Plan* (Basin Plan) (Central Valley RWQCB 2019). Demolition and construction activities associated with redevelopment of the project site would create the potential for soil erosion and sedimentation of drainage systems, both within and downstream of the project site. The construction process may also result in accidental release of pollutants to surface waters including Chicken Ranch Slough. (Because groundwater is approximately 90 feet below the ground surface underneath the project site, it is unlikely that groundwater would be contaminated by any activities at the project site.) Installation of the portable classrooms at Encina High School would only disturb an approximately 0.3-acre area comprised primarily of asphalt pavement. Soil erosion and accidental spills of hazardous materials could result in downstream sedimentation and degradation of water quality. However, as discussed in detail in Section 3.7, “Hydrology and Water Quality” of this EIR, the District is required by law to prepare and implement a SWPPP with appropriate BMPs at the project site, such as source control, revegetation, and erosion control, to maintain surface and groundwater quality conditions in adjacent receiving waters. Just as with the proposed project, the related projects considered in this cumulative analysis

would also be required to adhere to applicable requirements designed to prevent water quality degradation including SWPPPs with BMPs, and grading plans and implementation of County or local city grading permit terms. Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable incremental contribution** to temporary, short-term construction-related degradation of water quality or interference with implementation of the Basin Plan.

Operational Degradation of Water Quality or Interference with Implementation of the Basin Plan

The proposed project could change the long-term potential for contaminant discharges at the project site because the new school would be larger than the existing school, and thus there would be a potential for the project to cause or contribute to increased long-term discharges of urban contaminants (e.g., oil and grease, fuel, trash, pesticides, fertilizers). Although new portable classrooms would be installed at Encina High school, they would be constructed on an existing parking lot. The District is required to comply with the Sacramento County Regional MS4 Permit, which regulates operational water quality. The existing school campuses already have existing on-site drainage systems. A tie-in to the existing system would be provided for the portable classrooms at Encina. The existing system at the Creekside campus would be enlarged and/or upgraded as necessary to serve the proposed redeveloped, larger school. Water quality BMPs, such as vegetated swales, constructed wetlands, and infiltration trenches have been shown to be successful in controlling water quality and avoiding water quality impacts, and would be implemented as part of redevelopment at the project site subject to approval from the CDE. The related projects considered in this cumulative analysis would be required to meet similar requirements, including the Sacramento Areawide NPDES MS4 Permit and stormwater pre-treatment measures contained in the *Sacramento Region Stormwater Quality Design Manual* (SSQP 2021). Therefore, implementation of the related projects considered in this cumulative analysis would result in cumulatively less-than-significant impact, and the project would result in a **less-than-cumulatively considerable incremental contribution** to cumulative impacts from operational degradation of water quality or interference with implementation of the Basin Plan.

Exceedance of Drainage Systems Resulting in Hydromodification or Flooding

Potential changes to the hydrologic and geomorphic processes in a watershed as a result of impervious surfaces and exceedance of drainage infrastructure capacity from urbanization include increased runoff volumes and dry weather flows, increased frequency and number of stormwater runoff events, increased long-term cumulative duration of flows, as well as increased peak flows. Exceedance of drainage infrastructure capacity results in hydromodification, which intensifies the erosion and sediment transport process, and often leads to changes in stream channel geometry, and streambed and streambank properties, which can result in degradation and loss of riparian habitat, and downgradient sediment deposition. In addition, operational stormwater discharges, if not properly detained, could exceed drainage system capacity resulting in flooding. The project site has an existing on-site drainage system; however, the proposed site redevelopment would encompass approximately 2 additional undeveloped acres, necessitating upgrades and improvements to the drainage system. The additional portable classrooms at Encina would not require changes to the drainage system because the drainage system capacity would be available for use by the Adult Education Center relocated to Encina. Implementation of Mitigation Measure 3.7-1 would require the District to prepare a final drainage plan for the proposed project that incorporates Central Valley RWQCB requirements to appropriately convey off-site upstream runoff through the project site, and demonstrate that project-related on-site runoff would be appropriately detained and managed with other improvements (e.g., source controls) to reduce flooding and hydromodification impacts, as required by the

Sacramento Areawide NPDES MS4 Permit. The related projects considered in this cumulative analysis would be required to meet similar requirements, including drainage design that meets the *Sacramento City/County Drainage Manual Volume 2: Hydrology Standards* (County and City of Sacramento 2006), and the *Hydromodification Management Plan* (SSQP 2017). Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable with mitigation incremental contribution** to cumulative impacts associated with exceedance of stormwater drainage systems resulting in hydromodification and flooding.

Impedence or Redirection of Flood Flows

The proposed portable classrooms at Encina High School would be installed in an area that is part of a 200-year floodplain under the jurisdiction of the Central Valley Flood Protection Board (CVFPB), and within an area classified by Sacramento County as requiring floodproofing to meet Urban Levee of Flood Protection (ULOP) standards related to the 200-year floodplain. Some of the related projects considered in this cumulative analysis are also located within the 200-year ULOP floodplain (U.S. Army Corps of Engineers and California Reclamation Board 2002; DWR 2022; Sacramento County 2017: Appendix D). All projects that would be located within the County-designated ULOP area require compliance with the County's Floodplain Management Ordinance, which sets forth specific floodproofing standards that must be incorporated into new residential and non-residential development. Furthermore, a permit for development within the 200-year ULOP area is required from the County Floodplain Administrator, that contains terms and conditions that are designed to reduce flood damage at each site-specific project. Implementation of Mitigation Measure 3.7-5 would require SJUSD to prepare a hydraulic study demonstrating that the proposed portable classrooms at Encina High School would not substantially increase upstream or downstream flooding, would not substantially increase the base water surface elevation, include recommendations for floodproofing that would be implemented by the District, and to obtain a permit consistent with County Floodplain Ordinance requirements. Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable with mitigation incremental contribution** to cumulative impacts associated with impedence or redirection of flood flows.

Groundwater Sustainability

The proposed project and the related projects considered in this cumulative analysis are located within the North American Groundwater Subbasin, which is not in a condition of overdraft. As required by the Sustainable Groundwater Management Act, a Groundwater Sustainability Plan (GSP) (GEI Consultants 2021) has been prepared and submitted to the California Department of Water Resources for approval. The development of approximately 2 acres of additional project-related impervious surfaces at the project site would reduce the amount of water available for local groundwater recharge. However, landscape irrigation activities would continue to occur, particularly in the northern portion of the project site, which would include approximately 3.75 acres of turf playfields. A portion of this applied irrigation water reaches the aquifer as recharge from percolation through the soil. The portable classrooms at Encina High School would be installed primarily in an area of existing asphalt pavement, and therefore would have no impact on groundwater recharge. Neither school uses groundwater as a source of water supply, and no groundwater wells would be drilled at either campus as part of the proposed project. Potable water would continue to be supplied by the Sacramento Suburban Water District (SSWD), which has determined that sufficient water supplies will be available in all water year types during the 2025–2045 planning horizon, to serve future projected development (Brown and Caldwell 2021). The related

projects considered in this cumulative analysis would also result in the creation of additional impervious surfaces, but would also not include drilling of new groundwater wells. Modeling conducted for the GSP indicates that even with future regional development through 2040 (with implementation of the specific management actions included in the GSP), there will be greater inflows than outflows in the North American Subbasin, resulting in an increase in groundwater storage over time. The GSP includes specific projects and management actions that will be undertaken in the North American Subbasin to promote groundwater sustainability (GEI Consultants 2021). Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable incremental contribution** to cumulative impacts associated with substantial reduction in groundwater recharge or depletion of groundwater supplies such that a implementation of a groundwater sustainability plan would be impaired.

NOISE AND VIBRATION

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the project's incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects that are in the direct vicinity of the proposed project are relevant in a cumulative context.

Implementation of the proposed project would reduce construction-related noise by implementing noise reduction measures identified in Section 3.8, "Noise and Vibration." Compliance with applicable noise regulations and mitigation from environmental documents prepared for related projects would reduce demolition- and construction-related noise impacts from other projects in the immediate vicinity of the project site. Construction projects occurring simultaneously would not result in cumulative noise or vibration impacts unless sites are being developed in close proximity to one another and expose sensitive receptors to significant noise levels at the same time. Because the closest proposed development (the Arcade Middle School and the Arden Middle School [construction now complete] projects), are approximately 1.25 miles northeast and southeast, respectively, from the Creekside School project site and noise and vibration attenuate with distance, any construction occurring simultaneously would not be cumulatively considerable. Similarly, the nearest projects considered in this cumulative analysis from the portable classrooms at Encina High School are approximately 1.5 miles from the high school. Therefore, a cumulatively significant impact would not occur, and the proposed project would **not result in a cumulatively considerable contribution** to impacts associated with short-term construction-related noise and vibration.

