

July 25, 2016 | Initial Study

CALIBER VALLEJO SCHOOL

Pacific Charter School Development

Prepared for:

City of Vallejo

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey

Abbreviations and Acronyms

CMP	congestion management program
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO _{2e}	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dba	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	day-night noise level
L _{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service

Abbreviations and Acronyms

LST	localized significance thresholds
M _w	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO _x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O ₃	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin

Abbreviations and Acronyms

SO _x	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WSA	water supply assessment

1. Introduction

Pacific Charter School Development (PCSD) is proposing demolition of existing structures and construction of a two-story transitional kindergarten through eighth (TK-8) grade charter school (Caliber Charter School), as well as other site improvements such as play areas, and an on-site surface parking lot, at 500 Oregon Street in the City of Vallejo. Detailed descriptions of the project components are provided below.

This Initial Study checklist was prepared to assess the potential environmental effects of the Caliber Charter School Environmental Review Project, herein referred to as the “proposed project.” This Initial Study consists of a depiction of the existing environmental setting and the project description followed by a description of various environmental effects that may result from construction and operation of the proposed project.

This document has been completed in accordance with the California Environmental Quality Act (CEQA; Public Resources Code [PRC], Sections 21000 et seq.). All projects within the State of California are required to undergo a review to determine the environmental impacts associated with implementation of the project in accordance with CEQA. CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and the ways to avoid or reduce the environmental effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to all California government agencies at all levels, including local agencies, regional agencies, and state agencies, boards, commissions, and special districts.

1.1 LEAD AGENCY

In accordance with Section 15367 of the CEQA Guidelines, the City of Vallejo is the Lead Agency for the proposed project, since it will serve as “the public agency which has the principal responsibility for carrying out or approving the project.”

1.2 PROJECT LOCATION

The project site is located at 500 Oregon Street in the City of Vallejo, California. The proposed project consists of Assessor’s Parcel Number (APN) 0054-020-140 and encompasses a total parcel area of 4.09 acres; however, the buildable area is slightly less than 4 acres.

1.2.1 Regional and Local Location

The project site is located 1.5 miles north of Interstate 780 (I-780), 0.25 miles east of Highway 29 (Sonoma Boulevard), 1.25 miles south of Highway 37, and 1.0 miles west of Interstate 80 (I-80) and, as shown on Figure 1. Regional access to the project site is provided via I-80, I-780, Highway 29, and Highway 37.

1. Introduction

The project site is located at 500 Oregon Street and is bounded by Valle Vista Avenue to the north, residential and office uses to the east, Oregon Street to the south, and Napa Street to the west, as shown on Figure 1. Local access to the project site is provided via Valle Vista Avenue, Oregon Street, and Napa Street.

1.3 ENVIRONMENTAL SETTING

1.3.1 Existing Conditions

The vacant project site was previously owned by Vallejo Unified School District (District) and operated as the District's Administration and Corporation Yard. As shown on Figure 2, the project site is generally flat and includes four, single-story structures, totaling 31,376 square feet, as well as a concrete slab foundation at the corner of Valle Vista Avenue and Napa Street from a previously demolished structure. The existing project site also consists of 203,575 square feet of impervious surfaces.¹ Further, the existing project site consists of minimal landscaping, including sparsely planted ornamental trees and shrubs along Oregon Street, Napa Street, and Valle Vista Avenue. There's also a small patch of gravel at the northeast corner of the project site.

1.3.2 Surrounding Conditions

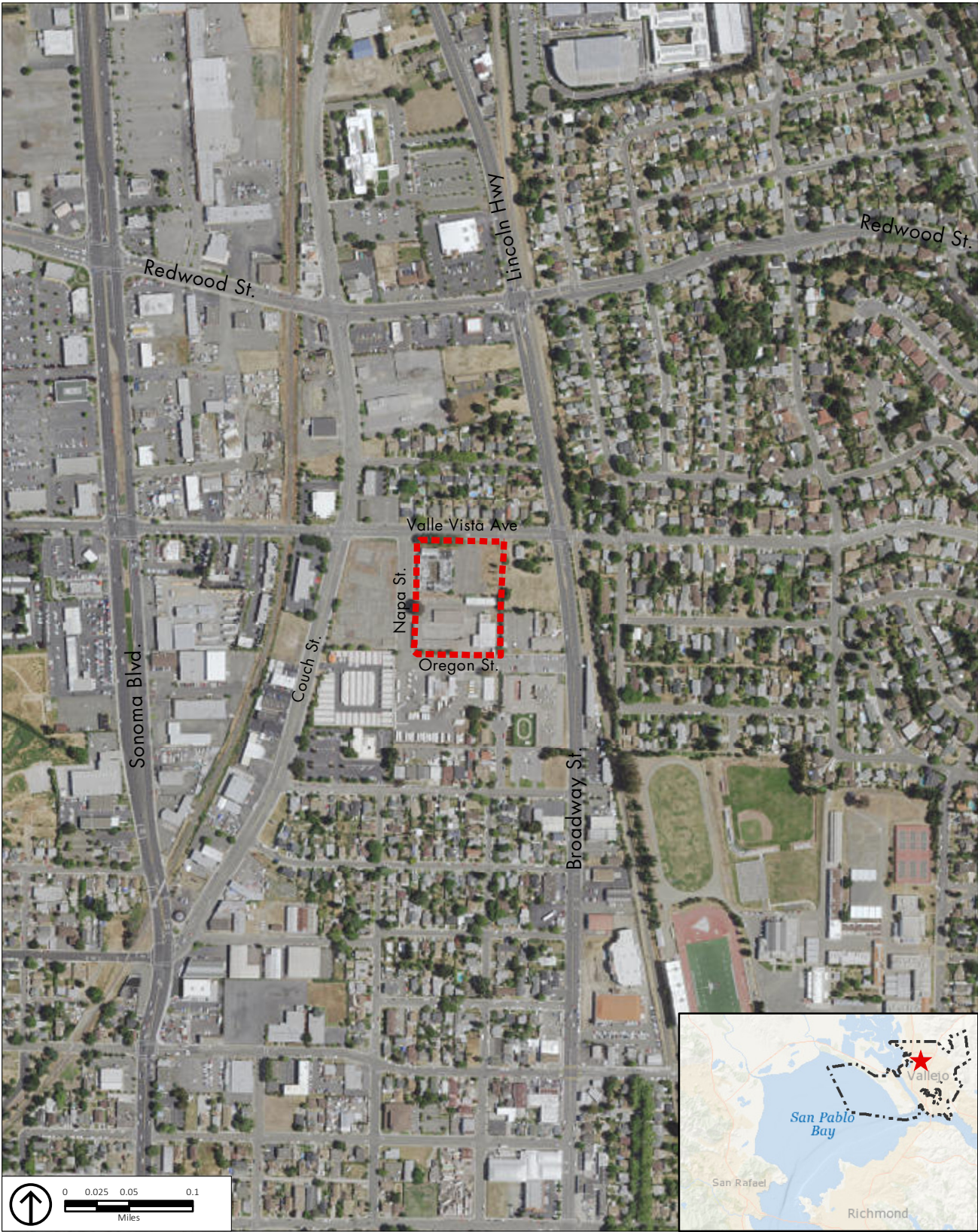
As shown on Figure 2, the project site is surrounded by a mix of land uses, including commercial, light industrial, and single-family residential to the north; single-family residential, and commercial to the east; light industrial and commercial to the south; and commercial to the west. In addition, there is a paved parcel area across Napa Street, directly west of the project site, which is anticipated for future development as a post office.

In general, the surrounding area is characterized by a mix of land uses lacking cohesive character or design, with the exception of the residential uses along Valle Vista Avenue, which consist primarily of smaller single-story residential units set back from the street and ornamental landscaping, such as turf grass, trees, and shrubs. The commercial uses surrounding the project site consist of single- and two-story structures reflective of either late 1970s and 1980s architecture, and include ornamental landscape and areas of paved surface parking lots.

1.3.3 Land Use Designation and Zoning

According to the City of Vallejo General Plan, the land use designation of the project site is Public and Semi-Public-Medical. In general, the Public and Semi-Public designation generally applies to governmental, education, and/or health care facilities within the City of Vallejo. The zoning designation is Public and Quasi-Public Facilities (PF). Permitted uses in the PF District include a wide range of uses, including but not limited to, public schools, fire and police stations, community centers, public administrative offices, public playground and playing fields, colleges and universities, and a variety of other public uses, which can be found in Section 16.30.020 of the City of Vallejo Municipal Code.

¹ Preliminary Stormwater Control Plan for Caliber Charter School – Vallejo Campus, CSW/Stuber-Stroeh Engineering Group, Inc., April 18, 2016.



Source: City of Vallejo, 2014; Solano County, 2014; PlaceWorks, 2016

 Project Site

Figure 1
Regional and Local Location



Source: TEF Design, 2016.



Figure 2
Existing Site Land Use

1.4 PROJECT DESCRIPTION

This section provides details of the proposed project components that would commence over two phases, including demolition and site preparation activities, construction, landscape, and circulation improvements.

1.4.1 Construction Timeline

The proposed project is projected to begin in September 2016 and would commence over an anticipated 10-month period.

1.4.2 Project Demolition and Site Preparation

The proposed project would include demolition of the four existing structures totaling 31,376 square feet, and the concrete slab foundation, as shown above on Figure 2. Other site preparation activities would include removal of the existing paved surfaces, and existing vegetation, including ornamental trees and shrubs along the Oregon and Napa Street frontages. The existing stand of trees along Valle Vista Avenue would be retained unless they are found to be in poor condition. In addition, site preparation activities would also include minor grading and trenching for installation of utilities.

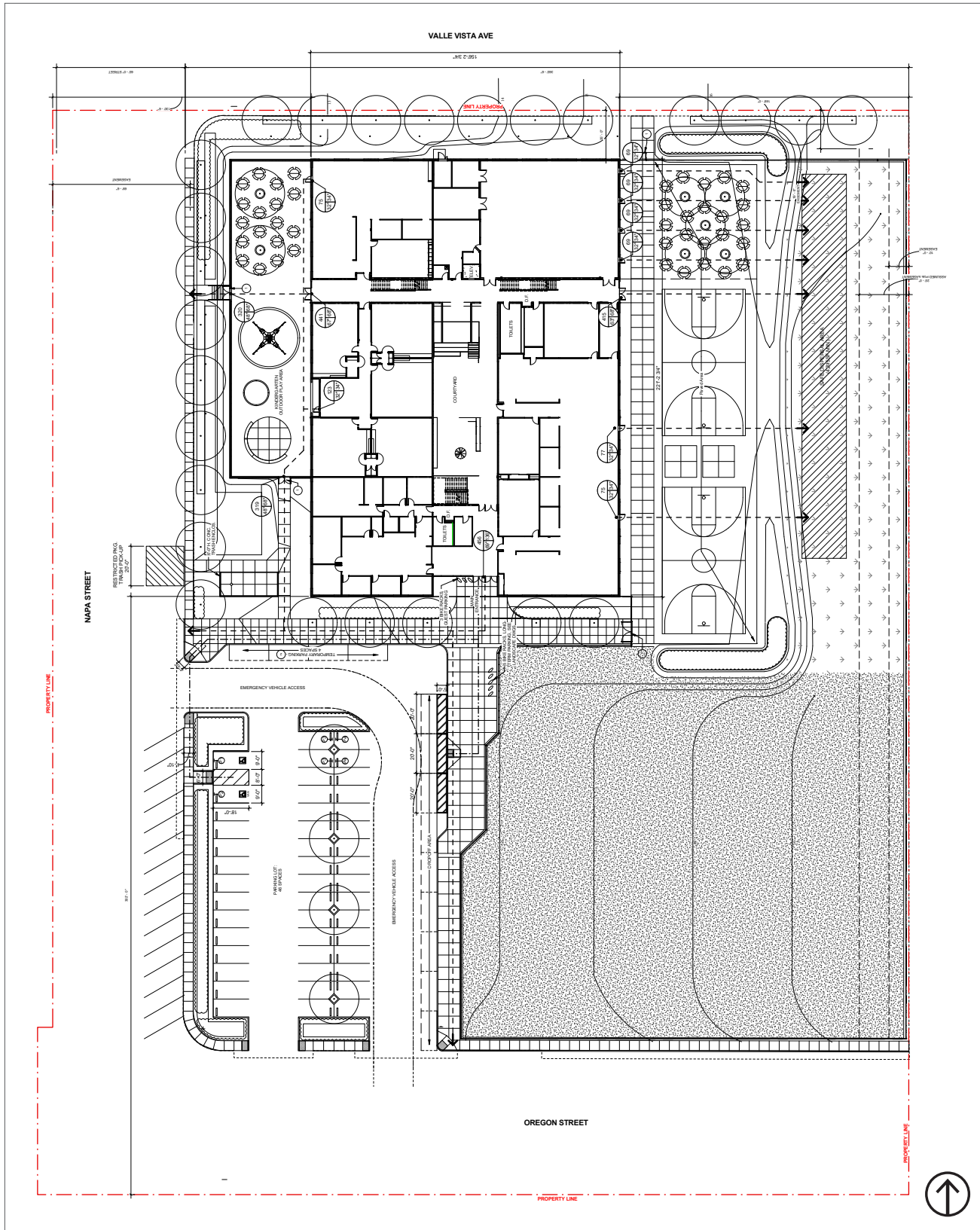
1.4.3 Project Components

The following sections provide detailed descriptions of the project components, as well as the proposed site plan as shown on Figure 3.

1.4.3.1 TK-8 CAMPUS BUILDING AND COURTYARD

As shown in Table 1, the proposed project would include construction of a 57,260 square foot campus building, and 3,224 square feet of interior courtyard space, for a total building area of 60,484 square feet to serve as the TK-8 campus. At full operation, the proposed project would have the capacity for 900 TK-8 students and a staff of up to 70 employees. As shown on Figures 4a and 4b, the proposed campus building would be constructed at a maximum height of 32 feet (2 stories).

The first story of the building would include TK through 3rd grade classrooms, as well as a multi-purpose room, administration offices, restrooms, a teacher work room, storage areas, and an open air courtyard at the interior of the building. The second story would include 5th through 8th grade classrooms, a teacher workroom, and restrooms.



Source: TEF Design, 2016.

- NUMBER OF OCCUPANTS
 PROVIDED WIDTH
 REQUIRED WIDTH
- PATH OF TRAVEL
- ACCESSIBLE PATH OF TRAVEL

Figure 3
Proposed Site Plan

1. Introduction

Table 1 Project Components – TK-8 Campus Building and Courtyard

Components	Gross Square Feet
CAMPUS BUILDING	
Classrooms (grades 1-8)	29,501
Coding Classrooms	2,279
Special Education	1,306
Kindergarten	5,187
Multi-purpose & Services	5,337
Administration	2,915
Teacher Break Room	1,845
Core	3,912
Entry	797
Internal Circulation	2,797
2nd Floor Outdoor Halls and Bridge	1,384
Subtotal – Campus Building	57,260
COURTYARD	
Courtyard	3,224
Subtotal - Courtyard	3,224
TOTAL BUILDING AREA (Campus + Courtyard)	
Campus Building	57,260
Courtyard	3,224
Total	60,484

Source: TEF Design, Caliber Charter School, 500 Oregon Street, Project Site Plans, April 18, 2016.



Source: TEF Design, 2016.

Figure 4a
Phase I Building Exterior Elevations: East and West



SOUTH ELEVATION



NORTH ELEVATION

Source: TEF Design, 2016.

Figure 4b
Phase I Building Exterior Elevations: North and South

1. Introduction

1.4.3.2 LANDSCAPE AND PLAY AREAS

As shown on Figure 5, the proposed project would include new landscape and play areas throughout the project site, including trees, bio-retention planter areas and sports courts. The existing stand of trees along Valle Vista Avenue would be retained unless they are found to be in poor condition. The parking lot along the Napa Street frontage would include an additional bio-retention area as well as trees within the center of the parking lot. Additionally, a small outdoor kindergarten play area would be located adjacent to the campus on its west side along Napa Street. The project also proposes construction of a paved recreational area east of the TK-8 campus building that would include two basketball courts, four square courts, and an outdoor seating area with trees. Bio-retention areas would be included along the north and south perimeter of the paved playing area, along with native shrubs and groundcover.

1.4.3.3 LIGHTING

As shown on Figure 6, the project site would be illuminated along the western, eastern, and southern edges of the school building and along Napa Street, west of the building, and along the eastern edge of the parking lot.

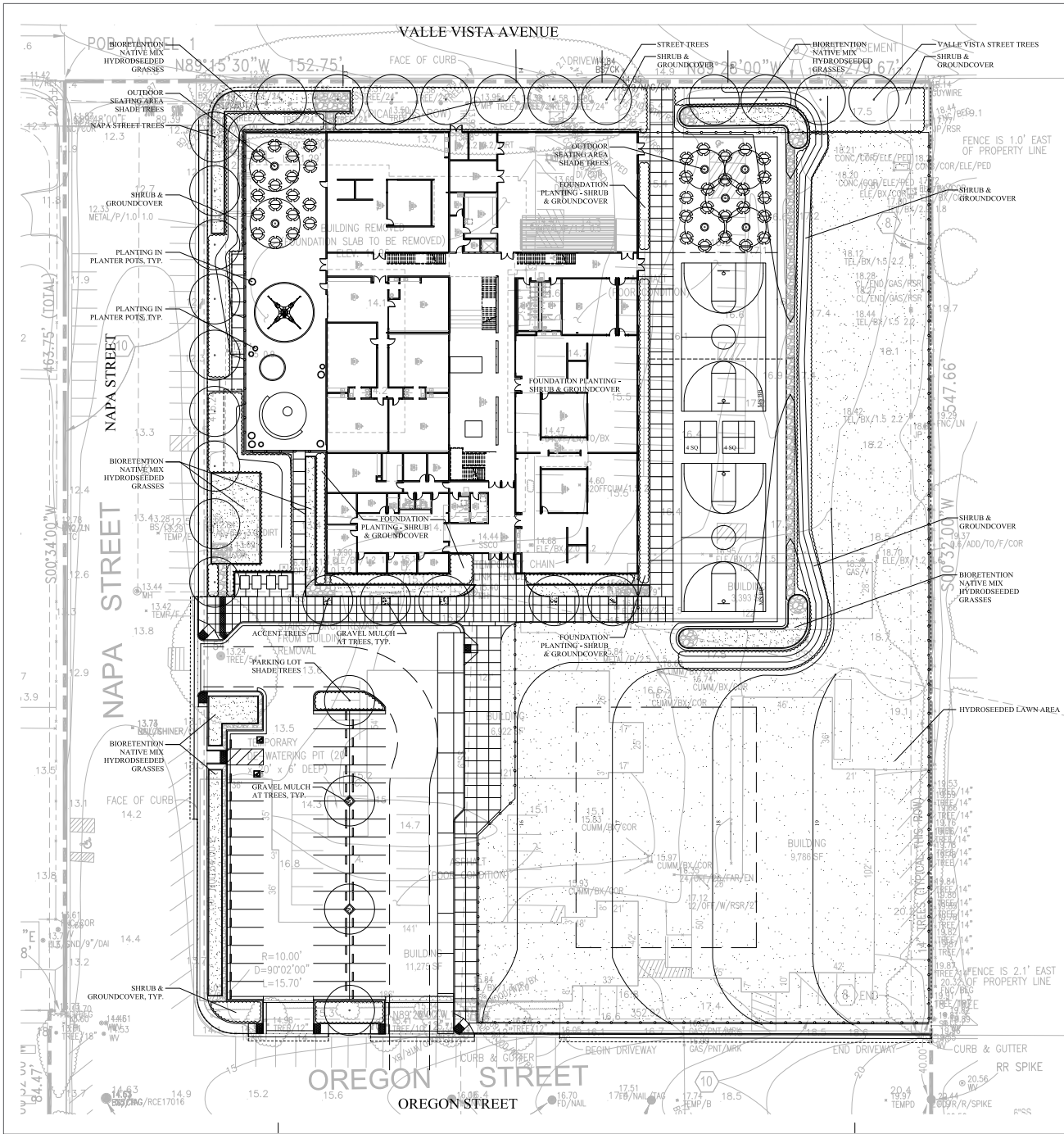
1.4.3.4 PARKING AND CIRCULATION

As shown above on Figure 3, the proposed project would include an on-site paved surface parking with 47 spaces, including two Americans with Disabilities Act (ADA) compliant spaces. The existing 27 on-street parking spaces along Napa Street would remain. The 17 on-street parking spaces along Oregon Street would be removed to accommodate two new driveways near the corner of Napa and Oregon Street along the site's southern boundary. In total, the proposed project would construct three driveways, including two along Oregon Street and one along Napa Street. Further, the project proposes staggered times for arrival and dismissal of students at the "valet" area, along the curb area of the parking lot. Table 2 shows proposed staggered operation of the school. Parking would be prohibited in the valet area between 3:30 p.m. and 4:00 p.m. Further, Caliber Charter School implements staggered school start times based on grade level and can range from start times between 7:30 a.m. and 8:00 a.m. For example, grades 5-8 generally have a start time of 7:30 a.m., grades 1-4 generally have a start time of 7:45 a.m., and TK-Kindergarten generally have a start time of 8:00 a.m.

Perimeter sidewalks would be retained as is; however, pedestrian access and circulation would be enhanced with the addition of paved pedestrian walkways throughout the project site. The main entry to the campus would be located at the southern end of the new school building, with additional access points along the north, east, and west sides of the building.

1.4.3.5 UTILITIES AND INFRASTRUCTURE

In general, the proposed project would connect to existing utilities and infrastructure, including sewer, water, electricity, gas, and communication.



Source: TEF Design, 2016.

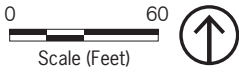
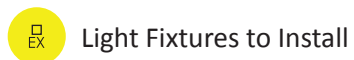


Figure 5
Phase I Landscape Planting Plan



Source: TEF Design, 2016.

Figure 6
Phase I Lighting Plan



1. Introduction

Table 2 Proposed Arrival and Dismissal Times

Arrival/Dismissal Procedures	Time
ARRIVAL – MORNING DROP-OFF	
Grades 5 – 8	7:30 AM to 7:45 AM
Grades 1 – 4	7:45 AM to 8:00 AM
Transitional Kindergarten (TK) – Kindergarten	8:00 AM to 8:15 AM
DISMISSAL – PICK-UP	
TK – Kindergarten (TK & K students must be picked up from their classrooms)	3:45 PM to 4:00 PM
Grades 1 – 4	3:45 PM to 4:00 PM
Grades 5 – 8	4:00 PM to 4:15 PM

Source: Caliber Schools, Draft Arrival and Dismissal Policies and Procedures, January 2016.

Stormwater

The proposed project would include construction of underground storm drain infrastructure and new storm drain mains along Valle Vista Avenue and Napa Street, as shown on Figure 7. Bio-retention treatment features would be constructed to reduce the peak discharge and treat stormwater runoff. Installation of the storm drain mains and on-site storm drainage would require excavation along portions of Valle Vista Avenue, Napa Street, and Oregon Street.

Water Supply

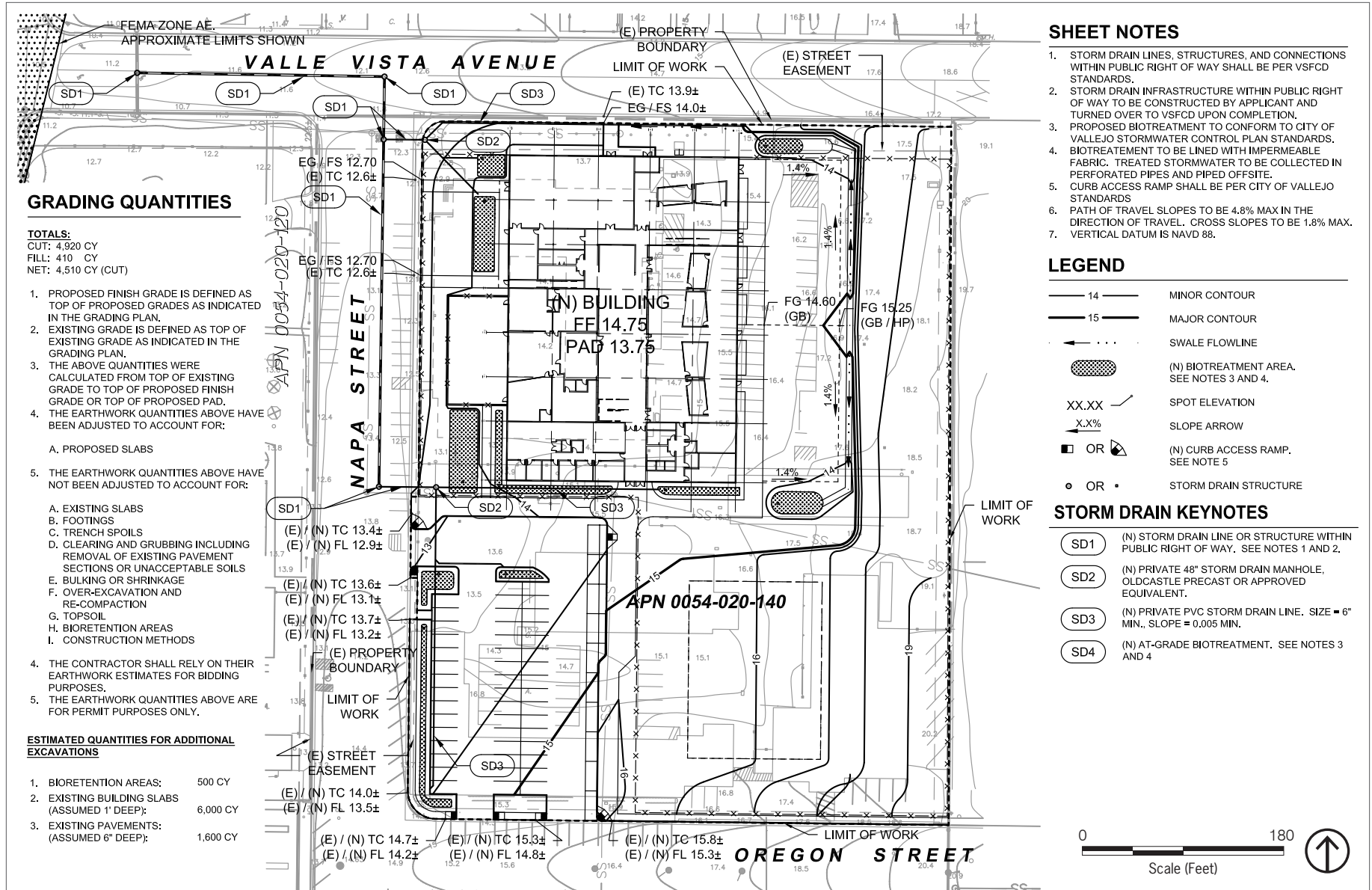
Water service at the project site is provided by the City of Vallejo Water Department. As shown on Figure 8, the project proposes connection to the existing 6-inch water main at the northern boundary of the site at Valle Vista Avenue.

Sanitary Sewer

Sanitary sewer service would be provided by the Vallejo Sanitation and Flood Control District. As shown on Figure 8, the existing project site has sanitary sewer lines traversing the site and the project proposes connections to the existing system at the northern boundary of the site at Valle Vista Avenue. The existing sanitary sewer lines are expected to remain in place.

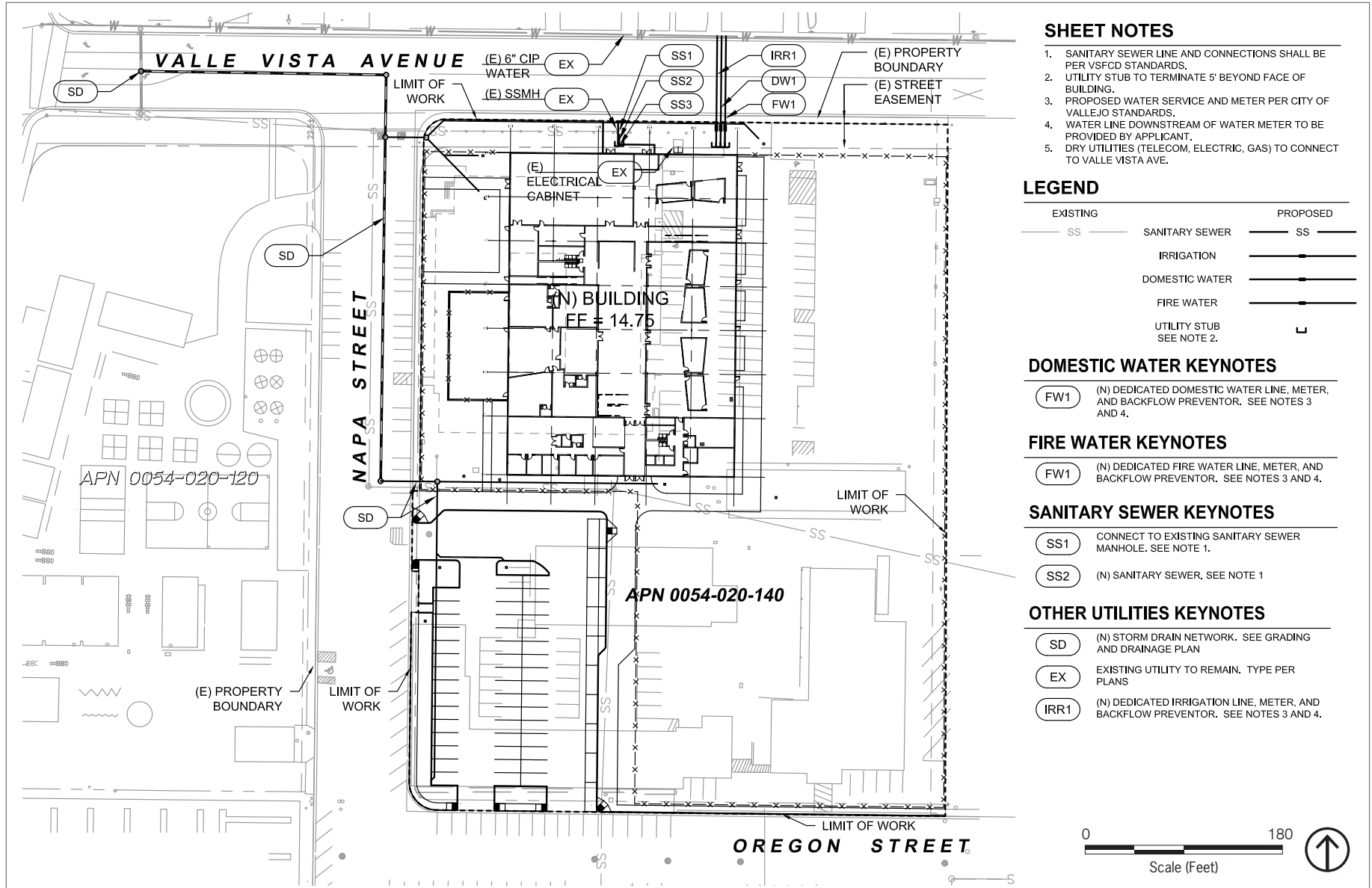
Gas and Electric

Gas and electricity would be provided by Pacific Gas and Electric (PG&E) and existing PG&E infrastructure would remain in place.



Source: TEF Design, 2016.

Figure 7
Phase I Drainage and Grading Plan



Source: TEF Design, 2016.

Figure 8
Phase I Utilities Plan

1. Introduction

1.5 REQUIRED PERMITS AND APPROVALS

Following the approval of the proposed project and adoption of the Initial Study, the project may require permits and approvals from the following agencies, as well as others as determined throughout the permitting process:

- Design Review
- Grading Permit
- Site Development Permit
- Building Permit
- Tree Removal Permit
- Demolition Permit

2. Environmental Checklist

2.1 BACKGROUND

1. **Project Title:** Caliber Charter School

2. **Lead Agency Name and Address:**

City of Vallejo
555 Santa Clara Street
Vallejo, CA 94590

3. **Contact Person and Phone Number:**

Dina Tasini
Planning Manager
City of Vallejo
707.648.4326

4. **Project Location:** The project site is located at 500 Oregon Street in the City of Vallejo, California Assessor's Parcel Numbers 0054-020-140.

5. **Project Sponsor's Name and Address:**

Whitney Rubin
Project Manager
Pacific Charter School Development
2323 Broadway
Oakland, CA 94612
310.600.6804

6. **General Plan Designation:** Public and Semi-Public-Medical

7. **Zoning:** is Public and Quasi-Public Facilities (PF)

2. Environmental Checklist

8. Description of Project:

Pacific Charter School Development is proposing demolition of existing structures and construction of a two-story transitional kindergarten through eighth (TK-8) grade charter school (Caliber Charter School), as well as other site improvements such as play areas, and an on-site surface parking lot, at 500 Oregon Street in the City of Vallejo.

9. Surrounding Land Uses and Setting:

The project site is surrounded by a mix of land uses, including commercial, light industrial, and single-family residential to the north; single-family residential, and commercial to the east; light industrial and commercial to the south; and commercial to the west. In addition, there is a paved parcel area across Napa Street, directly west of the project site, which is anticipated for future development as a post office.