Adding traffic to the local roadway network would result in increase in traffic noise levels in the vicinity of the project site. Possible future development within the proposed project area could result in an increase in traffic volumes on the local roadway network and, consequently, an increase in noise levels from traffic sources along affected roadway segments. To assess the impact of project-generated traffic increases, traffic noise levels associated with the proposed project were calculated for roadway segments in the project study area using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise levels were modeled under future weekday and weekend conditions, with and without project implementation. Average daily traffic (ADT) volumes and the distribution were obtained from the traffic study prepared to support the proposed project (AECOM 2022). Additional input data included day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths.

The project's contribution to the future traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic. Table 6.1-3 summarizes the modeled traffic noise levels for future conditions at 50 feet from the centerline of affected roadway segments in the vicinity of the proposed project site. Modeled increases that would be considered substantial, an increase of 3 dBA, in comparison to future no project conditions are indicated in bold. Modeled roadway noise levels assume no natural or artificial shielding between the roadway and the receptor.

As shown in Tables Table 3.8-13, the modeling conducted shows that future development, would result in traffic noise level increases up to (nine) 9 dBA, compared to noise levels without the project. In general, as stated above, a 1-dB increase in noise level is imperceptible, a 3-dB increase is barely perceptible, and a change of 5 dB generally fosters a noticeable change in human response. Closer to the proposed Katherine Johnson Middle School, along Kent Drive south of Miramar Road to El Camino Avenue, and along Miramar Road east of Kent Drive, traffic noise would increase by approximately 6 dB above ambient level of 55 dB L_{dn} (measured by LT-02, Table 3.8-1). As shown in Exhibit 3.8-1, LT-02 is measuring noise from Belport Lane with no building shielding in between the measurement location and the roadway. However, the noise-sensitive areas (backyards) of the residences along this segment of the road are shielded by the buildings of the houses. Assuming an average 7-dB reduction by the buildings, traffic noise levels at the residences along these segments would be about 7-dB lower than presented in Table 3.8-5.² Therefore, long-term noise levels from project-generated traffic sources would not exceed the standards established by the County's General Plan and the permanent increase in ambient noise levels would be the thresholds and would not result in disturbance of the residences along the affected roadways. As a result, this impact would be **less than cumulatively considerable**.

² Effective noise barriers typically reduce noise levels by 5 to 10 decibels (dB), cutting traffic noise by as much as one half (FHWA 2017).

Table 6.1-3. Predicted Traffic Noise Levels, Future 2035 with and without Project

Roadway	Segment		L _{dn} at 50 Feet, dB				
	From	To	No Project 2035	Allowable Noise Increment ^a	Plus Project 20235	Increase above No Project	Significant Impact?
Kent Drive	Miramar Road	North of Miramar Road	33.9	5 ⁺	-- ^b	--	-- ^b
Kent Drive	Miramar Road	South of Miramar Road	44.5	5 ⁺	53.5	8.9	Yes
Miramar Road	Kent Drive	East of Kent Drive	44.1	5 ⁺	50.5	6.3	Yes
Morse Avenue	Miramar Road	North of Miramar Road	56.3	5 ⁺	56.5	0.2	No
Morse Avenue	Miramar Road	South of Miramar Road	56.2	5 ⁺	57.2	1.0	No
Miramar Road	Morse Avenue	West of Morse Avenue	44.4	5 ⁺	51.9	7.5	Yes
Belport Lane	Elvyra Way	North of Miramar Road	38.6	5 ⁺	38.6	0.0	No
Belport Lane	Elvyra Way	South of Miramar Road	52.7	5 ⁺	52.7	0.0	No
Elvyra Way	Belport Lane	West of Belport Lane	52.5	5 ⁺	52.5	0.0	No
Belport Lane	El Camino Avenue	North of El Camino Avenue	51.0	5 ⁺	52.2	1.2	No
El Camino Avenue	Belport Lane	East of Belport Lane	64.8	1.5 ⁺	68.1	3.3	No
El Camino Avenue	Belport Lane	West of Belport Lane	65.0	1.5 ⁺	68.1	3.1	No
Kent Drive	El Camino Avenue	North of El Camino Avenue	48.4	1.5 ⁺	55.6	7.1	Yes
El Camino Avenue	Kent Drive	East of Kent Drive	67.9	1.5 ⁺	67.9	0.0	No
El Camino Avenue	Kent Drive	West of Kent Drive	67.9	1.5 ⁺	68.2	0.3	No

Notes: dB = decibels; dBA = A-weighted decibels; L_{dn} = day-night average noise level.

^a County Policy NO-9: Significant increase for a pre-project noise level of less than 60 dB L_{dn}, would be 5+ dB.

^b Roadway segment would be removed under project operation.

Traffic noise levels are predicted at a standard distance of 50 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

Source: Data modeled by AECOM in 2022

Because fewer adult school students would be moving to Encina High School as compared to the Kathleen Johnson Middle School students that would be leaving, the proposed project would result in a reduction of traffic at the Encina High school campus and surrounding surface streets such as Bell Street. Therefore, a cumulatively significant impact would not occur, and the proposed project would **not result in a cumulatively considerable contribution** to impacts associated with long-term increases in traffic noise levels. There are no sources of operational sources in the vicinity of the proposed Katherine Johnson Middle School site that the project's noise would combine with to create a significant cumulative impact.

With respect to cumulative long-term noise exposure for project users on site, the project site and the Encina High School have been operated as school campuses for many years, and there are no known noise-generating projects (stationary and mobile sources) planned in the vicinity of either campus that would expose the students to cumulatively excessive noise levels. The planned outdoor recreation areas would not be operated at night, and furthermore, Section 6.68.090 of the Sacramento County Code exempts noise from school grounds, parks, and public playgrounds, and provided they are owned and operated by a public entity (such as SJUSD) or by a private school. Therefore, a cumulatively significant impact would not occur, and the proposed project would **not result in a cumulatively considerable contribution** to impacts associated with on-site noise levels from future development in the vicinity of the proposed project.

TRANSPORTATION

Section 3.9 of this EIR is a summary of transportation-related impacts of the project, including conflicts with applicable circulation policies, the project's increase in vehicular travel demand, the project introducing transportation hazards, and impacts to temporary and long-term emergency access.

There are no conflicts with any program, plan, ordinance, or policy related to circulation that would lead to any significant adverse physical environmental impact, so the project would **not have any cumulatively considerable contribution** to any cumulative impact. As outlined under Impact 3.9-2, public schools would have a less-than-significant impact related to vehicle miles traveled (VMT) based on their local-serving nature. The project site is in a low-VMT area, is in a Transit Priority Area, and in an Environmental Justice Community where Sacramento County has committed to prioritizing new sidewalks, particularly along major streets and near parks and schools. Since the proposed Katherine Johnson Middle School is in an existing developed area and would serve students in the surrounding area, if there is additional residential development in the vicinity of the school, this could lead to more efficient transportation, as additional students would be able to reach the school by walking, riding their bicycle, carpooling, or through relatively shorter vehicular trips. There would be a **less than cumulatively considerable contribution**. The project does not introduce any transportation-related hazard. The project site is surrounded by existing development, and there are no vacant properties that could accommodate substantial development, nor are there underutilized properties in the direct vicinity of the project site, the development of which could lead to a cumulative temporary impact to emergency access. There would be a **less than cumulatively considerable contribution**.

UTILITIES AND SERVICE SYSTEMS

Water Supply and Conveyance

The existing project site is served with potable water by SSWD. The proposed project includes relocation of on-site connections to utility infrastructure for the new buildings, as necessary. The proposed project would not be large enough to require off-site capacity expansions for water, wastewater conveyance or treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. SSWD provides for conjunctive water use throughout its service area through a combination of groundwater pumped from a network of approximately 70 wells, and purchased surface water, as its supply sources. Groundwater is obtained from the southern portion of the North American Groundwater Subbasin, which is managed by the Sacramento Groundwater Authority. SSWD purchases surface water from the Placer County Water Agency, U.S. Bureau of Reclamation, San Juan Water District, and the City of Sacramento. Water demands for all types of land uses in the SSWD service area are planned for in SSWD's *Urban Water Management Plan* (UWMP) (Brown and Caldwell 2021), and are anticipated to remain relatively constant from 2025 through 2045, primarily because the SSWD service area is already urbanized. The SSWD UWMP determined that in normal water years, the combination of purchased surface water and pumped groundwater will be sufficient to meet demand in SSWD's service area. SSWD also determined that in single and multiple dry years during the 2025–2045 planning horizon, groundwater will be able to meet demands when surface water supplies are reduced or not available (Brown and Caldwell 2021). Thus, sufficient water supplies will be available to meet existing and projected future demand throughout the 20-year planning horizon in SSWD's service area. Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable incremental contribution** related to water supply and conveyance.