10. Other Public Agencies Whose Approval Is Required:

- Design Review Permit
- Grading Permit
- Site Development Permit
- Building Permit
- Tree Removal Permit
- Demolition Permit

11. Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

The City of Vallejo has not received any request from any tribes in the geographic area with which is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Vallejo.

2. Environmental Checklist

2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture / Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards / Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities / Service Systems |

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

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

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

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

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

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

2. Environmental Checklist

Signature

Date

Printed Name

For

2. Environmental Checklist

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analyses Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is

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substantiated. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) 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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) 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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) 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?				X

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

IV. BIOLOGICAL RESOURCES. Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		
VI. TRIBAL CULTURAL RESOURCES. Would the project:				
a) e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074? as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is? <ul style="list-style-type: none"> • Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historic 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 for the purposes of the this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. 		X		
VII. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) 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?				X
XIII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial 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)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?				X
e) Other public facilities?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XVII. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider, which 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?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
XIX. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

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3. Environmental Analysis

Section 2.4 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

3.1 AESTHETICS

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The proposed project would result in a significant impact if it would have a substantial adverse effect on a scenic vista. However, neither the California Scenic Highway Program² nor the Vallejo General Plan designates official scenic corridors or vistas within the City of Vallejo. Although there are no officially designated scenic views within the city, the City recognizes that views from the hillsides and elevated roadways are scenic characteristics of the area. These views include San Pablo Bay, Mare Island Strait, the Vallejo waterfront, Sulphur Springs Mountain, Vaca Mountains, White Slough, Napa River Wetlands, and Sky Valley. However, given the urbanized setting of the existing project site and its surroundings, views of the aforementioned areas are not visible and therefore would not be affected by the proposed project. As a result, a *less-than-significant* impact would occur and no mitigation measures are required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. As mentioned above in discussion 3.1a, there are no scenic highways designated under the California Scenic Highway Program within the City of Vallejo. Therefore, *no impact* would occur and no mitigation measures are required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. As mentioned above, the project site is located within an urbanized setting surrounded by a commercial, residential, and light industrial uses. The project site itself was previously developed and operated as a school maintenance yard for the Vallejo City Unified School District; however, has been unoccupied in recent years. In general the project site and its surroundings are characterized by surface parking lots, single- and multi-story structures, paved sidewalks, and ornamental landscape. The project proposes construction of a two-story (32 feet) elementary school at the northwest portion of the site, including paved play areas and an on-site surface parking lot. Consistent with the development standards of the PF Zoning District, there is no established height limit or other site development standards (Municipal

² California Department of Transportation, California Scenic Highway Mapping Program, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/, accessed on July 14, 2016.

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Code Section 16.30.060), except that the maximum height shall be determined through the site development process, taking into consideration adjacent uses. Thus, upon approval of the site development permit, the height of the proposed project would be determined not to substantially degrade the existing character of the site and its surroundings. Therefore, the overall structure and layout of the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. Further, the proposed project would improve the character of the existing site given that the existing site consists of unmaintained structures that are currently unoccupied and the project would include new structures and ornamental landscape throughout the site, including new trees, shrubs, and groundcover. Consequently, a *less-than-significant* impact would occur and no mitigation measures are required.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The proposed project would result in a significant impact if it resulted in new sources of light or glare which could adversely affect day and nighttime views in the area. As described above, the project site and its surroundings consist of a mix of residential, light industrial and commercial development, which currently emit light and glare typical of that type of development, such as interior and exterior lighting, and glare from windshields of vehicles in parking lots. Further, the existing project site and its surrounding area are comprised of street lights along Oregon Street, Napa Street, and Valle Vista, which are also sources of existing light. As shown above on Figure 6, the proposed project would include new lighting features throughout the project site, as well as an on-site surface parking lot. However, new light sources would conform to the California Building Code and would not result in a substantial increase in light because the majority of activity within the project site would occur during daytime hours. Lighting on the exterior of buildings would be used for safety, but would not be of the type or intensity that would differ from existing sources of light already present in and around the project site. There is potential for an increase in glare on sunny days resulting from light reflecting from the surface of windows and roofs. However, due to the orientation of new windows relative to the existing neighborhood north of the project site, the effects would result in a short duration. Additionally, compliance with the California Building Code and the use of proposed trees along the perimeter of the project site would serve to reduce potential impacts resulting from glare. Overall, a *less-than-significant* impact would occur and no mitigation measures are required.

3.2 AGRICULTURE AND FORESTRY RESOURCES

a) 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?

No Impact. The project site is located within the City of Vallejo in an area of the city that contains existing urban uses. Therefore, *no impact* would occur with regards to the conversion of farmland and no mitigation measures are required.

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b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The City of Vallejo is classified as Urban and Built-Up Land by the Department of Conservation's Farmland Mapping and Monitoring Program.³ Thus, the project site, adjoining parcels, and the surrounding areas do not feature agricultural zoning designations or properties subject to Williamson Act contracts. Therefore, there would be *no impact* in this respect and no mitigation measures are required.

c) 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))?

No Impact. The project site zoning designation is Public and Quasi-Public Facilities (PF). Permitted uses in the PF District include a wide range of uses, including but not limited to, public schools, fire and police stations, community centers, public administrative offices, public playground and playing fields, colleges and universities, and a variety of other public uses. Thus, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timber productions. Therefore, there would be *no impact* in this respect and no mitigation measures are required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As described above, the project site and surrounding areas currently feature developed, urbanized land uses and there are no forest lands on the project site or in close proximity to the project site.⁴ Thus, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, there would be *no impact* in this respect and no mitigation measures are required.

e) 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?

No Impact. As described above, the project site and surrounding areas do not include any zoning, land use designation, or existing land uses relating to forest land, timber production, or agriculture. Therefore, there would be *no impact* in this respect and no mitigation measures are required.

3.3 AIR QUALITY

This section analyzes the types and quantities of air pollutant emissions that would be generated by construction and operation of the proposed project. An update to the background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling is included in Appendix A, Air Quality and Greenhouse Gas Emissions, of this

³ California Department of Conservation Division, Solano County Williamson Act FY 2013/2014, ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Solano_13_14_WA.pdf, accessed on June 2, 2016.

⁴ California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, The Management Landscape, <http://frap.fire.ca.gov/data/frapgismaps/pdfs/landscapesmap.pdf>, accessed on June 2, 2016.

3. Environmental Analysis

Initial Study. The operational health risk assessment (HRA) is in Appendix A, Health Risk Assessment, of this Initial Study.

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the National and California Clean Air Act, respectively. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG) (also referred to as volatile organic compounds [VOC]), nitrogen dioxides (NO₂), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, all of them except for ROGs are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Toxic Air Contaminants

In addition to criteria air pollutants, both the State and federal government regulate the release of Toxic Air Contaminants (TACs). The California Health and Safety Code define a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code Section 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (Cal/EPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

Where available, the significance criteria established by the Bay Area Air Quality Management District (BAAQMD) may be relied upon to make the following determinations:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of BAAQMD’s 2010 Bay Area Clean Air Plan. The proposed project consists of construction of a campus building, courtyard, parking lot, and hardscape play areas. The proposed project would result in construction of 60,484 square feet of educational space (57,260 square foot campus building and 3,224 square feet of interior courtyard space) for 900 students and is not considered to be a project of statewide, regional, or area-wide significance under CEQA Guidelines Section 15206(b); and therefore, it would not be considered a large

3. Environmental Analysis

project that has the potential to affect regional demographic projects. Additionally, the proposed project would not exceed the level of population or housing foreseen in regional planning efforts, as demonstrated in Section 3.13, *Population and Housing*. As a result, the proposed project would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the 2010 Bay Area Clean Air Plan projections. Furthermore, the proposed project falls below BAAQMD's screening level thresholds, which identify projects that generate *de minimus* levels of air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by BAAQMD to be a substantial emitter of criteria air pollutants and thereby have the potential to affect the strategies in the 2010 Bay Area Clean Air Plan. Therefore, the proposed project would not conflict with or obstruct implementation of the 2010 Bay Area Clean Air Plan and impacts would be *less than significant*.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NO_x, PM₁₀, and PM_{2.5}. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. The following describes changes in regional impacts from short-term construction activities and long-term operation of the proposed project.

Construction-Related Impacts

Less Than Significant Impact with Mitigation Incorporated. Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on site would vary daily as construction activity levels change. Construction activities associated with the proposed project would result in emissions of reactive organic gases (ROG), oxides of nitrogen (NO_x), CO, PM₁₀, and PM_{2.5}.

Fugitive Dust

Ground disturbing activities during construction would generate fugitive dust. Fugitive dust emissions (PM₁₀ and PM_{2.5}) are considered to be significant unless the proposed project implements the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction. PM₁₀ is typically the most significant source of air pollution from the dust generated from construction. The amount of dust generated during construction would be highly variable and is dependent on the amount of material being disturbed, the type of material, moisture content, and meteorological conditions. If uncontrolled, PM₁₀ and PM_{2.5} levels downwind of actively disturbed areas could possibly exceed State standards. Consequently, impacts related to fugitive dust would be less than significant with the incorporation of BMPs as mitigation measures.

Impact AQ-1: Fugitive dust emissions (PM₁₀ and PM_{2.5}) are considered to be significant unless the proposed project implements the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction.

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Mitigation Measure AQ-1: The proposed project's construction contractor shall comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM₁₀ and PM_{2.5}:

- Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit vehicle traffic speeds on unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

Adherence to the BAAQMD's BMPs for reducing construction emissions of PM₁₀ and PM_{2.5} would ensure that ground-disturbing activities would not generate a significant amount of fugitive dust. Fugitive dust impacts would be *less than significant with mitigation*.

Construction Exhaust Emissions

Less Than Significant Impact. The proposed project would result in demolition of the existing 31,376 square-feet of buildings and facilities and construction of a new school facility in its place. In addition, construction activities would generate approximately 1,444 tons of asphalt demolition debris. Therefore, construction emissions associated with the proposed project were estimated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2.

Construction emissions are based on the construction schedule and equipment list provided by the proposed project construction contractor. Construction associated with the proposed project is estimated to take approximately 10.5 months. To determine potential construction-related air quality impacts, the average daily criteria air pollutants emissions generated by the proposed project-related construction activities are

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compared to the BAAQMD significance thresholds in Table 3.3-1. Average daily emissions are based on the annual construction emissions divided by the total number of active construction days.

Table 3.3-1 Construction-Related Criteria Air Pollutant Emissions Estimates

Year	Criteria Air Pollutants (tons/year) ^a					
	VOC	NOx	Fugitive PM ₁₀ ^b	Exhaust PM ₁₀	Fugitive PM _{2.5} ^b	Exhaust PM _{2.5} ^b
2016	0.04	0.35	0.03	0.02	0.01	0.02
2017	0.29	0.33	0.03	0.02	0.01	0.02
Total	0.33	0.68	0.06	0.05	0.01	0.04

	Criteria Air Pollutants (average lbs/day) ^a					
Average Daily Emissions^c	2.95	6.00	0.51	0.41	0.13	0.38
BAAQMD Average Daily Project-Level Threshold	54	54	BMPs	82	BMPs	54
Exceeds Average Daily Threshold	No	No	NA	No	NA	No

Note: Emissions may not total to 100 percent due to rounding. BMP: Best Management Practices; NA: not applicable

a. Construction phasing and equipment mix are based on the preliminary information provided by the project construction contractor. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.

b. Includes implementation of BMPs for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and replacing ground cover.

c. Approximately only 50 percent of the building interior would be painted.

d. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 320.

Source: CalEEMod 2013.2.2.

As shown in Table 3.3-1, criteria air pollutant emissions from construction equipment exhaust would not exceed the BAAQMD average daily thresholds and impacts from project-related construction activities to the regional air quality would be *less than significant*.

Operation-Related Impacts

Less Than Significant Impact. Long-term air pollutant emissions generated by elementary schools facilities are typically associated with the burning of fossil fuels in cars (mobile sources); energy use for cooling, heating, and cooking (energy); and landscape equipment use (area sources). The primary source of potentially new long-term criteria air pollutant emissions generated by the proposed project would be emissions produced from project-generated building energy use.

Implementation of the proposed project would create an elementary school which would accommodate 900 new students. The operational size of the proposed project would not exceed BAAQMD screening criteria for criteria pollutants for an elementary school, which is at 2,747 students; and therefore, would not generate criteria air pollutant emissions that exceed BAAQMD's regional significance thresholds (see Appendix B). The existing building is unused and does not generate any vehicle trips, thus the proposed project will

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increase vehicle trips by 2,484 average daily trips during a weekday. (See Section 3.16, *Transportation and Circulation*, for more details on traffic modeling conducted on the proposed project.) Additionally, while the proposed project would result in an increase in building square footage on the project site, the proposed project would replace older buildings with newer, more energy-efficient buildings. Consequently, the proposed project would not cumulatively contribute to the nonattainment designations of the Air Basin. Impacts from project-related operation activities to the regional air quality would be *less than significant* and no mitigation measures are required.

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

Less Than Significant Impact. The San Francisco Bay Area Air Basin (SFBAAB) is currently designated as a nonattainment area for California and National ambient air quality standards (AAQS) for ozone (O₃) and for PM_{2.5}, and a nonattainment area under the California AAQS for PM₁₀. Any project that does not exceed or can be mitigated to less than the BAAQMD significance levels, used as the threshold for determining major projects, does not add significantly to a cumulative impact.

The proposed project would have less than significant construction impacts (with mitigation for fugitive dust and construction-related off-site community risk and hazards), operational impacts (including 2010 Bay Area Clean Air Plan consistency, odors, and CO hotspots), and on-site community risk and hazards. Consequently, the proposed project's contribution to cumulative air quality impacts would be *less than significant*.

d) Expose sensitive receptors to substantial pollutant concentrations?

Construction Off-Site Community Risk and Hazards

Less Than Significant Impact With Mitigation Incorporated. The proposed project would elevate concentrations of toxic air contaminants (TACs) and PM_{2.5} in the vicinity of sensitive land uses during construction activities. The BAAQMD has developed Screening Tables for Air Toxics Evaluation During Construction that evaluate construction-related health risks associated with residential, commercial, and industrial projects.⁵ According to the screening tables, construction activities occurring within 492 feet (150 meters) of sensitive receptors would result in potential health risks and warrant a health risk analysis. The nearest sensitive land uses in the vicinity of the proposed project includes residential units adjacent to the project site to the east and single-family residences to the north across Valle Vista Avenue. Thus, construction activities in relation to sensitive receptors could occur within the BAAQMD construction-related health risks screening distance. Consequently, a construction HRA of TACs and PM_{2.5} was prepared (see Appendix A to this Initial Study).

Construction emissions were based on a 10.5-month construction duration, construction schedule, and off-road equipment list provided by the project construction contractor. The United States Environmental

⁵ Bay Area Air Quality Management District (BAAQMD), 2010, Screening Tables for Air Toxics Evaluation During Construction, Version 1.0, May.

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Protection Agency (USEPA) AERMOD, Version 9.1, dispersion modeling program was used to estimate excess lifetime cancer risk, chronic non-cancer hazard index for non-carcinogenic risk, and the PM_{2.5} maximum annual concentrations at the nearest sensitive receptors. Results of the analysis are shown in Table 3.3-2.

Table 3.3-2 Construction Risk Summary - Unmitigated

Receptor	Cancer Risk (per million)	Chronic Hazards	PM _{2.5} (µg/m ³) ^a
Maximum Exposed Receptor – Residences	14.0	0.055	0.16
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	Yes	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

a. From year 2016, which represents the highest maximum annual PM_{2.5} concentration.

Source: Lakes AERMOD View, 9.1 (2015).

The results of the HRA are based on the maximum receptor concentration over a 10.5-month construction exposure duration for off-site receptors, assuming 24-hour outdoor exposure. Risk is based on the updated OEHHA Guidance:⁶

- Cancer risk for the maximum exposed off-site resident, at the single-family residence immediately east of the project, from construction activities related to the proposed project were calculated to be 14.0 in a million and would exceed the 10 in a million significance threshold. Using the 2015 OEHHA guidance, the calculated total cancer risk for the off-site residents incorporates the individual risk for infant and childhood exposures into one risk value. Therefore only one cancer risk value for the off-site residents was determined using the 2015 OEHHA Guidance Manual.
- For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for off-site sensitive receptors from the proposed project. Therefore, chronic non-carcinogenic hazards are within acceptable limits.
- The highest PM_{2.5} annual concentration of 0.16 µg/m³ at the maximum exposed off-site sensitive resident would be below the BAAQMD significance threshold of 0.3 µg/m³. Therefore, the highest PM_{2.5} annual concentration is within acceptable limits.

Cancer risk for the maximum exposed off-site resident would exceed BAAQMD’s significance thresholds due to construction activities associated with the proposed project. However, Mitigation Measure AQ-2 requires using construction equipment fitted with Level 2 Diesel Particulate Filters (DPF), which would reduce the project’s localized construction emissions. The mitigated health risk values were calculated and are summarized in Table 3.3-3. As shown in the table, incorporation of mitigation would reduce cancer risk at the maximum exposed receptor to 7.0 in a million, which would be below the BAAQMD’s significance

⁶ Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

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threshold. Therefore, the project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be *less than significant with mitigation*.

Table 3.3-3 Construction Risk Summary – Mitigated

Receptor	Cancer Risk (per million)	Chronic Hazards	PM _{2.5} (µg/m ³) ^a
Maximum Exposed Receptor – Residences	7.0	0.028	0.08
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	No	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

Risks incorporate Mitigation Measure AQ-2, which includes using construction equipment with Level 2 Diesel Particulate Filters.

a. From year 2016 which represents the highest maximum annual PM_{2.5} concentration.

Source: Lakes AERMOD View, 9.1 (2015).

Recommended Mitigation Measures

Impact AQ-2: Cancer risk for the maximum exposed off-site resident would exceed BAAQMD’s significance thresholds due to construction activities associated with the proposed project.

Mitigation Measure AQ-2: During construction, the construction contractor(s) shall use construction equipment fitted with Level 2 Diesel Particulate Filters (DPF) or higher for all equipment over 50 horsepower. The construction contractor shall maintain a list of all operating equipment in use on the project site for verification by the City of Vallejo Building Division official or his/her designee. The construction equipment list shall state the makes, models, and number of construction equipment on-site. Equipment shall be properly serviced and maintained in accordance with manufacturer recommendations. The construction contractor shall ensure that all non-essential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board Rule 2449. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the City of Vallejo Planning Division and/or Building Division clearly show the requirement for Level 2 DPF or higher emissions standards for construction equipment over 50 horsepower.

Operation On-Site Community Risk and Hazard

Less Than Significant Impact. The proposed project would not create new major sources of TACs. However, when siting new sensitive receptors, the BAAQMD CEQA Guidelines recommend examining sources of TACs and PM_{2.5} emissions within 1,000 feet that would adversely affect individuals within the project. Under the California Supreme Court’s decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) (*CBLA v. BAAQMD*), where a project would exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future sensitive receptors of the proposed project and the public at large. Therefore, this analysis has been incorporated into the environmental assessment in order for the City to consider potential health and welfare implications from siting new sensitive receptors.

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BAAQMD has developed screening tools to identify stationary and mobile sources of TACs and PM_{2.5} in the vicinity of sensitive land uses, and developed screening thresholds for assessing potential health risks from these sources. The site is proximate to one highway (Highway 29/Sonoma Boulevard), two high volume roadways with over 10,000 vehicles per day (Lincoln Highway/Broadway and Redwood Street) and 12 permitted stationary sources (See Table 4). Additionally, the proposed project site is about 300 feet west of a California Northern Railroad (CFNR) rail line and easement along Lincoln Highway/Broadway, and approximately 525 feet east of an abandoned CFNR right-of-way. Lastly, the Vallejo City Unified School District (VCUSD) Transportation Department bus yard is located to the south across Oregon Street.

An HRA (Appendix C) was prepared to evaluate the health risk impacts to future students and staff of the proposed project from the identified emission sources. BAAQMD's screening health risk values were used to determine the risks for many of the sources. For sources requiring refined modeling, the US EPA AERMOD, Version 9.1, dispersion modeling program and CARB's Hot Spots Analysis and Reporting Program (HARP2) was used to estimate excess lifetime cancer risk, chronic and acute non-carcinogenic hazard indices, and PM_{2.5} concentrations for the on-site sensitive receptors due to off-site emission sources. The results of the HRA are shown in Table 3.3-4.

Table 3.3-4 On-Site Risk Summary

Emissions Sources	Cancer Risk (per million)		Chronic Hazards	Acute Hazards	PM _{2.5} (µg/m ³)
	Staff Exposure	Student Exposure			
SCREENING VALUES					
Highway 29 – Sonoma Boulevard ^a	0.94	0.94	0.001	0.001	0.010
Lincoln Highway/Broadway ^b	2.48	2.48	0.020	0.020	0.037
Redwood Street ^b	1.10	1.10	0.020	0.020	0.013
Klimisch's Inc. ^c	0.00	0.00	0.000	0.000	0.001
E Auto Body ^c	0.00	0.00	0.001	0.001	0.000
Rose's Collision Repair Center ^c	0.00	0.00	0.000	0.000	0.000
Earl Scheib of California ^c	0.00	0.00	0.000	0.000	0.000
Sonoma Auto Collision ^c	0.00	0.00	0.000	0.000	0.000
Foster Lumber ^c	n/a	n/a	n/a	n/a	n/a
Solano Collision Inc. ^c	0.00	0.00	0.002	0.002	0.000
Vallejo Sanitation & Flood Control District ^c	0.37	0.37	<0.001	0.003	0.002
D&F Autoshine ^c	0.15	0.15	0.001	0.001	0.000
Vallejo One Hour Cleaners ^c	0.00	0.00	0.000	0.000	0.000
A1 Collision Repair ^c	0.00	0.00	0.003	0.003	0.000

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Table 3.3-4 On-Site Risk Summary

Emissions Sources	Cancer Risk (per million)		Chronic Hazards	Acute Hazards	PM _{2.5} (µg/m ³)
	Staff Exposure	Student Exposure			
Road Runner Gas ^c	0.40	0.40	<0.001	0.029	n/a
REFINED MODELING VALUES					
California Northern Railroad ^d	0.01	0.02	<0.001	n/a	n/a
VCUSD Transportation Dept. ^d	0.13	0.52	0.001	0.003	n/a
BAAQMD Project-Level Threshold	10	10	1.0	1.0	0.3
Exceeds Threshold?	No	No	No	No	No
Cumulative Level Risk					
Total Cumulative Risk from All Sources	5.58	5.98	0.050	0.083	0.063
BAAQMD Project-Level Threshold	100	100	10.0	10.0	0.8
Exceeds Threshold?	No	No	No	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

a. BAAQMD Highway Screening Analysis Tool (2011).

b. BAAQMD Roadway Screening Analysis Calculator (2015).

c. BAAQMD Stationary Source Screening Analysis Tool for Napa and Solano Counties (2012), with distance multipliers for gasoline stations and diesel engines.

d. Lakes AERMOD View, 9.1 (2015) and CARB HARP2 (2016).

The results of the HRA are based on the maximum receptor concentration for on-site receptors. Additionally, the calculated cancer risk is based on the updated OEHHA Guidance.⁷ Utilizing the 2015 OEHHA guidance, the calculated total cancer risk incorporates the individual risk for childhood and adult exposures into one risk value. Therefore, only one cancer risk value was determined using the 2015 OEHHA Guidance Manual. Additionally, an 8-hour outdoor exposure and an exposure duration of 25 years for adult staff and 10 years for TK through 8th grade students were assumed.

- The excess cancer risks for project staff and students from each identified source range from 0.0 to 2.48 in one million and are less than the 10 in one million BAAQMD significance thresholds for individual sources. Additionally, the combined excess cancer risk for project staff and students from the identified sources are also less than the 100 in a million BAAQMD cumulative significance threshold.
- For non-carcinogenic effects, the chronic and acute non-carcinogenic hazard indexes identified for each toxicological endpoint totaled less than one for on-site sensitive receptors. Therefore, chronic non-carcinogenic hazards are within acceptable limits.

⁷ Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

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- The individual and cumulative PM_{2.5} annual concentrations for on-site sensitive receptors would also not exceed BAAQMD's significance thresholds.

Because the cancer risk, chronic and acute non-carcinogenic hazard indexes, and PM_{2.5} concentrations for on-site sensitive receptors would not exceed the respective BAAQMD significance thresholds, health risk impacts to future occupants of the project are considered *less than significant*.

CO Hotspot Analysis

Less Than Significant Impact. Areas of vehicle congestion have the potential to create pockets of carbon monoxide (CO) called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Implementation of the proposed project would result in a net generation of 2484 average daily trips on a weekday⁸ and would not increase traffic volumes at affected intersections by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.⁹ Furthermore, the proposed project would not conflict with the Solano County Transportation Authority (SCTA) Congestion Management Program (CMP) because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. SCTA's CMP must be consistent with the Metropolitan Transportation Commissions' (MTC) and the Association of Bay Area Government's (ABAG) Plan Bay Area. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The proposed project would be consistent with the overall goals of the MTC's/ABAG's Plan Bay Area. Impacts associated with CO hotspots for the proposed project would be *less than significant*.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The proposed project is a school development. Construction and operation of school facilities developments would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Public safety facilities are not associated with foul odors that constitute a public nuisance.

During operation, school facilities could generate odors from cooking. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, which requires abatement of any nuisance generating an odor complaint. BAAQMD's Regulation 7, *Odorous Substances*, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are

⁸ PRISM Engineering, 2016, Traffic Impact Study: Caliber Charter School.

⁹ Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

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also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*, which states that “no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property.”

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be *less than significant*.

3.4 BIOLOGICAL RESOURCES

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

Less Than Significant Impact With Mitigation Incorporated. Special-status species are plants and animals that are legally protected under the State and/or federal Endangered Species Acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.

According to an ISMND previously prepared for the project site in 2009, which included a Biological Resources Assessment prepared by WRA Environmental Consultants, the project site was determined to consist primarily of artificial, landscaped and non-native plant communities which were disturbed due to fragmentation and alteration from the natural state.¹⁰ Although 42 special-status plant species and 68 special-status wildlife species were documents in the general vicinity of the project site, none were observed or deemed likely to occur at the project site or its immediate vicinity. Consequently, it was concluded that, due to the highly urbanized and disturbed conditions of the site, special-status plant and animal species are either not present or unlikely to occur as a result of site conditions and lack of suitable habitat. In addition, the surrounding conditions, which includes commercial, residential, and light residential development, further lower the likelihood of presence of special-status plant and animal species.¹¹

Although the project site does not likely support any special-status plant or animal species, there remains a potential for nesting by one or more species of birds, which could be affected by construction-related activities. However, nests of birds in active use are protected under the Migratory Bird Treaty Act and

¹⁰ City of Vallejo, Initial Study/Mitigated Negative Declaration, Former Vallejo City Unified School District Administration and Corporation Yard Development, July 2009, page 48.

¹¹ City of Vallejo, Initial Study/Mitigated Negative Declaration, Former Vallejo City Unified School District Administration and Corporation Yard Development, July 2009, page 48.

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California Department of Fish and Game Code. Additionally, implementation of Mitigation Measure BIO-1 would further ensure that potential impacts to nesting birds be reduced to a *less-than-significant* level.

Mitigation Measure BIO-1: Construction activities, such as tree removal, shall be performed between September 1 and January 31 to avoid the general nesting period for birds. If construction cannot be performed during this period, pre-construction surveys shall be prepared by a qualified biologist no more than 14 days prior to construction activities to determine the presence of any bird nests. In the event that active bird nesting is identified on the project site or its immediate vicinity, appropriate protections to the nest shall be taken, including but not limited to, establishing a minimum 100-foot buffer for passerine birds and 250-foot buffer for raptors, and ensuring that construction activities shall avoid buffered zones. Any tree containing active nesting shall not be removed until the nest is no longer active.

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

No Impact. The project site is in a highly urbanized area consisting of large areas of impervious surfaces and containing no natural water features or physical features normally found in areas adjacent to natural water features. Therefore, there would be *no impact* to riparian or other natural communities would not occur, and no mitigation is required.

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

No Impact. The project site is located in a highly urbanized area surrounded by commercial, light industrial, and residential uses. Wetlands and other regulated waters are absent from the project site.¹² Therefore, *no impact* to wetlands would occur, and no mitigation is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact With Mitigation Incorporated. The project site is located in a highly urbanized area surrounded by commercial, light industrial, and residential uses. The proposed project does not include any waterways that would harbor fish. The level of urbanization at the project site makes it highly unlikely that the proposed project would interfere with the movement of any wildlife species. However, the proposed project would comply with the requirements of the federal Migratory Bird Treaty Act (MBTA), which protects against the voluntary, intentional, or accidental destruction of migratory birds, nests, or eggs. Further, implementation of Mitigation Measure BIO-2 would further ensure that the project would not impede the movement of native resident or migratory fish or wildlife species. Therefore, impacts associated

¹² City of Vallejo, Initial Study/Mitigated Negative Declaration, Former Vallejo City Unified School District Administration and Corporation Yard Development, July 2009, page 48.

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with project implementation, in accordance with the MBTA and implementation of Mitigation Measure BIO-2, would ensure a *less than significant* impact.

Mitigation Measure BIO-2: Implement Mitigation Measure BIO-1.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. The proposed project would include demolition of existing structures, as well removal of existing trees; however, would plant new trees throughout the project site, including along Valle Vista, and Oregon Street. Although the proposed project would remove existing trees, the project site and its immediate surroundings are not generally considered to support special-status plant and animal species. Nevertheless, the proposed project would be required to comply with Section 10.12, Trees, of the City of Vallejo Municipal Code, which requires a tree removal permit (Section 10.12.040) that must state the extent and purpose of the trimming or tree removal as part of the tree removal permit application. Such applications shall be filed at least three days prior to the time of proposed removal of trees. Overall, given the lack of suitable habitat at the project site, compliance with the City's tree removal permit requirements, and because the project would plant new trees that would result in a net increase in the amount of trees over existing conditions, impacts would be *less-than-significant* and no mitigation measures are required.

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

Less Than Significant Impact. The only habitat conservation plan (HCP) or natural community conservation plan (NCCP) applicable to the proposed project is the Solano HCP. The proposed project would have a significant impact if it would be in conflict with the Solano HCP.

The Solano HCP provides a framework for promoting the protection and recovery of natural resources, including endangered species, and aims to streamline the permitting process for planned development, infrastructure, and maintenance activities. More specifically, the Solano HCP was developed to support the issuance of a Section 10(a)1(B) incidental take permit under the federal Endangered Species Act.

The City of Vallejo is a participant in the Solano HCP. The entire incorporated area within Vallejo would fall within "Zone 1 – Urban Zone" as shown on Figure 1-4, Covered Activity Zones, in the Solano HCP. However, given that the proposed project would occur within a previously developed site, the proposed project would not conflict with the provisions or otherwise impair implementation of the Solano HCP. Further, because the site largely contains impervious surfaces, has sparsely planted ornamental trees and landscaping, and because the project site does not contain waterways, wetlands, marshes or other habitat features that would generally support the plant or animal species that are covered under the Solano HCP, a *less-than-significant* impact would occur and no mitigation measures are required.

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3.5 CULTURAL RESOURCES

A Cultural Resources Study was prepared for the project site to by Tom Origer & Associates on July 8, 2016 and is included as Appendix B to this Initial Study.

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

Less Than Significant Impact. The types of cultural resources that meet the definition of historical resources under CEQA generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural and/or historical associations. Commonly, the two main resource types are subject to impact, and that may be impacted related to buildout of the proposed project, are historical archaeological deposits and historical architectural resources, as discussed below. Archaeological resources are addressed in criteria 3.5b, and human remains are addressed in criteria 3.5d below.

Cultural resources are protected by federal and State regulations and standards, including but not limited to, the National Historic Preservation Act, the California Public Resources Code, and CEQA. Also, the Office of Historic Preservation (OHP) has determined that structures in excess of 45 years of age should be considered potentially important historical resources, and former buildings and structure locations could be potentially important archaeological sites. Typically, if the project site or adjacent properties are found to be eligible for listing on the California Register, the development would be required to conform to the current Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, and Restoring Historic Buildings, which require the preservation of character defining features which convey a building's historical significance, and offers guidance about appropriate and compatible alterations to such structures.

Historical and pre-contact archaeological deposits that meet the definition of historical resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with construction under the proposed project, such as grading and/or filling. Should this occur, the ability of the deposits to convey their significance, either as containing information important in prehistory or history or as possessing traditional or cultural significance to Native American or other descendent communities, would be materially impaired.

According to the Cultural Resources Study prepared for the project site, although the structures could have been constructed sometime between 1952 and 1959, the buildings are not considered to be architecturally distinctive and do not convey important historical themes nor are they representative of the work of a master. Further, the existing structures are in various states of disrepair, and as a result do not appear to meet the criteria for inclusion on the California Register of Historical Resources.¹³ Although the City does contain historic resources, sites, and districts, neither the project site itself nor the immediate surrounding area include historic resources or are within the boundary of a historic district. Therefore, the proposed project would have *no impact* to historical resources and no mitigation measures are required.

¹³ Tom Origer & Associates, Cultural Resources Study, 500 Oregon Street, July 8, 2016, page 7.