The Encina High School campus is served by the California American Water Company. Because approximately 550 middle school students would be transferring from Encina High School to the project site, with only approximately 300 adult education students transferring to Encina, the water demand at Encina High School would decrease, and the proposed project would have **no cumulative contribution** related to water supply for the portable classrooms at Encina.

Wastewater Conveyance and Treatment

The Sacramento Area Sewer District (SASD) provides wastewater collection and conveyance to a service area that includes the urbanized, unincorporated areas of Sacramento County, the cities of Citrus Heights, Elk Grove, and Rancho Cordova, portions of the cities of Sacramento and Folsom, and the delta communities of Freeport, Courtland, and Walnut Grove. SASD has prepared a *System Capacity Plan* (SASD 2020) to evaluate existing sewer system service areas that require upgrades or improvements, propose projects to achieve the identified upgrade and improvement goals, and size facilities in new areas where wastewater conveyance will be needed in the future. The *System Capacity Plan* includes projects and estimated capital costs to upgrade capacity in existing sewer pipelines, where necessary. Wastewater from SASD is discharged into the larger Sacramento Regional County Sanitation District (Regional San) interceptor system and subsequently treated at the Sacramento Regional Wastewater Treatment Plant (WWTP) located east of the Sacramento River near Elk Grove.

The reconfigured and remodeled school on the existing Creekside campus would include minor on-site renovations or replacements, as necessary, of on-site conveyance pipelines that tie-in to SASD collectors off the project site. The project would not be large enough to require off-site capacity expansions for water, wastewater conveyance or treatment, storm water drainage, electric power, natural gas, or telecommunications facilities.

SASD's *System Capacity Plan* identifies areas that would have insufficient capacity under the future projected development conditions of full buildout of the SASD service area (which encompasses 278 square miles and serves approximately 1.2 million people). With projected future capital improvement projects throughout its service area, to which new development is required to contribute funding through the County permitting process, SASD would have capacity in its sewer conveyance lines through full buildout of the regional SASD service area (SASD 2020). Furthermore, Regional San expects per-capita consumption to fall 25 percent in the future through the ongoing installation and use of water meters and compliance with conservation mandates such as the state Water Conservation Act of 2009 (SB X7-7). Therefore, Regional San expects that water conservation measures throughout its service area would allow the existing 181 mgd average dry-weather flow capacity at the Sacramento Regional WWTP to be adequate for at least 40 years (Ascent Environmental 2014:6-2). Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable incremental contribution** related to wastewater conveyance and treatment.

The restroom building for the portable classrooms at Encina High School would require minor trenching for installation of wastewater conveyance piping, which would tie-in to the school's existing system. Because approximately 550 middle school students would be transferring from Encina High School to the proposed Katherine Johnson Middle School project site, with only approximately 300 adult education students transferring from Creekside to Encina, the wastewater conveyance and treatment from Encina High School would decrease, and there would be **no cumulative contribution** related to wastewater for the portable classrooms at Encina.

Solid Waste

The proposed project includes demolition of the existing school buildings at the project site (approximately 25,928 square feet of floor space), and all of the existing pavement. Approximately 0.3 acre of asphalt pavement would be demolished at the Encina High School campus for the new portable classrooms. Solid waste services, including recycling of building materials, for both the proposed project and the related projects considered in this cumulative analysis, are available from several service providers in the area. The Florin Perkins Public Disposal Center and the L&D Landfill are permitted to receive and handle recycling of construction and demolition debris. During the project's operational phase, the North Area Recovery Station in North Highlands (which transfers waste to the Kiefer Landfill) is the closest facility that accepts standard business and household wastes. The L&D Landfill also accepts standard business and household wastes from the surrounding area. Because all of these solid waste facilities have capacity to receive project waste during the demolition, construction, and operational phases; because the District would continue to implement a recycling program; and because the proposed project and the related projects are required to follow state laws required to recycling, the proposed project and the related projects would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, implementation of the related projects considered in this cumulative analysis would result in a cumulatively less-than-significant impact, and the proposed project would result in a **less-than-cumulatively-considerable incremental contribution** related to solid waste.

6.2 GROWTH-INDUCING IMPACTS

6.2.1 INTRODUCTION TO GROWTH-INDUCING IMPACTS

CEQA (CEQA Guidelines, CCR Section 15126.2[d]) requires an examination of the direct and indirect impacts of the proposed project, including the potential of the project to induce growth leading to changes in land use patterns and population densities and related impacts on environmental resources. Specifically, CEQA states that the EIR shall:

[D]iscuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring the construction of new facilities that could cause significant environmental effects. Also discuss characteristics of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth-inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for example, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises); or

- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area) or adding new urban development adjacent to undeveloped land.

Growth-inducement itself is not an environmental impact, but it may lead to foreseeable environmental impacts. These environmental impacts may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

6.2.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

The proposed project does not include new commercial, office, or industrial land uses that would generate new permanent employment opportunities. Katherine Johnson Middle School teachers and staff are currently co-located with Encina High School at the Encina campus. The proposed project relocates an existing middle school to a new site. The project also involves the relocation of an existing adult education center from the project site to the Encina High School campus. Future teacher and staff positions would be filled by existing Sacramento region residents and transfers from within the District. Due to the small size and short-term nature of construction, the project would not induce permanent relocation of construction workers to the Sacramento region.

Redevelopment of the Creekside School campus would not directly induce unplanned growth by increasing the total SJUSD enrollment or the population in the District. The need to redevelop the Creekside School campus has been known by the District for some time, based on population growth and demographic changes in the District's service area. Katherine Johnson Middle School teachers and staff are currently co-located with Encina High School at that campus. Moving those students and staff to the redeveloped Creekside School campus would result in a benefit by providing educational opportunities at a location with appropriate space and facilities dedicated to middle school student learning. The redeveloped Creekside campus would provide space for an additional 100 students because continued, projected population growth in the District's service area requires the District to plan for and improve facilities, particularly in the western portion of the District's service area.

The portable classrooms at Encina High School would not induce unplanned growth because they would be used to accommodate existing adult education students in the District's service area (who are currently being served at the Creekside School campus).

In addition, redevelopment of the Creekside school site and the addition of new portable classrooms at Encina High School would not indirectly induce growth by providing new water and wastewater infrastructure or roadway improvements that could be used to serve new development beyond either school site. Both school campuses already have existing on-site water and sewer systems that are connected to off-site infrastructure. The on-site infrastructure would be modified and upgraded as necessary to serve only the proposed new Katherine Johnson Middle School and the portable classrooms at Encina. The areas surrounding the proposed Katherine Johnson Middle School site and the Encina portable classrooms site are developed, and the project would not cause any increased or unplanned intensity of new development in the surrounding areas.

In conclusion, the proposed project would accommodate existing Katherine Johnson Middle School students and staff and an additional 100 students generated by planned growth within the District's service area, and would provide portable classrooms at Encina to serve the District's existing adult education students. Furthermore, the proposed project would not induce substantial population growth indirectly through the creation of substantial

new employment opportunities, or the extension of roads or other utility infrastructure. Therefore, the proposed project would not result in growth inducement.

6.3 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

CEQA Guidelines Section 15216.2(b) requires an EIR to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented.

Chapter 3 of this EIR provides a detailed analysis of all significant and potentially significant environmental impacts from implementation of the proposed project; identifies feasible mitigation measures, as appropriate, that could avoid or reduce these significant and potentially significant impacts; and presents a determination whether the identified mitigation measures would reduce these impacts to less-than-significant levels. In addition, Section 6.1 of this EIR provides an analysis of the significant cumulative impacts resulting from the combined effects of the proposed project and related projects. If a potentially significant or significant impact cannot be reduced to a less-than-significant level, it is considered a significant and unavoidable adverse impact.

Implementing the proposed project would result in one significant and unavoidable adverse impact as identified below.

NOISE AND VIBRATION

Impact 3.8-1: Short-Term Noise Levels from Construction Activities.

Construction activities associated with grading, building the new school and placement of portable classrooms on the Encina site, and infrastructure and facilities necessary to serve the school and portable classrooms could expose sensitive receptors to noise levels in excess of the applicable noise standards and/or result in a noticeable increase in ambient noise levels. The impact would be significant and unavoidable.

Impact 3.8-4: Long-Term Operational (School Site) Noise Levels.

The proposed project would add noise sources, such as mechanical HVAC equipment, surface parking, site access roads, and playfields. The project-related noise sources would not exceed the County's standards. However, operational noise levels would substantially increase ambient noise levels on temporary basis when the basketball courts are in use above the existing conditions. The impact would be significant and unavoidable.

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7 REFERENCES

EXECUTIVE SUMMARY

None.

1 INTRODUCTION

None.

2 PROJECT DESCRIPTION

Sacramento County. 1980 (November). Arden-Arcade Community Plan. Available:

<http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/Community%20Plans/Arden%20Arcade%20comm-plan-text.pdf>. Accessed April 27, 2022.