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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant Impact With Mitigation Incorporated. Archaeological deposits that meet the definition of unique archaeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with development under the proposed project, such as grading and/or filling.¹⁴ Should this occur, the ability of the deposits to convey their significance, either as containing information important in prehistory or history, or as possessing traditional or cultural significance to Native American or other descendent communities, would be materially impaired.

The proposed project would include ground-disturbing activities, such as minor grading or leveling, and trenching for utilities, as part of the construction of the proposed project. The project site is currently developed with several structures and paved surfaced parking lot. Although a concentration of domestic items including non-temporally diagnostic oyster shell, ceramic shards, and glass fragments was observed on the ground surface, these materials lack integrity and do not qualify for listing on the California Register of Historical Resources.¹⁵ Therefore, construction activities and operation of the proposed project would unlikely yield any archeological resources since ground-disturbing activities associated with the proposed project would occur on areas of the project site previously disturbed and would be within the general footprint of the existing facilities. Nevertheless, the potential remains to accidentally uncover or discover unknown archaeological resources that may be present on the project site. However, implementation of Mitigation Measure CULT-1 would ensure that a less-than-significant impact occur in the event of accidental discovery or disturbance of an archaeological resource.

Mitigation Measure CULT-1: In the event of accidental discovery or disturbance to unknown archaeological, paleontological, historic resources or human remains during ground-disturbing activities associated with project construction (i.e. trenching, leveling, grading, trenching), the following measures shall be implemented.:

- In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event human remains are encountered during grading and construction, all work within 50 feet of the find will stop and the Solano County Coroner's office will be notified. If the remains are determined to be Native American, the Coroner would notify the Native American Heritage Commission to identify the "Most Likely Descendant" (MLD). Pacific Charter School Development, in consultation with the MLD, would then prepare a plan for treatment, study, and reinterment of the remains.

¹⁴ If the cultural resource in question is an archaeological site, CEQA Guidelines Section 15064.5(c)(1) requires that the lead agency first determine if the site is a historical resources as defined in CEQA Guidelines Section 15064.5(a). If the site qualifies as a historical resource, the potential adverse impact must be considered through the process that governs the treatment of historical resources. If the archaeological site does not qualify as a historical resources but does qualify as a unique archaeological site, then it is treated in accordance with PRC Section 21083.2 (CEQA Guidelines Section 15064.5(c)(3)). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource.

¹⁵ Tom Origer & Associates, Cultural Resources Study, 500 Oregon Street, July 8, 2016, page 7.

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- In compliance with State law (Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code), in the event that historic, archeological, or paleontological resources are found, all work within 50 feet of the find will stop and a qualified archaeologist will examine the find. Pacific Charter School Development shall comply with all mitigation recommendations of the archeologist prior to commencing work in the vicinity of the archeological finds.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. Similar to the discussion of archeological resources described in response to 3.5.b, there is little chance that unique paleontological or unique geological feature would be discovered within the project site during construction activities. However, given that there is the potential for unknown subsurface resources to be located within the project site, this would be considered a *less-than-significant* impact with mitigation incorporated.

Mitigation Measure CULT-2: Compliance with Mitigation Measure CULT-1.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation Incorporated. Similar to the discussion of archeological resources described in response to 3.5.b, there is little chance that construction activities would disturb human remains within the project site. However, given that there is the potential for unknown human remains to be located within the project site, this would be considered a *less-than-significant* impact with mitigation incorporated.

Mitigation Measure CULT-3: Compliance with Mitigation Measure CULT-1.

3.6 TRIBAL CULTURAL RESOURCES

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

Less Than Significant Impact. The Native American Historic Resource Protection Act, Assembly Bill 52 of AB 52, is intended to minimize conflict between Native American and development interests. AB 52 adds “tribal cultural resources” (TCR) to the specific cultural resources protected under CEQA, and it requires lead agencies to notify relevant tribes about development projects. It also mandates lead agencies to consult with tribes if requested by the tribe, and sets the principles for conducting and concluding consultation. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2015. The Governor’s Office of Planning and Research (OPR) developed guidelines on July 1, 2016, and the Native American Heritage Commission (NAHC) has informed tribes which agencies are in their traditional area. In response to these guidelines, a separate tribal Cultural Resource section has been added as a stand-alone section to the checklist. Information shared by

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tribes as a result of AB 52 consultation shall be documented in a confidential file and made part of a lead agencies administrative record. In response to AB 52, City of Vallejo has not received any request from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Vallejo. Nonetheless, the evaluation of potential impacts to TCRs is addressed below.

A TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included a local register of historical resources, or if the City of Hayward, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

As described above, no known archaeological resources are located on the project site. However, it is possible that an unknown TCR could be found during ground disturbing activities. Compliance with existing federal, State, and local laws and regulations would protect unrecorded TCR's within the project site through excavation or preservation activities, thereby preventing or minimizing the material impairment of archaeological deposits. In addition, implementation of Mitigation Measure CULT-4 would further ensure that a less-than-significant impact occur should an unknown TCR be discovered.

Mitigation Measure CULT-4: Compliance with Mitigation Measure CULT-1.

3.7 GEOLOGY AND SOILS

The following discussion is based in part on a Geotechnical Investigation prepared for the project site on January 22, 2016, by Rockridge Geotechnical, which is included as Appendix C to this Initial Study.

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less Than Significant Impact. It should be noted that exposure of people or structures to seismic hazards as a result of project implementation is no longer a CEQA impact. According to the California Supreme Court, CEQA applies to a project's impact on the environment, not the environment's impact on the project, unless the project would exacerbate a particular environmental hazard.¹⁶ From the standpoint of geology and soils, proposed project implementation would not cause or worsen seismic hazards. Although further evaluation of potential impacts a)(i), a)(ii), a)(iii), and a)(iv) is not strictly required under CEQA, the impacts are discussed below for informational purposes.

¹⁶ California Supreme Court, 2015, California Building Industry Association v Bay Area Air Quality Management District, Opinion No. S213478, date filed: December 17, 2015.

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The proposed project would have a significant impact if it would expose people or structures to potential substantial adverse effects due to rupture of a known earthquake fault. The California Geological Survey (CGS) has not mapped any Alquist-Priolo Earthquake Fault Zones in the city of Vallejo or its immediate vicinity. Nevertheless, some potentially active faults in the vicinity have been the subject of recent research. These faults include the Franklin Fault to the south across the Carquinez Strait, the Southampton Fault in the southeast part of Vallejo, and the West Napa Fault to the north, which was the source of the August 2014 magnitude 6.0 South Napa earthquake.¹⁷

Because no mapped earthquake faults pass through or lie adjacent to the project site, the potential for proposed project implementation to result in substantial adverse impacts due to fault rupture is considered less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The proposed project would have a significant impact if it would expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death due to strong seismic ground shaking. The city of Vallejo, like much of the San Francisco Bay area, is vulnerable to seismic activity due to the presence of nearby active faults. The closest and most prominent active faults are the Rodgers Creek Fault and Concord-Green Valley Fault, whose closest approaches lie within five miles of the proposed project. When earthquake faults within the Bay Area's nine-county area were considered, the United States Geological Survey estimated that the probability of a magnitude 6.7 or greater earthquake prior to the year 2036 is 63 percent.¹⁸ Earthquakes of this magnitude can create ground accelerations severe enough to cause major damage to structures and foundations that are not designed to resist the forces generated by earthquakes. The seismic forecasts presented on the Association of Bay Area Governments' website (developed by a cooperative working group that included the United States Geological Survey and the California Geological Survey) suggest that most parts of Vallejo are expected to experience "very strong" shaking.

Previous CEQA evaluations in this part of the city of Vallejo concluded that strong seismic ground shaking was a significant, but mitigable impact. Safeguards against these impacts include City of Vallejo grading permit requirements for new commercial/industrial construction, that include submittal of a geotechnical report that considers: 1) soil nature and distribution; 2) recommended grading procedures; 3) soil design criteria for structures or embankments; 4) slope stability; and 5) soil liquefaction potential. Additional protections would be afforded by conformance to the most recent version of the California Building Standards Code (e.g., relevant seismic design requirements in Chapter 18).

Fulfillment of these requirements would ensure that impacts with respect to strong seismic shaking are reduced to a *less-than-significant* level.

¹⁷ US Geological Survey (USGS), 2016. M6 South Napa, California Earthquake – August 24, 2014, What We Know After One Year, url: <http://earthquake.usgs.gov/research/napa2014/>, accessed July 7, 2016.

¹⁸ USGS, 2014. United States Geological Survey, 2014. 2008 Bay Area Earthquake Probabilities, <http://earthquake.usgs.gov/regional/nca/ucercf/>, accessed July 7, 2016.

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iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Although the California Geological Survey (CGS) has not yet mapped seismic-generated liquefaction hazard zones in the city of Vallejo, they have performed a regional assessment of liquefaction potential in the broader San Francisco Bay area. In that evaluation, several areas of “very high” liquefaction susceptibility were identified in Vallejo, including much of Mare Island, an east-west trending area near Lake Dalwigk and the Interstate Highway I-780/I-80 interchange, and a low-lying area northeast of the Vallejo Heights neighborhood.¹⁹ The proposed project is not located in any of these areas. Instead, the proposed project appears to lie in a mapped area of low liquefaction susceptibility. Furthermore, the recent geotechnical investigation of the project site also concluded that the potential for liquefaction adversely impacting the proposed development is very low.²⁰

In light of the above, the potential impacts associated with liquefaction and ground failure would be *less than significant*.

iv) Landslides?

Less Than Significant Impact. Implementation of the proposed project would have a significant impact if it would expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides. Landslides are gravity-driven movements of earth materials that may include rock, soil, unconsolidated sediment, or combinations of such materials. The susceptibility of an area to landslides depends on many variables, such as slope steepness and materials, soil moisture content, vegetative cover, and seismic activity. Earthquake-induced landslides have the potential to occur in Vallejo and the surrounding area, most notably in the hillier northeast and east-central parts of the community where slopes locally exceed 70 percent. Landslides are generally not an issue in parts of Vallejo where the topographic relief is subdued such as the project site.²¹ There are no substantial slopes on or near the project site and this setting precludes the possibility of landslides. For these reasons, no mitigation measures were required and the impact of proposed project would be *less than significant* with respect to landslides.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Implementation of the proposed project would have a significant impact if it would result in substantial soil erosion or loss of topsoil. Such erosion could undermine structures and minor slopes, and this could be a concern during the construction associated with project development.

Compliance with existing regulatory requirements, such as the erosion control measures specified in Vallejo Municipal Code, Title 12, Section 12.40.070, City of Vallejo grading permit requirements, as well as the

¹⁹ California Geological Survey, 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California, Open-File Report 2006-1037, Version 1.1, by Robert C. Witter, Keith L. Knudsen, Janet M. Sowers, Carl M. Wentworth, Richard D. Koehler, Carolyn E. Randolph, Suzanna K. Brooks, and Kathleen D. Gans.

²⁰ Rockridge Geotechnical, 2016. Geotechnical Investigation, Proposed Caliber Charter School, 500 Oregon Street, Vallejo, California, dated January 22, 2016, page 9.

²¹ USGS, 2012. Mare Island Quadrangle, California, 7 ½-minute Series, scale 1:24,000.

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requirements of the Regional Water Quality Control Board – San Francisco Bay Region, would help reduce the likelihood of significant erosion or topsoil loss during project construction. These requirements establish mandatory content for grading permits, including submittal and construction requirements, and implementation of appropriate erosion-control Best Management Practices (BMPs) such as bio-detention basins, check dams, cribbing, riprap, and siltation basins.

Compliance with these existing regulatory requirements would reduce potential impacts from substantial erosion and/or the loss of topsoil to a *less-than-significant* level.

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

Less Than Significant Impact. As discussed above, the topography at the project site is gentle, with typical elevations ranging from 12 to 20 feet above mean sea level. In light of the topography and absence of significant slopes on or near the project site, the potential for on- or off-site landslides is considered very low. The recent site-specific geotechnical investigation concluded that the potential for lateral spreading at the project site was very low and that the anticipated total and differential settlement following project implementation would lie in an acceptable range. In light of this information, the impact of project implementation as it relates to on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse would be *less than significant*.

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

Less Than Significant Impact With Mitigation Incorporated. Development, as allowed under the proposed project, could result in significant adverse impacts where construction takes place atop soils with a high shrink-swell potential (i.e., expansive soils). Such construction could be at risk for differential settlement, and cracking or failure of foundations, building facades, etc. Similarly, underground utilities would also be at risk for damage unless appropriate design measures are developed and implemented. The previously cited 2016 geotechnical investigation of the project site included the drilling and sampling of several exploratory soil borings to maximum depths of 30 feet below ground surface (feet bgs). A shallow, 1 to 3 foot-thick layer of highly expansive clayey fill was found in the west and north parts of the project site. The geotechnical report cautioned that these expansive soils could be subject to volume changes due to seasonal changes in moisture content, resulting in damage to overlying foundations, flatwork, and pavement.

Mitigation Measure GEO-1: To mitigate the impact of the proposed project implementation with respect to static settlement, the recommendations of the January 22, 2016 Rockridge Geotechnical report shall be followed. The recommended approach is summarized below:

- To reduce the potential for differential movement, the highly expansive surficial soil should be removed and replaced with non-expansive fill, such as an aggregate base material.
- Alternatively, lime can be mixed into the upper 12 inches of soil to control the moisture content and/or change the plasticity of the clay through chemical admixtures.

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- Lime treatment of the entire building pad and concrete flatwork areas may be more cost-effective than treating smaller areas.

Assuming faithful implementation of Mitigation Measure GEO-1, the impact of project implementation with respect to development on expansive soil would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would have a significant impact if it were located atop soils that were unable to adequately accommodate the use of septic systems or alternative wastewater disposal methods, and existing sanitary sewer systems were not available. The project area is serviced by a sanitary sewer system that is maintained and operated by the Vallejo Sanitation and Flood Control District (VSFCD).²² The VSFCD provides wastewater transmission, treatment, and disposal services for the City of Vallejo and outlying areas. The system includes the Ryder Street Wastewater Treatment Plant (WWTP), which treats domestic and industrial wastewater flows, and a network of pipes that convey flows from residential and commercial generators to the plant. Development of the project site would use the existing sanitary sewer system and there would be no impact.

3.8 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydro fluorocarbons, per fluorocarbons, and chlorofluorocarbons.^{23,24}

The City of Vallejo's Climate Action Plan (CAP) was adopted in 2012 and recommends programs that would meet the state's AB 32 goal for local government actions by achieving a 15 percent below 2008 levels by year 2020 in Vallejo's GHG emissions. To achieve the City's GHG reduction target, the CAP outlines energy, transportation, land use, water, solid waste, and off-road equipment GHG reduction measures that would be

²² VSFCD, 2016. Vallejo Sanitation & Flood Control District web site, url: <https://www.vsfcd.com/SitePages/default.aspx#>, accessed on July 8, 2016.

²³ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

²⁴ Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2014b). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

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implemented in the city.²⁵ This section analyzes the project's contribution to global climate change impacts in California through an analysis of project-related GHG emissions. Information on manufacture of cement, steel, and other "life cycle" emissions that would occur as a result of the project are not applicable and are not included in the analysis.²⁶ A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, this section measures the project's contribution to the cumulative environmental impact.

Construction Phase

Less Than Significant Impact. The construction-related GHG emissions associated with the proposed project are shown in Table 3.7-1. BAAQMD does not have thresholds of significance for construction-related GHG emissions. However, BAAQMD has identified a threshold of 1,100 MTCO_{2e} which is used to evaluate construction emissions in order to identify whether or not construction-related GHG emissions would be substantial. The BAAQMD advises that lead agencies quantify and disclose GHG emissions that would occur during construction and make a determination on the significance of these construction-generated GHG emissions in relation to meeting AB 32 GHG emissions reduction goals. GHG emissions from construction activities are one-time, short-term emissions and therefore would not significantly contribute to long-term cumulative GHG emissions impacts of the proposed project. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation.²⁷

²⁵ City of Vallejo, 2012, *City of Vallejo Climate Action Plan*.

²⁶ Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

²⁷ International Energy Agency, 2008, Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings, March.

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Table 3.7-1 Project GHG Emissions – Construction Phase

Category	GHG Emissions (MTCO _{2e} /Year)
2016	53
2017	54.4
Total Construction Emissions (Years 2017–2020)	107
30-Year Amortized Construction	4
BAAQMD Bright-Line Threshold	1,100 MTCO _{2e} /Year
Exceeds BAAQMD Threshold?	No

Note: Emissions may not total to 100 percent due to rounding. The proposed fire station building would be constructed to meet the 2016 Building Energy Efficiency Standards (effective January 1, 2017)
Source: CalEEMod 2013.2.2.