Sacramento County. 2018. Sacramento County Improvement Standards. Available:

<https://engineering.saccounty.gov/Pages/ImprovementStandards.aspx>. Accessed April 27, 2022.

———. 2021. *Sacramento County Zoning Code, Chapter 3: Use Regulations*. Available:

<https://planning.saccounty.net/LandUseRegulationDocuments/Pages/Sacramento%20County%20Zoning%20Code.aspx>. Accessed April 27, 2022.

———. 2022. Sacramento County Zoning and Land Use Online Map. Available:

http://generalmap.gis.saccounty.net/JSViewer/county_portal.html. Accessed April 27, 2022.

Sacramento Stormwater Quality Partnership. 2021. *Sacramento Region Stormwater Quality Design Manual*.

Available: <https://www.beriverfriendly.net/Newdevelopment/>. Accessed April 27, 2022.

3 DETAILED ENVIRONMENTAL IMPACT ANALYSIS

3.1 AESTHETICS AND RECREATION

California Department of Transportation. 2022. California Scenic Highways.

<https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a>. Accessed July 27, 2022.

City of Sacramento. 2022. Del Paso Regional Park. Available:

<http://www.cityofsacramento.org/parksandrec/parks/park-directory/arden-arcade/del-paso-regional-park>. Accessed July 27, 2022.

Federal Highway Administration. 1988. *Visual Impact Assessment for Highway Projects*. Publication No. FHWA-HI-88-054. Office of Environmental Policy. Washington, D.C.

FHA. See Federal Highway Administration.

- Fulton-El Camino Recreation and Park District. 2022a. Creekside Nature Area. Available: <https://www.fecrpd.com/creekside-nature-area>. Accessed July 27, 2022.
- . 2022b. Facilities. Available: <https://www.fecrpd.com/facilities>. Accessed July 27, 2022.
- Sacramento County. 2008. *American River Parkway Plan*. Available: https://regionalparks.saccounty.gov/Parks/Documents/Parks/ARPP06-021909_sm.pdf. Accessed July 27, 2022.
- . 2017. *Sacramento County General Plan of 2005-2030*. Adopted 2011, updated 2017. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed July 15, 2022.
- . 2018. *Countywide Design Guidelines and Case Studies*. Adopted 2015, Amended 2018. Available: <https://planning.saccounty.net/applicants/Pages/DesignReviewProgram.aspx>. Accessed January 11, 2022.
- . 2021. *Sacramento County Zoning Code, Chapter 3: Use Regulations*. Available: <https://planning.saccounty.net/LandUseRegulationDocuments/Pages/Sacramento%20County%20Zoning%20Code.aspx>. Accessed April 28, 2022.
- . 2022. Sacramento County Zoning and Land Use Online Map. Available: https://generalmap.gis.saccounty.gov/JSViewer/county_portal.html. Accessed April 28, 2022.
- U.S.D.A. Forest Service. 1995. *Landscape Aesthetics: A Handbook for Scenery Management*. Agriculture Handbook No. 701. Available: http://www.fs.fed.us/cdt/carrying_capacity/landscape_aesthetics_handbook_701_no_append.pdf. Accessed July 28, 2022.
- U.S. Fish & Wildlife Service. 2022. National Wild and Scenic Rivers System. Available: <https://www.rivers.gov/rivers/american-lower.php>. Accessed July 27, 2022.
- USFS. *See* U.S. Forestry Service.

3.2 AIR QUALITY

- California Air Resources Board. 2005 (April). *Air Quality and Land Use Handbook: A Community Health Perspective*. Available: <https://www.arb.ca.gov/ch/handbook.pdf>. Accessed August 5, 2022.
- . 2013. *California Almanac of Emissions and Air Quality*. Available: <https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac>. Accessed August 8, 2022.
- . 2016. *Ambient Air Quality Standards*. Available: <https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf>. Accessed August 31, 2022.
- CARB. *See* California Air Resources Board.

OEHHA. *See* Office of Environmental Health Hazard Assessment.

Office of Environmental Health Hazard Assessment (OEHHA). 2015 (February). Air Toxics Hot Spots Program: Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments. Available: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed August 5, 2022.

EPA. *See* U.S. Environmental Protection Agency.

Sacramento County. 1980. *Arden-Arcade Community Plan*. Available: <https://planning.saccounty.net/LandUseRegulationDocuments/Documents/CommunityPlans/Arden%20Arade%20comm-plan-text.pdf>. Accessed August 10, 2022.

———. 2021. *Sacramento County Zoning Code, Chapter 3: Use Regulations*. Available: <https://planning.saccounty.net/LandUseRegulationDocuments/Pages/Sacramento%20County%20Zoning%20Code.aspx>. Accessed August 10, 2022.

Sacramento Metropolitan Air Quality Management District (SMAQMD). 2010. PM₁₀ Implementation/Maintenance Plan and Redesignation Request for Sacramento County. October 2010. Available: [http://www.airquality.org/ProgramCoordination/Documents/10\)%20%20PM10%20Imp%20and%20MP%202010.pdf](http://www.airquality.org/ProgramCoordination/Documents/10)%20%20PM10%20Imp%20and%20MP%202010.pdf). Accessed August 8, 2022.

———. 2013. *Re-designation Request for Sacramento PM_{2.5} Nonattainment Area*. October 24, 2013. Available: [http://www.airquality.org/ProgramCoordination/Documents/9\)%20%20PM2.5%20Imp%20and%20MP%202013.pdf](http://www.airquality.org/ProgramCoordination/Documents/9)%20%20PM2.5%20Imp%20and%20MP%202013.pdf). Accessed August 31, 2022.

———. 2015. California Environmental Air Quality Act Guidelines Update. Available online at: <http://www.airquality.org/LandUseTransportation/Documents/ParticulateMatterThresholdsUpdateMay2015AgendaItemAttachment.pdf>. Accessed July 2022.

———. 2017. Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan. July 2017. Available: <http://www.airquality.org/ProgramCoordination/Documents/Sac%20Regional%202008%20NAAQS%20Attainment%20and%20RFP%20Plan.pdf>. Accessed August 8, 2022.

———. 2019. Basic Construction Emission Control Practices. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3BasicEmissionControlPracticesBMPSFinal7-2019.pdf>. Accessed August 5, 2022.

———. 2020a. Thresholds of Significance Table. Available: <https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf>. Accessed August 5, 2022.

———. 2020b. Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District. October 2020. Available: <https://www.airquality.org/LandUseTransportation/Documents/SMAQMDFriantRanchFinalOct2020.pdf>. Accessed August 8, 2022.

- _____. 2021. Guide to Air Quality Assessment in Sacramento County (CEQA Guide). November 2021. Available: <https://www.airquality.org/residents/ceqa-land-use-planning/ceqa-guidance-tools>. Accessed August 8, 2022.
- SCAQMD. *See* South Coast Air Quality Management District.
- SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.
- South Coast Air Quality Management District. 2015. Application of the South Coast Air Quality Management District for leave to file brief of amicus curiae in support of neither party and (proposed) brief of amicus curie. Filed April 13.
- U.S. Environmental Protection Agency. 2022. Ozone Pollution and Your Patients' Health: Patient Exposure and the Air Quality Index. Available: <https://www.epa.gov/ozone-pollution-and-your-patients-health/patient-exposure-and-air-quality-index>. Accessed August 8, 2022.
- WHO. *See* World Health Organization.
- World Health Organization. 2018. Ambient (outdoor) air pollution. Available: [https://www.who.int/en/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/en/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health). Accessed August 8, 2022.
- Zhu, Yifang; William C. Hinds, Seongheon Kim & Constantinos Sioutas. 2002. Concentration and Size Distribution of Ultrafine Particles Near a Major Highway, Journal of the Air & Waste Management Association, 52:9, 1032-1042, DOI: 10.1080/10473289.2002.10470842. Available: <http://dx.doi.org/10.1080/10473289.2002.10470842>. Accessed August 5, 2022.
- ### 3.3 BIOLOGICAL RESOURCES
- AECOM. 2022a. Biological Resources Survey Report for the Katherine Johnson Middle School Project. Prepared for San Juan Unified School District, Carmichael, CA.
- AECOM. 2022b. Katherine Johnson Middle School Project Arborist Report. Prepared for San Juan Unified School District, Carmichael, CA.
- California Department of Fish and Wildlife (CDFW). 2022a. Natural Communities List. Updated July 5, 2022. Available at: <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>.
- _____. 2022b. California Natural Diversity Database). Maps and Data, Rarefind 5 Version 5.2.14. Available: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed 23 May 2022.
- California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants of California. Online edition, v9-01 1.5, Rare Plant Program. Available: <http://www.rareplants.cnps.org>. Accessed 23 May 2022.
- Griffith, G.E., Omernik, J.M., Smith, D.W., Cook, T.D., Tallyn, E., Moseley, K., and Johnson, C.B. 2016, Ecoregions of California (poster): U.S. Geological Survey Open-File Report 2016–1021, with map, scale 1:1,100,000.

- National Cooperative Soil Survey (NCSS). 1999. Official Series Description – SAN JOAQUIN Series. U.S.A. September 1999.
- Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey, Version 3.3.2. Available: <https://websoilsurvey.sc.egov.usda.gov/>. Accessed 23 May 2022.
- Sacramento County. 2022. Sacramento County Code Chapter 19.12 Tree Preservation and Protection. Published by Quality Code Publishing, Seattle, Washington. Available at: https://library.qcode.us/lib/sacramento_county_ca/pub/county_code/item/title_19-chapter_19_12. Accessed June 4, 2022.
- U.S. Fish and Wildlife Service (USFWS). 2022a. Information for Planning and Consultation (IpaC). Powered by ECOS – the Environmental Conservation Online System. Available: <https://ecos.fws.gov/ipac/>. Accessed 23 May 2022.
- . 2022b. National Wetlands Inventory. Wetlands Mapper data desktop/mobile view. Available: <https://www.fws.gov/wetlands/data/Mapper.html>.
- . 2022c (May 23). USFWS Threatened & Endangered Species Active Critical Habitat Report. Critical Habitats Mapper data desktop/mobile view. Available: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>.
- U.S. Geological Survey (USGS). 2018a. Sacramento East Quadrangle, California, 7.5-minute series.
- . 2018b. Taylor Monument Quadrangle, California, 7.5-minute series.
- . 2018c. Rio Linda Quadrangle, California, 7.5-minute series.
- . 2018d. Citrus Heights Quadrangle, California, 7.5-minute series.
- . 2018e. Carmichael Quadrangle, California, 7.5-minute series.
- . 2018f. Sacramento West, California, 7.5-minute series.
- . 2018g. Clarksburg Quadrangle, California, 7.5-minute series.
- . 2018h. Elk Grove Quadrangle, California, 7.5-minute series.
- . 2018i. Florin Quadrangle, California, 7.5-minute series. Griffith, G.E., Omernik, J.M., Smith, D.W., Cook, T.D., Tallyn, E., Moseley, K., and Johnson, C.B., 2016, Ecoregions of California (poster): U.S. Geological Survey Open-File Report 2016–1021, with map, scale 1:1,100,000.
- NCSS. *See* National Cooperative Soil Survey.
- National Cooperative Soil Survey. 1999. *Official Series Description – San Joaquin Series*. Soil Data Explorer, California Soil Resource Lab. September 1999.

Natural Resources Conservation Service. 2022. Custom Soil Resource Report for Sacramento County, California. United States Department of Agriculture. Available at websoilsurvey.sc.egov.usda.gov. Accessed June 9, 2022.

NRCS. *See* Natural Resources Conservation Service.

U.S. Climate Data. 2022. Monthly Climate Sacramento – California. Your Weather Service, US Climate Data 2022, version 3.0. Available at: www.usclimatedata.com. Accessed June 9, 2022.

3.4 CULTURAL RESOURCES

Beardsley, R. K. 1954. “Temporal and Areal Relationships in Central California, pts. 1–2.” *University of California Archaeological Survey Reports 24 and 25*. University of California, Berkeley.

Beck, Warren A. and Ynez D. Haase. 1974. *Historical Atlas of California*. Norman, OK: University of Oklahoma Press.

Bennyhoff, J. A. 1961. *The Ethnogeography of the Plains Miwok*. Unpublished Ph.D. dissertation in Anthropology, University of California, Berkeley.

Britton & Rey. 1885. *Official map of Sacramento County, California*. Available: <https://www.loc.gov/resource/g4363s.la000034/?r=-0.583,-0.496,1.912,1.175.0> (accessed June 2022).

Capital Adult Education Regional Consortium Community (CAERC). 2016 May. *CAERC Community*, Volume 1, Issue 1. [newsletter]. Available: https://www.caerc.org/newsletters/CAERC_Newsletter-May_2016.pdf (accessed June 2022).

Cartwright Aerial Industries (CAS).

1961. Flight ID CAS-SAC, Frame 4-80 Scale 1:20,000, July 17. Available: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/.

1971. Flight ID CAS-3069, Frame 4-78, Scale 1:12,000, March 20. Available: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/.

Cowan, James. 1990. *History of Arcade School District with information on the Growth and Development of the North Area of Sacramento County, California, 1885-1960*. Sacramento, CA: California Retired Teachers Association.

DLR Group. 2014. “Creekside Elementary School” in San Juan Unified School District Master Plan – Volume 2, Part 2: Other Facilities. Ehrenreich-Risner, V. 2010. *North Sacramento*. Charleston, SC: Arcadia Publishing.

Elsasser, Albert. 1978. “Development of Regional Prehistoric Cultures,” in *Handbook of North American Indians*, Vol. 8, California. Ed. R. F. Heizer, gen. ed. W. G. Sturtevant. Washington, D.C: Smithsonian Institution.

Engineering & Mining Journal 98, No. 12. 1914 September 19. “James B. Haggin,” 539-540.

- Fairchild Aerial Surveys. 1928. Flight ID C-201, Frame G-21, Scale 1:14,400, March 29. Available: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed June 2022).
- Fredrickson, David A. 1973. *Early Cultures of the North Coast Ranges, California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis, CA.
- Google Earth Pro. 1993-2018. "2641 Kent Drive, Sacramento, CA." Historical aerial imagery.
- Gutierrez, C.I. 2011. Preliminary Geological Map of the Sacramento 30' x 60' Quadrangle, California, California Geological Survey.
- HistoricAerials.com.
1947. 3500 Edison Avenue, Sacramento, CA. Aerial imagery.
1957. 3500 Edison Avenue, Sacramento, CA. Aerial imagery.
- Laval Company Inc. 1937. Flight ID ABC-1937, Frame 47-32, Scale 1:20,000, August 17.
- Sacramento Bee*.
- 1940 December 11. "Arcade School Trustees Plan \$50,000 Annex." 19.
- 1941 January 18. "Arcade School Annex May Be Erected Soon." 5.
- 1952 April 12. "Creek School Bids Will Be Taken April 29." 140
- 1952 May 3. "Arcade Approves \$376,986 Bid for Creekside School." 27.
- 1952 July 19. "Work Begins On Creekside School." 15.
- 1953 April 4. "Students Will Occupy Completed Creekside Grammar School Monday." 66.
- 1946 January 15, "Arcade School District Will Vote on Bonds February 1st," 5.
- 1981 March 7. "San Juan Superintendent Lists 4 Schools to Close." 9.
- 2005 June 9. "Thanks for the memories – Creekside School will close Friday after 52 years." G1.
- 2008 October 28. "Closed school site gets cleanup after vandalism – Complaints persuade district to act." B3.
- 2009 October 28. "Education – New programs bring life back to K-12 campuses." B1.
- Sacramento County Assessor. 1925. County, Volume 3, Co-F, Del Paso Park View Tract No 2 Map. Available: <https://archive.org/details/SacCountyMapBook1925C-F/page/n5/mode/1up> (accessed July 2022).
- Sacramento County. 2017. General Plan. Conservation Element.

Sacramento County Planning & Community Development Department. 1980. Arden-Arcade Community Plan, Adopted by Sacramento County Board of Supervisors, Resolution No. 80-1357, November 6, 1980.

Sacramento Union. 1891 September 19. "Rancho Del Paso," 5.

_____. 1911 April 14. "To Start Colony on Haggin Grant." 9.

_____. 1914 January 6. "History of Ranch Del Paso," 5.

_____. 1915 December 25. "\$61 Revenue on Del Paso Deed," 1.

Thoroughbred Record 82, No. 11. 1915 September 11. "The Passing of Elmendorf Stud," 126.

United States Geological Survey (USGS).

1891. *Sacramento*. Topographic Map, scale 1:125000.

1901. *Fairoaks, Calif.* Topographic Map, scale 1:62500.

1911. *Brighton*. Topographic Map, scale 1:31680.

Wilson, N. L., and A. H. Towne. 1978. "Nisenan" in *Handbook of North American Indians, Vol. 8, California*. Ed. R. F. Heizer, gen. ed. W. G. Sturtevant. Washington, D.C: Smithsonian Institution.

3.5 GEOLOGY AND PALEONTOLOGICAL RESOURCES

Branum, D., R. Chen, M. Petersen, and C. Wills. 2016. *Earthquake Shaking Potential for California*. California Geological Survey and U.S. Geological Survey. Map Sheet 48. Sacramento, CA.