The net increase in emissions generated by the project was evaluated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. As shown in Table 3.7-1, when amortized over a 30-year project lifetime, average annual construction emissions from the proposed project would represent a nominal source of GHG emissions. Development of the proposed project would result in a net increase of GHG emissions of 107 MTCO_{2e}/year and would not exceed BAAQMD's *de minimus* bright line threshold of 1,100 MTCO_{2e}. Construction emissions are *less than significant*.

Operational Phase

Less Than Significant Impact. Development permitted under the proposed project would contribute to global climate change through direct and indirect emissions of GHG from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. The total and net increase in GHG emissions associated with the proposed project are shown in Table 3.7-2. As shown in Table 3.7-2, development of the proposed project would result in a net increase of GHG emissions of 413 million metric tons of carbon dioxide equivalent (MTCO_{2e}) per year would not exceed the significance threshold of 1,100 MTCO_{2e} per year. Therefore, project-related GHG emissions during the operational phase of the proposed project would be *less than significant* and no mitigation measures are required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the Metropolitan Transportation Commission's (MTC)/Association of Bay Area Governments' (ABAG) Plan Bay Area. A consistency analysis with these plans is presented below.

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Table 3.7-2 Project GHG Emissions – Operational Phase

	GHG Emissions (MTCO _{2e} /Year)	
	Project	Project
Net Change		
Area	<1	0%
Energy	140	34%
On-Road Mobile Sources	232	56%
Waste	34	8%
Water/Wastewater	7	2%
	Total	413
		100%
BAAQMD Bright-Line Threshold	1,100 MTCO _{2e} /Year	N/A
Exceeds BAAQMD Threshold?	No	N/A

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2016 Building & Energy Efficiency Standards (effective January 1, 2017).

CARB's Scoping Plan

Less Than Significant Impact. In accordance with Assembly Bill (AB) 32, the CARB developed the *2008 Scoping Plan* to outline the State's strategy to achieve 1990 level emissions by 2020. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Since adoption of the 2008 Scoping Plan, state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations; California Building Standards (i.e., California Green Building Standards Code [CALGreen] and Building and Energy Efficiency Standards); California Renewable Energy Portfolio Standard (33 percent RPS); changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. The proposed project would comply with these GHG emissions reduction measures as they are statewide strategies. Although statewide strategies in the Scoping Plan are not directly applicable to individual projects, these statewide GHG emissions reduction measures that are being implemented over the next five years would reduce the proposed project's GHG emissions. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

Additionally, the proposed project would replace older, less energy-efficient structures on-site with newer, more energy-efficient structures, consistent with the recent goals to increase building energy efficiency

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statewide by 50 percent by 2030 under Executive Order B-30-15. New structures would meet the current Building and Energy Efficiency Standards. The 2016 Building and Energy Efficiency Standards become effective January 1, 2017. The 2016 Building Energy Efficiency Standards become effective January 1, 2017. The 2016 Standards are 33.5 percent more energy efficient than the 2008 standards for non-residential buildings. The new buildings would also be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water-efficient irrigation systems.

The proposed project would not conflict with statewide programs adopted for the purpose of reducing GHG emissions. The impact would be *less than significant* and no mitigation measures are required.

MTC's/ABAG's Plan Bay Area

Less Than Significant Impact. To achieve MTC's/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth by 2040 is allocated to PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 housing units) of new housing and 66 percent (or 744,230 jobs) of new jobs. Consequently, an overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The proposed project is not within a PDA. Growth associated with the project is consistent with ABAG projections and would not exceed regional population and employment projects. The proposed project would be consistent with the overall goals of Plan Bay Area. Therefore, the proposed project would not conflict with the land use concept plan for the City of Vallejo identified in the *Plan Bay Area*. The impact would be *less than significant* and no mitigation measures are required.

The proposed project would not conflict with statewide programs adopted for the purpose of reducing GHG emissions and impacts would be *less than significant*.

Vallejo Climate Action Plan

The City of Vallejo adopted its Climate Action Plan (CAP) in March 2012. The CAP provides a roadmap for the City to become a more sustainable community by calling for changes in green building practices, energy efficiency, transit-oriented development, mixed-use/higher-density development, recycling and composting, water conservation, and renewable energy. The CAP identifies a target for the City to achieve 15 percent below 2008 levels by year 2020. To achieve the City's GHG reduction target, the CAP outlines energy, transportation, land use, water, solid waste, and off-road equipment GHG reduction measures that would be implemented in the city.²⁸

The strategies in the CAP consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The city of Vallejo would achieve these reductions in GHG emissions through

²⁸ City of Vallejo, 2012, *City of Vallejo Climate Action Plan*.

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a mix of voluntary programs and new strategic standards. The standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources. The proposed project is generally consistent with the GHG inventory contained in the CAP. The proposed project incorporates several voluntary design elements that would reduce energy demand, water use, and commute emissions. The voluntary GHG reduction measures applicable to the proposed project include the following:

- **E-2. Building Standards** - Require all new development to meet the minimum California Title 24 and California Green Building Standards Code requirements, as amended, and encourage new development to exceed the minimum requirements. This school project would be constructed to achieve the California Title 24 minimum requirements and encourage new construction and major remodels to adhere to a Tier 1 or Tier 2 standard of the CALGreen Code, and is therefore consistent with this CAP goal.
- **TDM-7. Commute Behavior** - Reduce emissions from commute travel to and from schools and workplaces. This project will encourage a variety of transportation system demand management techniques for new development including safe routes to schools such as sidewalks and pedestrian crossings, and is therefore consistent with CAP goal TDM-7.
- **W-2. Development Standards for Water Conservation** - Require water conservation in all new buildings and landscapes. The proposed project will meet the 2010 CALGreen Code, and treat at least 40 percent of the average annual rainfall on-site through low impact development strategies.
- **W-4. Development Standards for Recycling and Composting**—The proposed project will require waste diversion and the use of recycled materials in this new development by reusing 100 percent of existing asphalt to be demolished on site. This waste diversion during construction is consistent with the city’s goal to include 10 percent recycled content materials in new development.
- **OR-1. Lawn & Gardening Equipment** – The proposed project will comply with CBC regulations by providing outdoor plugs to reduce the need for gas-powered gardening equipment. This is consistent with the City’s CAP.
- **OR-2. Construction Equipment** - Reduce emissions from heavy-duty construction equipment by limiting idling and utilizing cleaner fuels, equipment, and vehicles. Construction will comply with this CAP goal by limiting idling times by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]).

3.9 HAZARDS AND HAZARDOUS MATERIALS

Existing Conditions

A Phase I Environmental Site Assessment (ESA) of the property located at 500 Oregon Street and 211 Valle Vista Avenue (i.e., project site) was performed by Ramboll Environ US Corporation for Valle Vista Education

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in March 2016.²⁹ The Phase I ESA, which is included as Appendix E to this Initial Study, was conducted in connection with a potential purchase of the project site for planned redevelopment and future use as a school. The discussion below is based in part on information contained in this Phase I ESA.

The rectangular-shaped project site is roughly 4 acres in size. The northern portion of the project Site (211 Valle Vista Avenue) previously was occupied by the Vallejo City Unified School District (VCUSD) administrative offices and was developed with a single-story office building that has since been demolished with the exception of its concrete foundation. The southern portion of the project site (500 Oregon Street) is developed with four permanent structures that are now vacant.

Historically, the project site was developed with slaughterhouses and a hay shed as early as 1901 and used for agricultural purposes by 1937. In 1957, the VCUSD acquired and developed the project site for use as a district administration and maintenance facility. The facility included an office building at 211 Valle Vista Avenue (the foundation for which remains on site) and the four buildings currently present at 500 Oregon Street, which included a print shop, carpenter shop, paint shop, warehouses, and storage. The project site was sold in 2007 to Brooks Street, an entity that intended to redevelop the site for residential use. The loan for the acquisition was underwritten by the current owner EnviroFinance Group (EFG), which took title to the site in 2010 as the result of a foreclosure.

Ramboll Environ did not identify any “recognized environmental conditions” (RECs), in connection with the project site. Although not a considered a REC, based on currently available information, Ramboll Environ identified the following other findings of potential interest.

- **Historical Agricultural Use.** Based on Ramboll Environ’s review of historical information sources, use of the site was agricultural in nature at least in the 1930s and prior to the VCUSD’s occupancy beginning in 1957. While sampling for pesticides has been conducted at portions of the site and identified areas of pesticide impacts have been remediated, as discussed in the text of this report, these activities have focused primarily on the northwest corner of the site (211 Valle Vista) where pesticides were applied during VCUSD’s occupancy (i.e., application of pesticides around the perimeter of the former administration building). It is possible that residual concentrations of agricultural chemicals are present in shallow soil in areas of the site that have not been assessed, due to historical agricultural site use prior to VCUSD’s occupancy. However, given that past sampling activities did not identify pesticides above laboratory reporting limits in other portions of the site with a similar history of pesticide use (i.e., areas that may have received pesticides during past agricultural activities but were not likely the subject of pesticide applications during VCUSD’s occupancy), the likelihood is considered low that significant or widespread pesticide impacts are present.
- **Asbestos-Containing Materials (ACMs).** The earliest building on the site was constructed in 1957, before asbestos was generally phased out of use in many building material applications during the 1980s. A demolition-level asbestos survey conducted at the site in 2015 identified a number of ACMs

²⁹ Phase I Environmental Site Assessment of 211 Valle Vista Avenue and 500 Oregon Street, Vallejo, California; prepared by Ramboll Environ US Corporation, dated March 25, 2016.

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including floor tile and mastic, drywall and joint compound, pipe insulation, and roofing materials in the remaining structures at the site.

- **Lead-Based Paint.** Lead was a major ingredient in paint pigment prior to and through the 1940s. While other pigments were used in the 1950s, the use of lead in paint continued until the early 1970s. In 1978, the Consumer Products Safety Commission banned paint and other surfacing coating materials that are “lead-containing paint.” A limited lead based paint survey was conducted at the site in 2013, including the collection of five paint chip samples from exterior buildings at the 500 Oregon Street portion of the site. Lead was detected in four samples above 5,000 parts per million (ppm), the threshold designating LBP. The asbestos survey conducted in 2015 included the collection and analysis of 20 additional exterior paint chip samples for lead. Four additional surfaces were identified as LBP.

Schools

The proposed project is a new 55,000 square foot education building for 900 students in grades TK-8. There are no other schools within 0.25 mile of the project site. The schools closest to the project site are Vallejo High School located approximately 0.6 mile to the southeast and Vallejo Middle School located approximately 0.7 mile to the southeast. Additional schools that serve the City of Vallejo generally are located within 1 to 2 miles of the project site.

Airports and Private Airstrips

The nearest public airport or public use airport to the project site is the Napa County Airport located roughly 11 miles to the northwest. There are no private airstrips near the project site; no private airstrips or heliports are in the city of Vallejo.³⁰

Emergency Response Planning

The City of Vallejo has established emergency preparedness procedures to respond to a variety of natural and man-made disasters that could affect the community.³¹ In the event of an emergency, the City will respond according to the Standardized Emergency Management System (SEMS) developed by the State. The SEMS system establishes a hierarchy of response, with local government as the first responders. Vallejo established an Emergency Operations Center (EOC) program in 2015. The Emergency Response Plan establishes evacuation routes, identifies agencies responsible for emergency response and summarizes and assesses potential threats and hazards.

³⁰ Airnav.com. 2014. Airport Information. <http://www.airnav.com/airports/>, accessed July 17, 2016.

³¹ City of Vallejo, 2015. Emergency Operations Plan, February.

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Wildfire Hazards

The project site is surrounded by urban development and is not mapped as a Fire Hazard Severity Zone by the California Department of Forestry and Fire Prevention.³² The Vallejo City Fire Department provides fire protection to the city. The nearest fire station to the project site is Station 23 at 900 Redwood Street about 0.75 miles to the northwest.

Discussion

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

Less Than Significant Impact. The proposed project, a TK-8 school development, would not include the routine transport or disposing of hazardous materials. Project operation would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes, such as cleansers, degreasers, pesticides, and fertilizers. These potentially hazardous materials would not be of a type or be present in sufficient quantities to pose a significant hazard to public health and safety or the environment. Furthermore, such substances would be used, transported, stored, and disposed of in conformance with existing regulations of several agencies, including RCRA, which provides the ‘cradle to grave’ regulation of hazardous wastes; CERCLA, which regulates closed and abandoned hazardous waste sites; the Hazardous Materials Transportation Act, which governs hazardous materials transportation on US roadways; The International Fire Code (IFC), which creates procedures and mechanisms to ensure the safe handling and storage of hazardous materials; CCR Title 22, which regulates the generation, transportation, treatment, storage and disposal of hazardous waste; and CCR Title 27, which regulates the treatment, storage and disposal of solid wastes.

Construction activities at the project site would involve the use of larger amounts of hazardous materials, such as operation petroleum-based fuels for maintenance and construction equipment, and coatings used in construction, which would be transported to the site periodically by vehicle and would be present temporarily during construction. These potentially hazardous materials, however, would not be of a type or occur in sufficient quantities on-site to pose a significant hazard to public health and safety or the environment and would also be short-term. Additionally, as with proposed project operation, the use, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur.

³² California Department of Forestry and Fire Prevention (CAL FIRE). 2008. Very High Fire Hazard Severity Zones in LRA, San Carlos, http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/san_mateo/San_Carlos.pdf, accessed July 15, 2016.

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- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Less Than Significant Impact. The proposed project, new TK-8 school development, is not considered the type of project that would create a hazardous materials threat to the users of the site or the surrounding land uses. The Solano County Department of Resource Management (SCDRM) is the CUPA for Solano County, including the City of Vallejo, and is responsible for enforcing Chapter 6.95 of the Health and Safety Code. As the CUPA, SCDRM is required to regulate hazardous materials business plans (HMBP) and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. The HMBP is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on development sites. The HMBP also contains an emergency-response plan, which describes the procedures for mitigating a hazardous release, procedures, and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the Cal EPA and other emergency-response personnel, such as the Vallejo City Fire Department. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, SCDRM is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances. Compliance with these regulations would ensure that the risk of accidents and spills is minimized to the maximum extent practicable during the operation of the proposed project.

Similar to the operation of the proposed project, the type of construction materials and equipment would be considered standard for this type of development. All spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility.

Furthermore, strict adherence to all emergency response plan requirements set forth by SCDRM would be required through the duration of the construction of each individual development project. Therefore, substantial hazards to the public or the environment arising from the routine use of hazardous materials during project construction would not occur.

Prior to the construction of the proposed project, the existing buildings on-site, which are known to contain ACMs and LBP, would be demolished. During the demolition phase of the proposed project, potentially hazardous building materials (i.e., ACMs, LBPs, PCBs, mercury, household wastes) may be encountered. Removal of these types of hazardous materials by contractors licensed to remove and handle these materials in accordance with existing federal, State, and local regulations would insure that risks associated with the transport, storage, use, and disposal of such materials would be reduced to the maximum extent practical.

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

Less Than Significant Impact. The project site is not within one-quarter mile of an existing school, although the proposed project is development of a new TK-8 charter school. However, discussed in 3.8 (a), (b), and (d) herein, construction and occupation of the proposed project would not generate substantial amounts of hazardous materials, and these materials are regulated by federal, state, and local regulations.

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

Less Than Significant Impact. The Phase I ESA performed by Ramboll Environ (see Existing Conditions section) several listing in federal and state agency databases for the project site. These listings and related previous environmental assessments and activities are discussed at length in the Phase I ESA; information pertinent to this threshold is summarized below.

In relation to VCUSD's sale of the site to Brooks Street and in anticipation of the proposed residential redevelopment, a subsurface investigation conducted in 2007 identified elevated concentrations of pesticides (primarily dieldrin and chlordane) and arsenic around the perimeter of the administration building formerly located at 211 Valle Vista, reportedly in relation to the historical application of pesticides and herbicides around the base of the building. Pesticides were not detected in the samples collected on the 500 Oregon portion of the site. After the residential redevelopment project was abandoned, limited additional activity took place in relation to this issue until 2015, when a voluntary cleanup agreement was entered into between VCUSD and the SCDRM. Specifically, the former administration building at 211 Valle Vista was demolished, and excavation of shallow soil around the building perimeter was conducted in May 2015, with follow-up excavation performed in September 2015. A total of approximately 420 cubic yards (670 tons) of soil were excavated between the two efforts, off-hauled and disposed as non-hazardous waste at Potrero Hills Landfill in Suisun, California. Confirmation soil samples collected from the base and sidewalls of the excavated area were analyzed for the primary chemicals of concern (i.e., organochlorine pesticides and arsenic).