California Department of Water Resources. 2021. SGMA Data Viewer—Depth to Groundwater Spring 2021. Available: <https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels>. Accessed May 18, 2022.

California Geological Survey. 2008. Ground Motion Interpolator. Available: <https://www.conservation.ca.gov/cgs/SiteAssets/ground-motion-interpolator-for-embedding-2008.aspx>. Accessed July 18, 2022.

_____. 2022. CGS Seismic Hazards Program: Alquist-Priolo Fault Hazard Zones. Available: <https://www.arcgis.com/home/item.html?id=ee92a5f9f4ee4ec5aa731d3245ed9f53>. Accessed July 18, 2022.

CGS. *See* California Geological Survey.

DWR. *See* California Department of Water Resources.

Gutierrez, C.I. 2011. *Preliminary Geologic Map of the Sacramento 30' x 60' Quadrangle, California*. California Geological Survey. Sacramento, CA.

- Hay, O. P. 1927. *The Pleistocene of the Western Region of North American and its Vertebrated Animals*. Carnegie Institute Publication 322B. Washington, DC.
- Helley, E.J. and D.S. Harwood. 1985. *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California*. U.S. Geological Survey, Miscellaneous Field Studies MF-1790. Reston, VA.
- Hilton, R. P., D. C. Dailey, and H. G. McDonald. 2000 (April 15). A Late Pleistocene Biota from the Arco Arena Site, Sacramento, California. *PaleoBios Abstracts* 20(1).
- Jefferson, G. T. 1991a. *A Catalogue of Late Quaternary Vertebrates from California—Part One, Nonmarine Lower Vertebrate and Avian Taxa*. Technical Report no. 5. Natural History Museum of Los Angeles County. Los Angeles, CA.
- . 1991b. *A Catalogue of Late Quaternary Vertebrates from California—Part Two: Mammals*. Technical Report No. 7. Natural History Museum of Los Angeles County. Los Angeles, CA.
- Jennings, C.W. and W.A. Bryant. 2010. *2010 Fault Activity Map of California*. Available: <https://maps.conservation.ca.gov/cgs/fam/App/index.html>. Accessed June 10, 2022.
- Kolber, M. 2004. *Mammoth Coup: Discovery of Huge Fossil Near Elk Grove Is a Big Deal for Northern California*. Sacramento Bee, July 27, 2004.
- Marchand, D.E., and A. Allwardt. 1981. *Late Cenozoic Stratigraphic Units, Northeastern San Joaquin Valley, California*. U.S. Geological Survey Bulletin 1470. Washington, D.C.
- Natural Resources Conservation Service. 2021. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed July 19, 2022.
- Sacramento County. 2017. *Sacramento County General Plan of 2005-2030, Conservation and Safety Elements*. Sacramento, CA. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed July 15, 2022.
- Society of Vertebrate Paleontology. 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources Society of Vertebrate Paleontology*. Impact Mitigation Guidelines Revision Committee.
- SVP. *See* Society of Vertebrate Paleontology.
- UCMP. *See* University of California Museum of Paleontology.
- University of California Museum of Paleontology. 2022. Paleontological Collections Database. Available: <https://ucmp.berkeley.edu/collections/databases/>. Accessed July 19, 2022.

3.6 GREENHOUSE GAS EMISSIONS

California Air Resources Board. 2008. Climate Change Scoping Plan. Available at www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm. Accessed June 2016.

_____. 2021a. Current California GHG Emission Inventory Data. Available online at: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed August 2022.

_____. 2021b. California Greenhouse Gas Emissions for 2009 to 2019: Trends of Emissions and Other Indicators. Available online at: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed March 2022.

CARB. *See* California Air Resources Board.

California Energy Commission (CEC). 2022. 2022 Building Energy Efficiency Standards. Available: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed August 2022.

CEC. *See* California Energy Commission .

Intergovernmental Panel on Climate Change. 2021. AR6 Climate Change 2021: The Physical Science Basis. Available: <https://www.ipcc.ch/report/ar6/wg1/>. Accessed November 2021.

IPCC. *See* Intergovernmental Panel on Climate Change.

Sacramento County. 2017. Climate Change Vulnerability Assessment for the Sacramento County Climate Action Plan: Communitywide Greenhouse Gas Reduction and Climate Change Adaptation. Available online at: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/Climate%20Action%20Plan/Climate%20Change%20Vulnerability%20Assessment.pdf>. Accessed August 2022.

_____. 2022. Revised Final Draft Climate Action Plan. February. Available online at: https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/Climate%20Action%20Plan/Revised%20Final%20Draft%20CAP_February%202022.pdf. Accessed August 2022.

Sacramento Metropolitan Air Quality Management District. 2020a. Thresholds of Significance Table. Available: <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf>. Accessed September 18, 2020.

_____. 2020b. Greenhouse Gas Thresholds for Sacramento County. Available: <http://www.airquality.org/LandUseTransportation/Documents/SMAQMDGHGThresholds2020-03-04v2.pdf>. Accessed September 18, 2020.

_____. 2020c. SMAQMD Greenhouse Gas Thresholds/Best Management Practices Applicability.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

3.7 HYDROLOGY AND WATER QUALITY

- Branum, D., R. Chen, M. Petersen, and C. Wills. 2016. *Earthquake Shaking Potential for California*. California Geological Survey and U.S. Geological Survey. Map Sheet 48. Sacramento, CA.
- Brown and Caldwell. 2021. *Sacramento Suburban Water District Urban Water Management Plan*. Available: <https://www.sswd.org/departments/engineering/reports/urban-water-management-plan>. Accessed July 20, 2022.
- California Department of Water Resources. 2013. *Urban Level of Flood Protection Criteria*. Available: https://cawaterlibrary.net/wp-content/uploads/2017/05/ULOP_Criteria_Nov2013.pdf. Accessed August 10, 2022.
- . 2021. SGMA Data Viewer: Depth to Groundwater Spring 2021. Available: <https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels>. Accessed May 18, 2022.
- . 2022a. Best Available Map Viewer: Central Valley Flood Protection Board Regulated Streams and Designated Floodways. Available: <https://gis.bam.water.ca.gov/bam/>. Accessed July 21, 2022.
- . 2022b. *Central Valley Flood Protection Plan 2022 Update*. Available: <https://water.ca.gov/Programs/Flood-Management/Flood-Planning-and-Studies/Central-Valley-Flood-Protection-Plan>. Accessed August 10, 2022.
- Central Valley Regional Water Quality Control Board. 2016. *National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems: City of Folsom, City of Rancho Cordova, County of Sacramento*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/. Accessed July 26, 2022.
- . 2019. *The Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed July 26, 2022.
- Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.
- County and City of Sacramento. *See* Sacramento County Water Resources Division and the City of Sacramento Department of Utilities Division of Engineering Services.
- Federal Emergency Management Agency (FEMA). 2012. Flood Map Service Center. Available: <https://msc.fema.gov/portal/home>. Accessed July 21, 2022.
- FEMA. *See* Federal Emergency Management Agency.
- GEI Consultants. 2021. *North American Subbasin Groundwater Sustainability Plan*. Available: <https://nasbgroundwater.org/>. Accessed May 23, 2022.

- Sacramento County. 2017a. *Sacramento County General Plan of 2005-2030, Conservation and Safety Elements*. Adopted in 2011, updated in 2017. Sacramento, CA. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed July 15, 2022.
- . 2017b. *Sacramento County Floodplain Management Ordinance*. Available: <https://planning.saccounty.gov/LandUseRegulationDocuments/Documents/Sacramento%20County%20Floodplain%20Management%20Ord.pdf>. Accessed July 26, 2022.
- Sacramento County Department of Water Resources. 2022. Stormwater Utility (Drainage). Available: <https://waterresources.saccounty.gov/Pages/StormwaterUtility%28Drainage%29.aspx>. Accessed May 23, 2022.
- Sacramento County Water Resources Division and the City of Sacramento Department of Utilities Division of Engineering Services. 2006. *Sacramento City/County Drainage Manual Volume 2: Hydrology Standards*. Adopted 1996, updated 2006. Available: https://waterresources.saccounty.gov/DrainageManual_Volume2/V2_intro2.pdf. Accessed July 25, 2022.
- Sacramento Stormwater Quality Partnership. 2009. *Stormwater Quality Improvement Plan for the County of Sacramento and the Cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova*.
- . 2017. *Hydromodification Management Plan*. Available: https://www.beriverfriendly.net/wp-content/uploads/2021/10/SSQP-HMP-Report_FINAL_w-Figs_w-App_2018.pdf. Accessed July 26, 2022.
- . 2020. *Hydromodification Management Plan Applicability Map*. Available: https://www.beriverfriendly.net/wp-content/uploads/2021/10/Fig3-7_Applic_Mapping_Oversize-V2020.pdf. Accessed July 26, 2022.
- . 2021. *Sacramento Region Stormwater Quality Design Manual*. Available: <https://www.beriverfriendly.net/stormwater-quality-design-manual/>. Accessed July 25, 2022.
- State Water Resources Control Board. 2012. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002)*. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed July 26, 2022.
- . 2021. *2018 California Integrated Report*. Available online: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html. Accessed July 21, 2022.
- SWRCB. *See* State Water Resources Control Board.
- U.S. Army Corps of Engineers and California Reclamation Board. 2002. Best Available Map Viewer: 200-year Floodplains. Available: <https://gis.bam.water.ca.gov/bam/>. Accessed July 21, 2022.