Based on the results of the removal action and confirmation sample analysis, the SCDRM issued no further action on March 1, 2016. The SCDRM's closure decision was made with input from both DTSC and the San Francisco RWQCB. The closure letter and underlying case closure summary documents acknowledge the proposed future use of the site as a school and indicate that the agency considers residual chemical concentrations to represent a low risk to human health and the environment. The project site is not subject to any site management requirements, and no further review of the corrective actions are required in the event of a future change in land use.³³

³³ The SCDRM closure letter also indicates the potential for DTSC to require additional assessment in the event that state funding is used in connection with development of a school site. Evaluation of the environmental suitability of a property for use as a public school in California falls under the jurisdiction of DTSC, irrespective of the environmental condition of a property. However,

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As noted above, VCUSD's historical use of the site included the storage of fuel in a UST at the 500 Oregon Street portion of the site. A 500-gallon gasoline UST operated by the VCUSD was removed in October 1998. Sampling during UST removal activities and during subsequent investigations conducted in April and September 1999 indicated the presence of TPHg, BTEX, and MTBE in soil and groundwater in proximity to the former UST. Following the September 2009 investigation, which confirmed that contaminant concentrations were not present in downgradient groundwater, and based on the continuing commercial/industrial use at the time, the SCDRM issued no further action for the UST in December 1999.

In relation to proposed residential redevelopment of the project site, additional soil sampling was performed in 2007 and the former UST case was reopened due to findings of petroleum hydrocarbons in excess of regulatory screening criteria. At the request of the SCDRM, additional investigation was performed in 2008, including temporary borings for the collection of soil and soil vapor samples, and the installation of three groundwater monitoring wells (two on site near the former UST and one off-site to the west [downgradient] across Napa Street), which were sampled on a quarterly basis through January 2009. Sampling confirmed that residual contaminant concentrations related to the former UST were limited to the area in immediate proximity to the former tank, and based on results and the lack of use of groundwater in the area for drinking water purposes, the SCDRM again issued case closure for the UST matter on October 2, 2013. Of note, the SCDRM's closure letter states that the site is suitable for the then commercial use, while the underlying case closure summary documentation states that the agency believes the residual impacts are acceptable for residential use.

Under the voluntary cleanup agreement and as part of the soil excavation described above in relation to the presence of pesticides and arsenic in shallow soil at the 211 Valle Vista portion of the site, over-excavation of residual soil impacts around the former UST was also conducted in May 2015. Approximately 120 cubic yards of soil (200 tons) were excavated and removed from the location of the former UST to a maximum depth of seven feet bgs, and disposed off-site as non-hazardous waste.

Based on the results of the removal action and confirmation sample analysis, and comparison of site data to the SWRCB's Low Threat UST Closure Policy guidance, the SCDRM issued no further action for the UST matter on March 1, 2016. The SCDRM's closure decision was made with input from both DTSC and the San Francisco RWQCB. The closure letter and underlying case closure summary documents acknowledge the proposed future use of the site as a school and indicate that the agency considers residual chemical concentrations to represent a low risk to human health and the environment. The project site is not subject to any site management requirements, and no further review of the corrective actions are required in the event of a future change in land use.

Based on Ramboll Environ's review of historical information sources, use of the site was agricultural in nature at least in the 1930s and prior to the VCUSD's occupancy beginning in 1957. While sampling for pesticides has been conducted at portions of the site and identified areas of pesticide impacts have been remediated, as discussed in the text of this report, these activities have focused primarily on the northwest

DTSC legal counsel indicated that because the project does not include state funding, DTSC does not need to approve or oversee the cleanup that occurred at the site.

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corner of the site (211 Valle Vista) where pesticides were applied during VCUSD's occupancy (i.e., application of pesticides around the perimeter of the former administration building). It is possible that residual concentrations of agricultural chemicals are present in shallow soil in areas of the site that have not been assessed, due to historical agricultural site use prior to VCUSD's occupancy. However, given that past sampling activities did not identify pesticides above laboratory reporting limits in other portions of the site with a similar history of pesticide use (i.e., areas that may have received pesticides during past agricultural activities but were not likely the subject of pesticide applications during VCUSD's occupancy), the likelihood is considered low that significant or widespread pesticide impacts are present.

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

No Impact. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport.

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

No Impact. The project site is not in the vicinity of a private airstrip.

- g) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Less Than Significant Impact. The proposed project would not block roads and would not impede emergency access to surrounding properties or neighborhoods. All construction staging would occur on-site. Construction parking would occur on-site; or in other parking lots nearby subject to the proposed project Construction Traffic Control Plan.

- h) **Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

No Impact. The project site is surrounded by built-out urban uses and is not mapped as a Fire Hazard Severity Zone by the California Department of Forestry and Fire Prevention.³⁴ The proposed project would not subject people or structures to wildfire hazards.

3.10 HYDROLOGY AND WATER QUALITY

The discussions below are based in part on several studies prepared related to the hydrology and water quality of the project site, which are included as Appendix F to this Initial Study.

³⁴ California Department of Forestry and Fire Prevention (CAL FIRE). 2008. Very High Fire Hazard Severity Zones in LRA. San Carlos. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/san_mateo/San_Carlos.pdf. Accessed July 15, 2016.

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Existing Conditions

The topography of the project site is relatively flat with a slight gradient to the west. The site is located within the San Pablo Bay Watershed, which drains approximately 900 square miles. The San Pablo Bay Watershed is the drainage area for the major creeks and streams that discharge into San Pablo Bay, including the Napa River. The project site is also within the Napa-Sonoma Lowlands Subbasin of the Napa-Sonoma Valley Groundwater Basin. However, local groundwater is not used for water supply by the City of Vallejo. Although the geotechnical investigation for the project reported groundwater in only two borings at a depth of about 18 feet below ground surface (bgs), previous soil remediation investigations at the site reported groundwater at depths ranging from 8.5 to 13 feet bgs.³⁵ Therefore, it is possible that ground-disturbing activities (i.e. leveling, trenching, grading) at the site may encounter shallow groundwater, depending on the season, and construction dewatering may be necessary.

Municipal stormwater discharge in Vallejo, including the project site, is regulated by the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) permit (MRP) issued for the San Francisco Bay Area Region (Order No. R2-2015-0049), which was recently revised and is in effect as of January 1, 2016. Stormwater is also regulated through Chapter 12.41 of the City's Municipal Code, Stormwater Management and Discharge Control, to ensure compliance with C.3 provisions and NPDES permit requirements. The Vallejo Sanitation & Flood Control District (VSFCD) provides stormwater and flood control services to the Vallejo community and imposes storm drain system collection fees and storm drain system user fees. The VSFCD also has storm drain design standards and policies that apply to new development and redevelopment projects that connect to the existing storm drain system. Hydrologic design must be in accordance with the Solano County Water Agency Hydrology Manual, with a 15-year level of protection for drainage areas less than 640 acres. A connection permit issued by the VSFCD with hydraulic calculations to verify the capacity of the receiving storm drain system is also required.

The project site is currently vacant with a former building foundation on the northern portion and four vacant buildings on the southern portion of the site. The site is mostly covered with impervious surfaces with a small amount of patchy ground cover. Stormwater runoff at the site currently occurs via sheet flow, shallow concentrated flows, and channelized flow (curbs and gutters) before entering the gutter along the south side of Valle Vista Avenue. The stormwater flows westward and enters a catch basin just before Couch Street.

Proposed drainage includes an internal storm drain system swale that connect to five bioretention areas scattered throughout the site, as shown on Figure 7. Stormwater runoff will be conveyed to the bioretention facilities via pop-up emitters for roof runoff, sheet flow, and grass-lined drainage swales. The bioretention facilities were sized based on the criteria described in the C.3 provisions of the MRP and strategically placed throughout the site to capture runoff from impervious surfaces. Runoff collected within the bioretention areas is allowed to pond before percolating through the engineered bioretention soil and eventually collecting in a perforated subdrain for conveyance to the underground storm drain network.

³⁵ Schutze & Associates, Inc., 2015. Project Update: Excavation of Pesticide-Impacted Soil. Prepared for Vallejo City Unified School District. Dated June 24, 2015. Accessed on July 7, 2016 at http://geotracker.waterboards.ca.gov/regulators/deliverable_documents/5636143565/SCS516%201%20%2D%20Project%20Update%2DPAC144.pdf.

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The project site is not within a 100-year floodplain, as per FEMA FIRM Nos. 06095C0630F and 06095C0610E. The project site also is not within a dam inundation zone or a tsunami zone. According to Association of Bay Area Governments (ABAG) earthquake and hazards interactive maps, the site is not in a debris flow source area and would not be susceptible to mudflows.

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. Urban runoff can carry a variety of pollutants, such as soil and grease, metals, sediment and pesticide residues from roadways, parking lots, rooftops, and landscaped areas, and deposit them into adjacent waterways via the storm drain system. Construction activities could result in the degradation of water quality, releasing sediment, oil and grease, and other chemicals into storm drains and/or nearby water bodies.

Construction Impacts

Clearing, grading, excavation, and construction activities associated with the proposed project have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, the proposed project would be required to comply with the NPDES General Construction Permit (GCP) as well as prepare a Storm Water Pollution Prevention Plan (SWPPP) that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The SWRCB mandates that projects that disturb one or more acres must obtain coverage under the Statewide GCP. Since the proposed project will disturb approximately 4 acres, it will be subject to these requirements. The GCP also requires that prior to the start of construction activities, the proposed project Applicant must file Permit Registration Documents (PRDs) with the SWRCB, which includes a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The SWPPP must include erosion and sediment control BMPs that would meet or exceed measures required by the Construction General Permit, as well as BMPs that control hydrocarbons, trash, debris, and other potential construction-related pollutants. Construction BMPs include inlet protection, silt fencing, fiber rolls, stabilized construction entrances, stockpile management, solid waste management, and concrete waste management.

Post-construction stormwater performance standards are also required to specifically address water quality and channel protection events. Implementation of these BMPs would prevent or minimize environmental impacts and ensure that discharges during the construction phase would not cause or contribute to the degradation of water quality in receiving waters.

The City of Vallejo also requires submittal of a Grading and Erosion Control Plan with a building permit application. In addition, the City requires project applicants to install hydrodynamic devices or other BMPs to

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remove pollutants from stormwater runoff and to show the location of these devices or controls on plans submitted with the building permit application.

Compliance with local and State regulatory requirements and implementation of construction BMPs would minimize discharges during the construction phase of the proposed project. Therefore, the proposed project would not result in the degradation of water quality in receiving waters and construction-related water quality impacts are *less than significant*.

Operational Impacts

Runoff from school properties and parking lots may contain nutrients, pesticides, organic compounds, trash and debris, oil and grease, heavy metals, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations. Also, increasing the amount of impervious surfaces can result in a greater potential to introduce pollutants to receiving waters. However, the proposed project would result in a decrease in the amount of impervious area of approximately 25 percent as compared to existing conditions, thus minimizing the potential for water quality impacts.

Also, water quality in stormwater runoff is regulated by the MRP, which includes the C.3 provisions set by the San Francisco Bay RWQCB. Provision C.3 of the MRP addresses post-construction stormwater requirements for new development or redevelopment projects that create and/or replace 10,000 square feet or more of impervious surfaces. Since the proposed TK-8 campus and courtyard are estimated to occupy approximately 60,500 square feet, this would be considered to be a regulated project and site design, source control, and stormwater treatment measures are required. A Stormwater Management Plan (SWMP) has been prepared that includes the post-construction BMPs that control pollutants. The SWMP will be reviewed and approved by the City of Vallejo prior to the issuance of building or grading permits. The SWMP for this proposed project is provided in Appendix F. Hydromodification controls are not required for this project because there will be a decrease in the amount of impervious area with implementation of the proposed project. The determination of compliance with the City's hydromodification plan is also provided in the SWMP. In addition, the proposed project Applicant has prepared a Draft Storm Water Control Operation and Maintenance (O&M) Plan that outlines the responsibilities, maintenance requirements, and inspection schedule for the bioretention areas, which is included as Appendix F. Prior to the issuance of grading permits, a signed covenant agreement to accept responsibility for the O&M of the stormwater treatment system and maintain it for perpetuity will be submitted to the City.

Calculations provided in the SWMP indicate that the impervious area of the site will decrease from 203,575 square feet to 152,900 square feet (a 25 percent reduction) with implementation of the proposed project. Stormwater runoff from the site will be directed to five on-site bioretention areas that total 5,054 square feet. The stormwater in the bioretention areas will be treated, filtered, and released gradually to the internal storm drain system, which eventually will connect to the City's storm drain system beneath Valle Vista Avenue. Details of the proposed on-site stormwater treatment system are provided in Exhibit 1 of the SWMP. The following site design, source control, and treatment control measures to minimize potential water quality impacts will be implemented:

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- Site Design Measures
 - Direct roof runoff via pop-up emitters to vegetated area (swale or bioretention area)
 - Direct runoff from sidewalks, walkways, and courtyards to vegetated area (swale or bioretention)
 - Direct runoff from parking lot to vegetated area (swale or bioretention area)
- Source Control Measures
 - Mark all on-site storm drain inlets with the words “No Dumping/Flows to Bay”
 - Plumb all interior flood drains and elevator shaft sump pumps to sanitary sewer
 - Incorporate building design features to minimize the need for pest control
 - Preserve existing trees, shrubs, and ground cover to the maximum extent possible
 - Design irrigation and runoff to promote surface infiltration where appropriate and minimize the use of fertilizers and pesticides
 - Specify plants that are tolerant of drought conditions and/or saturated soil conditions
 - Trash areas should be roofed and enclosed to avoid run-on and run-off
 - Drain fire sprinkler test water to the sanitary sewer
 - Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris
- Treatment Control Measures
 - Roof runoff with pop-up emitters
 - Grass-lined swales
 - Five bioretention areas totaling 5,054 square feet with discharge to internal storm drain network and ultimate discharge to the City’s storm drain system

The City of Vallejo also will require submittal of a Grading and Erosion Control Plan with the building permit application. In addition, the City requires project applicants to install hydrodynamic devices, or other BMPs, to remove pollutants from stormwater runoff. The location of these devices or controls must be shown on plans submitted with the building permit application. The proposed project would also be required to comply with the requirements of the City’s Municipal Code Chapter 12.40, Excavation, Grading, and Filling, and Chapter 12.41, Stormwater Management and Discharge Control.

Collectively, the stormwater design, control, and treatment features will address the anticipated and expected pollutants of concern from the operational phase of the proposed project. Through the development review process, the City would ensure that the proposed project complies with various statutory requirements necessary to achieve regional water quality objectives and protect groundwater and surface waters from pollutants in stormwater runoff. Stormwater runoff generated on the project site would be managed in accordance with all applicable federal, State, and local water quality regulations in order to effectively minimize the proposed project’s impacts on water quality.

Through compliance with the MRP C.3 requirements, including preparation and implementation of a Stormwater Control Plan and Stormwater O&M Plan, and construction of stormwater treatment measures, the potential impact to water quality from proposed project operation would be *less than significant*.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater**

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table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. New construction could result in impacts related to groundwater if the construction would require dewatering or reduce groundwater recharge. Grading and cut-and-fill activities may encounter shallow groundwater. Although the geotechnical investigation for the proposed project reported groundwater in only two borings at a depth of about 18 feet below ground surface (bgs), previous soil remediation investigations at the site reported groundwater at depths ranging from 8.5 to 13 feet bgs. If construction activities are conducted during the rainy season, temporary construction dewatering may be necessary.

However, the proposed project is not anticipated to adversely impact groundwater resources because required excavations would intersect only the shallow groundwater table and it would be a temporary occurrence. Small amounts of dewatering could be discharged to the sanitary sewer system by obtaining a discharge permit from the VSFC. Substantial amounts of dewatering would require a Waste Discharge Requirement (WDR) permit from the San Francisco Bay RWQCB. The WDR permit would require testing to ensure that discharged water did not pose a risk to water quality. Limits on the quantity of groundwater discharge during dewatering and the temporary nature of the construction dewatering would ensure that substantial lowering of the groundwater table would not occur. In addition, the proposed project would be subject to SWPPP requirements, which include measures for spill prevention, control, and containment that would prevent potential construction pollutants from leaching into the shallow groundwater.

Groundwater recharge may be reduced if areas currently available for the infiltration of rainfall runoff are reduced and permeable areas are replaced by impermeable surfaces. However, the proposed project would reduce the amount of impervious surface at the site by 50,675 square feet and therefore increase the potential for infiltration. Therefore, the proposed project would not result in a significant change in groundwater recharge.