3.8 NOISE AND VIBRATION

AECOM 2013. Long Beach Unified School District. Jordan High School Major Renovation Project Draft EIR. September 2013

AECOM 2018. CasaRoble_InteriorNoise_Memo_12-21-2018, AECOM. Sacramento, CA.

AECOM. 2022. Katherine Johnson Middle School – Traffic Analysis Memo.

American National Standard Institute. 2002 (June). Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, ANSI S12.60-2002. Melville, NY.

ANSI. See American National Standard Institute.

CDE. See California Department of Education

California Department of Education. 2017 (December). School Site Selection and Approval Guide.

California Department of Transportation. 2013. *Technical Noise Supplement*. Sacramento, CA. Prepared by IFC Jones & Stokes, Sacramento, CA.

Caltrans. See California Department of Transportation.

Environmental Noise Control (ENC). 2014. Product Specifications Sheet.

EPA. See U.S. Environmental Protection Agency.

Federal Highway Administration. 1978 (December). *Highway Traffic Noise Prediction Model*. FHWA-RD-77-108. Washington, DC: Office of Research, Office of Environmental Policy.

———. 2006 (January). *Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. Washington, DC.

Federal Transit Administration (FTA). 2018 (September). *Transit Noise and Vibration Impact Assessment*. FTA Report No. 0123.

Federal Interagency Committee on Noise. 1992 (August). Federal Agency Review of Selected Airport Noise Analysis Issues.

FHWA. See Federal Highway Administration.

FICON. See Federal Interagency Committee on Noise.

FTA. See Federal Transit Administration.

Governor's Office of Planning and Research. 2017. *State of California General Plan Guidelines*. Sacramento, CA.

OPR. See Governor's Office of Planning and Research.

Penn State University. 2009. How Does Aircraft Noise Interfere With Speech Communication? Available: <http://www.noisequest.psu.edu/pmwiki.php?n=NoiseAffect.Speech>.

PSU. See Penn State University.

Sacramento County. 2017 (December). Sacramento County General Plan of 2005–2030—Noise Element.

Sacramento County Code. Title 6. Chapter 6.68 Noise Control

U.S. Environmental Protection Agency. 1971 (December 31st). Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

WHO. See World Health Organization.

World Health Organization. 1999. Guidelines for Community Noise. Geneva, Switzerland.

3.9 TRANSPORTATION

AECOM (2022). *Traffic Analysis Study for the Katherine Johnson School Project EIR*. Sacramento, California.

Governor's Office of Planning and Research (OPR). 2018. Technical Advisory On Evaluating Transportation Impacts in CEQA. Available: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf. Accessed August 21, 2022.

Institute of Transportation Engineers. 2021. *Trip Generation Manual 11th Edition*. Washington, DC.

Sacramento Area Council of Governments (SACOG). 2016. *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Available: <http://sacog.org/mtpscs/mtpscs/>. Accessed August 24, 2017.

———. 2020. SACOG Open Data Portal. MTP/SCS 2016 - Transit Priority Area. Available: <https://data.sacog.org/datasets/SACOG::mtp-scs-2016-transit-priority-area/about>. Accessed August 21, 2022.

———. 2020a. General Plan Circulation Element. Amended October 6, 2020.

Sacramento County. 2020b. *Transportation Analysis Guidelines*. Sacramento, CA. Available: <https://sacdot.saccounty.net/Documents/A%20to%20Z%20Folder/Traffic%20Analysis/Transportation%20Analysis%20Guidelines%2009.10.20.pdf>. Accessed: August 21, 2022.

———. 2019 (December 17th). Sacramento County Environmental Justice Element. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/General%20Plan%202030/Environmental%20Justice%20Element.pdf?csf=1&e=1VDeDp>. Accessed August 21, 2022.

———. 2018 (April). Sacramento County Improvement Standards. Available: <https://engineering.saccounty.gov/Documents/Section%204%20Street%20Design.pdf>. Accessed August 21, 2022.

———. 2011 (April). Sacramento County Bicycle Master Plan.

Transportation Research Board. 2022. *Highway Capacity Manual*. Washington, DC.

Sacramento Regional Transit. Available: https://m.sacrt.com/tt_routes.aspx. Accessed in June 2022

3.10 TRIBAL CULTURAL RESOURCES

Bennyhoff, J. A. 1961. *The Ethnogeography of the Plains Miwok*. Unpublished Ph.D. dissertation in Anthropology, University of California, Berkeley.

BIA. *See* Bureau of Indian Affairs.

Bureau of Indian Affairs. 2002 Feb 5. “McCaleb Approves United Auburn Indian Community Land Into Trust Application.” U.S. Department of the Interior, Indian Affairs. Available at: <https://www.bia.gov/as-ia/opa/online-press-release/mccaleb-approves-united-auburn-indian-community-land-trust>. Accessed March 2022.

Indian Country Today. 2010 Sep 12. “News from the West Coast – Trust acquisition clears way for community development. Available at: <https://indiancountrytoday.com/archive/news-from-the-west-coast>. Accessed March 2022.

Kroeber, A.L. 1925. *Handbook of the Indians of California*. Washington, DC: Government Printing Office.

UAIC. *See* United Auburn Indian Community.

United Auburn Indian Community. 2022. “Our History.” Available at: <https://www.auburnrancheria.com/about-us/our-history-1/>. Accessed March 2022.

Wilson, N. L. 1972. “Notes on Traditional Foothill Nisenan Food Technology,” in *Papers on Nisenan Environment and Subsistence*. Center for Archaeological Research at Davis, Publication Number 3. University of California, Davis.

Wilson, N. L., and A. H. Towne. 1978. “Nisenan” in *Handbook of North American Indians*, Vol. 8, California. Ed. R. F. Heizer, gen. ed. W. G. Sturtevant. Washington, D.C: Smithsonian Institution.

Wilton Rancheria. 2022. “Wilton Rancheria Tribal History.” Available at: <https://wiltonrancheria-nsn.gov/Home/TribalHistory/tabid/305/Default.aspx>. Accessed July 2022.

4 TOPIC AREAS DISMISSED FROM DETAILED ANALYSIS

4.1 AGRICULTURE AND FORESTRY RESOURCES

California Department of Conservation (DOC). 2018. *Sacramento County Important Farmland 2018*. Available: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed July 20, 2022.

DOC. *See* California Department of Conservation.

Sacramento County. 2022a. Sacramento County Zoning and Land Use Online Map. Available: http://generalmap.gis.saccounty.net/JSViewer/county_portal.html. Accessed April 27, 2022.

———. 2022b. Williamson Act Parcels. Available: <https://data-sacramentocounty.opendata.arcgis.com/datasets/williamson-act-parcels/explore?location=38.626412%2C-121.426349%2C11.00>. Accessed July 20, 2022.

4.2 ENERGY RESOURCES

REFERENCES

California Energy Commission (CEC). 2017a. California Gasoline Data, Facts, and Statistics. Available: http://www.energy.ca.gov/almanac/transportation_data/gasoline/. Accessed June 11, 2018.

———. 2017b. Diesel Fuel Data, Facts, and Statistics. Available: http://www.energy.ca.gov/almanac/transportation_data/diesel.html.
http://www.energy.ca.gov/almanac/transportation_data/gasoline/. Accessed August 28, 2017.

SJUSD. *See* San Juan Unified School District.

Sacramento County. 2017. Sacramento County General Plan. Energy Element.

Sacramento Metropolitan Air Quality Management District. 2016 (December). Guide to Air Quality Assessment in Sacramento County – Chapter 6, Greenhouse Gas Emissions. Available: <http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools>. Accessed August 8, 2017.

Sacramento Metropolitan Utility District (SMUD). 2022. Greenergy Partner Plus Historic and Prospective Product Content Label. Available: <https://www.smud.org/-/media/Documents/Going-Green/Power-Content-Label-Greenergy.ashx>. Accessed June 11, 2018.

United States Energy Information Administration (EIA). 2016. Carbon Dioxide Emissions Coefficients. Available: https://www.eia.gov/environment/emissions/co2_vol_mass.php. Accessed March 16, 2018.

———. 2017a. (October 19). California State Energy Profile. Available: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed August 28, 2017.

- . 2017b. (October 20). Use of Energy in the United States Explained: Energy Use in Commercial Buildings. Available: https://www.eia.gov/energyexplained/?page=us_energy_commercial. Accessed August 28, 2017.
- United States Environmental Protection Agency (EPA). 2011. Energy Efficiency Programs in K-12 Schools: A Guide to Developing and Implementing Greenhouse Gas Reduction Programs (EPA 430-R-09-034).
- California Energy Commission. 2022a. Energy Reports: Electricity Consumption by Entity. Available at: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed February 2022.
- . 2022b. Energy Reports: Electricity Consumption by County. Available at: <https://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed February 2022.
- . 2022c. Energy Reports: Gas Consumption by Entity. Available at: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed February 2022.
- . 2022d. Energy Reports: Gas Consumption by County. Available at: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed February 2022.
- U.S. Energy Information Administration (EIA) 2018. Tracking Progress: California’s Declining Reliance on Coal. https://www.energy.ca.gov/sites/default/files/2019-12/declining_reliance_coal_ada.pdf. Accessed February 2020.
- . 2022. California State Energy Profile Analysis. Available at: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed February 2022.

4.3 HAZARDS AND HAZARDOUS MATERIALS

- California Department of Forestry and Fire Protection. 2021. Fire Hazard Severity Zone Viewer. Available: <https://egis.fire.ca.gov/FHSZ/>. Accessed August 1, 2022.
- California Department of Toxic Substances Control. 2022. EnviroStor. Available: <https://www.envirostor.dtsc.ca.gov/public/>. Accessed August 1, 2022.
- DTSC. *See* California Department of Toxic Substances Control.
- EPA. *See* U.S. Environmental Protection Agency
- State Water Resources Control Board. 2022. GeoTracker—Taylor Shopping Center, 2752 Marconi Avenue, Case No. T10000011306. Available: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000011306. Accessed August 1, 2022.
- SWRCB. *See* State Water Resources Control Board.
- U.S. Environmental Protection Agency (EPA). 2021. Search for Superfund Sites Where You Live. Available: <https://www.epa.gov/superfund/search-superfund-sites-where-you-live>. Accessed August 1, 2022.

4.4 LAND USE AND PLANNING

Sacramento Area Council of Governments. 1992. *McClellan Air Force Base Comprehensive Land Use Plan*. Available: <https://www.sacog.org/post/sacramento-county>. July 28, 2022.

Sacramento County. 1980. *Arden-Arcade Community Plan*. Available: <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/Community%20Plans/Arden%20Arcade%20comm-plan-text.pdf>. Accessed April 28, 2022.

———. 2017. *Sacramento County General Plan of 2005–2030*. Sacramento County Planning and Development Department. Adopted 2011, amended 2017. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed July 20, 2022.

———. 2021. *Sacramento County Zoning Code, Chapter 3: Use Regulations*. Available: <https://planning.saccounty.net/LandUseRegulationDocuments/Pages/Sacramento%20County%20Zoning%20Code.aspx>. Accessed April 28, 2022.

———. 2022. Sacramento County Zoning and Land Use Online Map. Available: https://generalmap.gis.saccounty.gov/JSViewer/county_portal.html. Accessed April 28, 2022.

4.5 MINERALS RESOURCES

O’Neal, M.D. and F.W. Gius. 2018. *Mineral Land Classification: Concrete Aggregate in the Greater Sacramento Area Production-Consumption Region*. Special Report 245. California Geological Survey. Sacramento, CA.

Sacramento County. 2017. *Sacramento County General Plan of 2005-2030, Conservation Element*. Sacramento, CA. Available: <https://planning.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed July 15, 2022.

4.6 POPULATION AND HOUSING

None

4.7 PUBLIC SERVICES

None.

4.8 UTILITIES AND SERVICE SYSTEMS

Ascent Environmental. 2014. *Draft Environmental Impact Report for the Sacramento Regional County Sanitation District EchoWater Project*. Available: <https://www.regionalsan.com/post/echowater-draft-environmental-impact-report-deir>. Accessed July 20, 2022.

Brown and Caldwell. 2021. *Sacramento Suburban Water District Urban Water Management Plan*. Available: <https://www.sswd.org/departments/engineering/reports/urban-water-management-plan>. Accessed July 20, 2022.

California Department of Resources Recycling and Recovery (CalRecycle). 2019a. SWIS Facility/Site Activity Details: North Area Transfer Station. Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2071?siteID=2508>. Accessed July 21, 2022.

———. 2019b. SWIS Facility/Site Activity Details: Sacramento County Landfill (Kiefer). Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2070?siteID=2507>. Accessed July 21, 2022.

———. 2019c. SWIS Facility/Site Activity Details: Florin Perkins Public Disposal Site. Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/242?siteID=4721>. Accessed July 21, 2022.

———. 2019d. SWIS Facility/Site Activity Details: L&D Landfill. Available: <https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2524>. Accessed July 21, 2022.

CalRecycle. *See* California Department of Resources Recycling and Recovery.

Central Valley Regional Water Quality Control Board. 2021. *Waste Discharge Requirements for the Sacramento Regional County Sanitation District Sacramento Regional Wastewater Treatment Plant, Sacramento County*. NPDES Permit No. CA0077682, Order R5-2021-0019. Available: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2021-0019_npdes.pdf. Accessed July 20, 2022.

Florin Perkins Sacramento. 2022. Florin Perkins Public Disposal Center. Available: <https://www.zankerrecycling.com/florin-perkins/>. Accessed July 21, 2022.

L&D Landfill. 2022. Recycling Program. Available: <https://www.landdlandfill.com/recycling-programs>. Accessed July 21, 2022.

RWQCB. *See* Regional Water Quality Control Board.

Sacramento Area Sewer District (SASD). 2020. *System Capacity Plan*. Available: <https://www.sacsewer.com/sewer-system-capacity-plan>. Accessed July 20, 2022.

Sacramento County Waste Management and Recycling. 2022. North Area Recovery Station. Available: <https://wmr.saccounty.gov/Pages/NARS.aspx>. Accessed July 21, 2022.

SASD. *See* Sacramento Area Sewer District.

4.9 WILDLAND FIRE HAZARDS

California Department of Forestry and Fire Protection (CAL FIRE).

2021. Fire Hazard Severity Zone (FHSZ) Viewer. Available: <https://egis.fire.ca.gov/FHSZ/>. Accessed August 10, 2022.

5 ALTERNATIVES

None.

6 CUMULATIVE AND OTHER CEQA CONSIDERATIONS

- Branum, D., R. Chen, M. Petersen, and C. Wills. 2016. *Earthquake Shaking Potential for California*. California Geological Survey and U.S. Geological Survey. Map Sheet 48. Sacramento, CA.
- Brown and Caldwell. 2021. *Sacramento Suburban Water District Urban Water Management Plan*. Available: <https://www.sswd.org/departments/engineering/reports/urban-water-management-plan>. Accessed July 20, 2022.
- California Department of Water Resources. 2022. Best Available Map Viewer: Central Valley Flood Protection Board Regulated Streams and Designated Floodways. Available: <https://gis.bam.water.ca.gov/bam/>. Accessed August 17, 2022.
- Central Valley Regional Water Quality Control Board (Central Valley RWQCB). 2019. *The Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed July 26, 2022.
- DWR. See California Department of Water Resources.
- GEI Consultants. 2021. *North American Subbasin Groundwater Sustainability Plan*. Available: <https://nasbgroundwater.org/>. Accessed May 23, 2022.
- Sacramento County. 2017. *Sacramento County Floodplain Management Ordinance*. Available: <https://planning.saccounty.gov/LandUseRegulationDocuments/Documents/Sacramento%20County%20Floodplain%20Management%20Ord.pdf>. Accessed July 26, 2022.
- Sacramento County Water Resources Division and the City of Sacramento Department of Utilities Division of Engineering Services. 2006. *Sacramento City/County Drainage Manual Volume 2: Hydrology Standards*. Adopted 1996, updated 2006. Available: https://waterresources.saccounty.gov/DrainageManual_Volume2/V2_intro2.pdf. Accessed July 25, 2022.
- Sacramento Stormwater Quality Partnership. 2017. *Hydromodification Management Plan*. Available: https://www.beriverfriendly.net/wp-content/uploads/2021/10/SSQP-HMP-Report_FINAL_w-Figs_w-App_2018.pdf. Accessed July 26, 2022.
- . 2021. *Sacramento Region Stormwater Quality Design Manual*. Available: <https://www.beriverfriendly.net/stormwater-quality-design-manual/>. Accessed July 25, 2022.
- U.S. Army Corps of Engineers and California Reclamation Board. 2002. Best Available Map Viewer: 200-year Floodplains. Available: <https://gis.bam.water.ca.gov/bam/>. Accessed August 17, 2022.

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