Implementation of the proposed project would result in an increase in water demand as compared to existing conditions. However, groundwater is not used for municipal supply in the City of Vallejo. The Vallejo Water Department would supply potable water for the proposed project; 100 percent of the supply is from surface water sources. The City has no intention to seek or investigate groundwater supply for future demand. Therefore, the proposed project would not increase the use of groundwater supplies and implementation of the proposed project would have a *less-than-significant* impact with respect to groundwater recharge and/or groundwater supply.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

Less Than Significant Impact. The proposed project is within the boundaries of a previously developed commercial property and does not involve the alteration of any natural drainage channels or any watercourse. It also would not alter existing drainage patterns other than creating a new internal storm drain system within the site that connects to the five bioretention areas scattered throughout the site. The bioretention areas

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would collect stormwater runoff from roofs and other hardscape areas via sheet flow and grass-lined swales. Eventual discharge would be to the City's storm drain system beneath Valle Vista Avenue. The proposed stormwater treatment facilities are shown on Exhibit 1 in the SWMP.

The proposed project will involve new construction that would require grading or soil exposure that could result in erosion and/or siltation if not controlled. To minimize this potential impact, the proposed project would be required to comply with all of the requirements in the GCP, including preparation of PRDs and submittal of a SWPPP to the SWRCB prior to the start of construction activities. The SWPPP includes BMPs for runoff, erosion, and sediment transport. Additionally, the City of Vallejo requires submittal of an Erosion Grading and Erosion Control Plan with a building permit application. The City also requires project applicants to install hydrodynamic devices or other BMPs to remove pollutants from stormwater runoff. The proposed project would also have to comply with the City's Municipal Code Chapter 12.40, Excavation, Grading, and Filling, and Chapter 12.41, Stormwater Management and Discharge Control. Implementation of GCP requirements and local City grading and excavation regulations as specified in the Municipal Code would reduce potential erosion and siltation impacts from construction activities to *less than significant*.

The proposed project would add an internal storm drain system and five bioretention areas and would result in a decrease in the increase in the amount of impervious surfaces. The bioretention areas would result in longer drainage flow times and post-development peak runoff rates that are lower than the pre-development peak runoff rates. In addition, the proposed project is required to comply with the C.3 provisions of the MRP permit and the proposed project applicant must submit a SWCP to the City that shows full compliance with the regulatory requirements. These provisions require BMPs and LID measures to be implemented across the project site, which incorporate site design, source control, and treatment control measures that provide both flow control and treatment to runoff before it enters the storm drain system. Therefore, the proposed project would not increase the rate or amount of surface runoff in a manner that would cause on-site and/or off-site erosion or siltation and the impact would be *less than significant*.

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

Less Than Significant Impact. New development can result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, the proposed project does not involve the alteration of the course of an existing stream or river. Also, the proposed project would decrease the amount of impervious surfaces by 50,675 square feet, thus reducing the amount of runoff from the site. The proposed project would include the installation of five bioretention areas, further reducing the amount of runoff, and an internal storm drain system, as shown on Figure 7 of this Initial study. This will collect runoff from the roofs, sidewalks, courtyard, and parking lot for treatment and flow control prior to discharge to the City's storm drain system along Valle Vista Avenue. Because of a decrease in impervious surfaces and installation of bioretention areas, the post-development runoff rates from the site will be lower than the pre-development runoff rates. Detailed calculations are provided in the Hydrology Study prepared

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by CSW/Stuber-Stroeb Engineering Group, Inc., which is provided in Appendix F. A summary of the change in impervious surfaces and runoff flow rates for existing and developed conditions is provided in Table 3.9-1.

Table 3.9-1 Comparison Of Existing And Proposed Conditions

Parameter	Existing Conditions	Post-Project Conditions	Percent Change
Impervious Surface	203,575 square feet	152,900 square feet	25 percent reduction
100-Year Storm Runoff	13.4 cfs	11.0 cfs	18 percent reduction

Source: CSW/Stuber-Stroeb Engineering Group, Inc. 2016.

As shown in Table 3.9-1, the proposed project will result in a reduction of impervious surfaces from 203,575 square feet to 152,900 square feet, which is approximately a 25 percent decrease. The reduction combined with the proposed bioretention treatment measures will also result in lower runoff rates from 13.4 cubic feet per second (cfs) for existing conditions to 11.0 cfs under post-development conditions. As a result, the proposed project would not result in on-site or off-site flooding.

The proposed project Applicant also proposes to install an internal storm drain system that is sized to convey runoff from the 15-year storm event, as per the Solano County Water Agency’s Hydrology Manual. The storm drain pipe sizes vary from 10 inches to 18 inches and will include a new storm drain in Napa Avenue and Valle Vista Avenue that eventually connects to the City’s existing storm drain in Valle Vista Avenue.

Change in the timing and volume of runoff from a site is called “hydromodification.” Projects that are in susceptible areas and increase impervious area over pre-project conditions are required to incorporate one or more hydromodification management (HM) measures in the design. The project site will not increase impervious area as compared to existing conditions, and therefore HM measures are not required.

Additionally, all projects that connect to the City’s existing storm drain system must be designed in accordance with the VSFCDD’s storm drain design standards, as specified in Section 5, Storm Drain Design Standards Master Bid Document and Project Specific Supplement. According to the design standards, this project must be designed to a 15-year level of protection; the Hydrology Study in Appendix F shows the design calculations for the 15-year storm event. Funding for storm drain improvements is provided by VSFCDD Ordinance 2011-708, which requires new development or redevelopment projects to pay fees for a storm drain connection permit, which includes a permit requirement processing fee and inspection fee. Also, VSFCDD charges users storm drain service rates to cover the rising operating costs to maintain the storm drain system. The proposed project will be required to pay storm drain connection fees and storm drain user fees.

With installation of the bioretention areas and reduction in impervious area, the proposed project would not result in increases in runoff that could contribute to on-site or off-site flooding. Therefore, the impacts would be *less than significant*.

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e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. There are two potential impacts to stormwater runoff hydrology with urban development. Impervious surfaces, such as roads, sidewalks, and buildings prevent the natural infiltration of stormwater into the soil and thus create higher runoff volumes. In addition, more rapid transport of runoff over impermeable surfaces combined with higher runoff volumes result in elevated peak flows. This increase in flows could adversely impact stormwater drainage systems.

The proposed project involves construction of a school on a previously developed property. The proposed project would result in a reduction in the amount of impervious surfaces by 50,675 square feet, which would in turn result in a reduction in the amount of runoff from the property. Post-development runoff rates would be 18 percent lower than existing conditions with an estimated 100-year stormwater runoff rate of 11 cfs. The project proposes to convey on-site stormwater runoff to the City's existing storm drain system. The new storm drain system would be subject to City and VSFCDD review to verify that it is designed to accommodate the stormwater flow from the site and would not exceed the capacity of the downstream drainage system.

Also, the proposed project must comply with the C.3 provisions of the MRP, which will include the construction of five bioretention areas throughout the property. This will provide both treatment of site runoff and flow control prior to discharge to the City's storm drain system. As a result, there will be a reduction in site runoff as compared to existing (pre-development) conditions. The existing storm drain system will be able to handle the stormwater flow from the site and the impact to stormwater drainage systems will be *less than significant*.

The proposed project would not create substantial additional sources of polluted runoff. During the construction phase, the proposed project is required to have a SWPPP and erosion and sediment control plan in place, thus limiting the discharge of pollutants from the site. During operation, the proposed project will implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants. All plans and construction activities are subject to the inspection and approval of the City Engineer, which ensures that selected BMPs and stormwater treatment features are appropriate for the expected pollutants in groundwater. The preparation of SWMPs is also required for which specify the stormwater control and treatment measures that will be used to minimize the discharge of pollutants in stormwater. Therefore, implementation of the proposed project would not create additional sources of polluted runoff and this impact is *less than significant*.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Pollutants commonly associated with construction sites that can impact stormwater are sediments, nutrients, trace metals, pesticides, oil, grease, fuels, and miscellaneous construction wastes. Pollutants generated from the operational phase of the proposed project may include sediment, nutrients, organic compounds, trash and debris, oxygen-demanding substances, bacteria and viruses, oil and grease, and pesticides/herbicides.

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As required by the City of Vallejo and VSFCO ordinances and the C.3 and C.6 provisions of the MRP, BMPs will be implemented across the project site during both construction and operation of the proposed project. These BMPs will control and prevent the release of sediment, debris, and other pollutants into the storm drain system. Implementation of BMPs during construction will be in accordance with the C.6 provisions of the MRP, as specified in the SWPPP, which will minimize the release of sediment, soil, and other pollutants. Operational BMPs will be required to meet the C.3 provisions of the MRP and the City of Vallejo will review the proposed project for stormwater conformance with applicable laws, policies, and guidelines. These requirements include the incorporation of site design, source control, and treatment control measures to treat and control runoff before it enters the storm drain system. Five bioretention areas will be installed throughout the project site that will reduce the volume and improve the quality of stormwater runoff from the site. With implementation of these BMPs in accordance with City and County requirements, the potential impact on water quality will be *less than significant*.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed project is not within a 100-year flood hazard area, as mapped by the FEMA Flood Insurance Rate Maps (FIRMs) No. 06095C0630F and 06095C0610F. In addition, there is no housing associated with this proposed project. Therefore, there would be *no impact*.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As discussed above, the project site is not located within a 100-year flood hazard area, as indicated by FEMA FIRM Nos. 06095C0630F and 06095C0610F. Therefore, no structures would be placed within a 100-year floodplain that could impede or redirect flood flows and there would be *no impact*.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The project site is not located within a dam inundation area, as mapped by the California Office of Emergency Services (OES),³⁶ and is not in close proximity to a levee. Therefore, people would not be exposed to a significant risk of loss, injury, or death from flooding as a result of dam or levee failure and there would be *no impact*.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. The project site is located approximately 3 miles from San Pablo Bay and is not within a mapped tsunami inundation zone.³⁷ Because there are no large bodies of water, such as reservoirs or lakes, in close proximity to the project site and the site is not within a dam inundation zone, there is no potential for seiches to impact the project site. The site is in a relatively flat area of the City and is outside of the ABAG mapped

³⁶ California Office of Emergency Services (OES), 2009. *Dam Inundation Registered Images and Boundary Files in Shape File Format, Version DVD3*. Dated April 2009.

³⁷ Association of Bay Area Governments (ABAG), 2016. *Tsunami Inundation Area for Emergency Planning*. Accessed on July 8, 2016 at <http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami>.

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zones for earthquake-induced landslide or debris flow source areas.³⁸ Therefore, there would be *no impact* with respect to these issues.

3.11 LAND USE AND PLANNING

a) Physically divide an established community?

No Impact. The project proposes construction of an elementary school on a previously developed site that formerly operated as a maintenance and administration yard for the Vallejo City Unified School District. The construction of the new facilities would not add new uses or structures to the site of the type that would divide an established community. Further, the proposed project would not introduce or otherwise construct features that are typically associated with the division of an established community, such as constructing new roadway networks or creation of other physical barriers that could divide an established community. Therefore, *no impact* would occur with respect to dividing an established community and no mitigation measures are required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The project proposes to enhance existing uses and does not propose to modify any existing land use plan, policy, or regulation that applies to the project site. Further, the proposed project is consistent with the project site's General Plan land use and zoning designations, which allow for school facilities. Although the project would include the removal of some existing trees, the project proposes installation of new trees throughout the site, including along Valle Vista and Oregon Street, that would result in a net increase in the amount of trees at the project site over existing conditions. Further, the project proposes features, such as on-site bio-filtration landscaping to collect and filter surface runoff, which would be an improvement over existing conditions. Overall, the proposed project would not conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and in some cases, enhance the site's features to further mitigate potential environmental effects of the proposed project. Therefore, a *less-than-significant* impact would occur and no mitigation measures are required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Less Than Significant Impact. See discussion 3.4f above.

³⁸ ABAG, 2016. *Landslide Maps and Information: Rainfall-Induced Landslides – Existing Landslides, Rainfall-Induced Landslides: Debris Flow Source Areas, and Earthquake-Induced Landslides*. Accessed on July 8, 2016 at <http://resilience.abag.ca.gov/landslides/>.

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3.12 MINERAL RESOURCES

- a) **Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?**

No Impact. The project site has not been identified as a mineral resource zone by the City of Vallejo. The project site is zoned Public and Quasi-Public Facilities (PF), which permits a wide range of uses, including but not limited to, public schools, fire and police stations, community centers, public administrative offices, public playground and playing fields, colleges and universities, and a variety of other public uses. As such, the proposed project would have *no impact* on the availability of known mineral resources, and no mitigation is required.

- b) **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?**

No Impact. See discussion 3.11.a above.

3.13 NOISE

Existing Conditions

The project site is located in a Public and Quasi-Public Facilities zoning designation, and is primarily surrounded by commercial and residential land uses. The principal noise source affecting the project site is traffic noise, primarily from Lincoln Highway/Broadway Street and Valle Vista Avenue. The nearest sensitive receptors include an adjacent residence approximately 290 feet to the northeast of the center of the project site, residences to the north across Valle Vista Avenue, approximately 320 feet from the center of the project site, and an outpatient facility approximately 330 feet to the southeast of the center of the project site.

Noise-related terminology/descriptors, pertinent existing regulations, and Vallejo Municipal noise guidelines, calculations for traffic noise levels, and calculations for construction noise and vibration levels can be found in Appendix G, Noise Background, Monitoring Data, and Calculations, of this Initial Study.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, State of California, and City of Vallejo have established criteria to protect public health and safety and to prevent disruption of certain human activities.

The following are brief definitions of terminology used in this section:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unit-less measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μ Pa).

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- **Vibration Decibel (VdB).** A unit-less measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the United States, the standard reference velocity is 1 micro-inch per second (1×10^{-6} in/sec).
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L_{90} is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.³⁹

a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Mobile-Source Noise Impacts

Less Than Significant Impact. The proposed project would generate noise associated with additional vehicles traveling to and from the project site on local roadways. The roadway noise modeling was based on average daily trips (ADT) on roadway segments in the vicinity, as analyzed in the project’s Traffic Impact Analysis (see Appendix H of this Initial Study). Traffic noise was evaluated for Existing, Near-Term Future, and Near-Term Future plus Project conditions.⁴⁰ Noise modeling procedures involved the calculation of vehicular noise levels along individual roadway segments. This was accomplished using the Federal Highway

³⁹ For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

⁴⁰ In this instance, “Near-Term Future” means the future conditions in 2018.

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Administration Highway Noise Prediction Model. This model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site conditions. The proposed project's impact is determined by analysis of off-site traffic noise increases. Parameters and modeling results are included in Appendix G of this Initial Study.

The proposed project will be subject to traffic noise from Lincoln Highway/Broadway Street, Valle Vista Avenue, Oregon Street, and Napa Street. The traffic on Lincoln Highway would be the dominant roadway noise sources at the project site. Table 3.12-1 compares the noise levels of each roadway segment for existing and (future) background conditions.

Table 3.12-1 Project Contributions to Traffic Noise Levels

Roadway	Segment	Existing, dBA CNEL	Near-Term Future ^a dBA CNEL	Near-Term Future + Project, dBA CNEL	Project Contribution, dB	Significant Impact?
Nebraska	Sonoma to Broadway	61.7	61.7	62.4	0.8	no
Valle Vista	Sonoma to Couch	63.1	63.8	64.0	0.1	no
Valle Vista	Couch to Napa	62.6	63.3	63.7	0.4	no
Valle Vista	Napa to Broadway	62.6	63.2	64.0	0.8	no
Oregon	Napa to Broadway	70.5	70.6	70.7	0.1	no
Redwood	Sonoma to Couch	70.5	70.7	70.8	0.1	no
Redwood	Couch to Broadway	74.4	74.7	74.8	0.1	no
Sonoma	Redwood to Valle Vista	74.0	74.2	74.3	0.1	no
Sonoma	Valle Vista to Couch	71.5	71.8	71.9	0.1	no
Sonoma	Couch to Nebraska	66.4	66.7	66.8	0.1	no
Couch	Redwood to Valle Vista	66.1	67.0	66.9	-0.1	no
Couch	Valle Vista to Sonoma	69.9	71.2	70.2	-1.0	no
Broadway	Redwood to Valle Vista	70.2	70.4	70.7	0.3	no
Broadway	Valle Vista to Oregon	70.2	70.4	70.7	0.3	no
Broadway	Oregon to Nebraska	70.2	70.4	71.1	0.6	no

a. "Near-Term Future" herein means the future conditions in 2018.
Source: Federal Highway Administration Highway Noise Prediction Model (FHWA-RD77-108).

As shown in Table 3.12-1, traffic noise increases due to project contributions range from 0.0 to 2.4 dBA. An increase of less than 3 dB CNEL is generally not noticeable and is not considered to be significant. Consequently, noise impacts generated by project-related traffic would be less than significant and no mitigation measures would be required.

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Stationary-Source Noise Impacts

Mechanical Systems

Less Than Significant Impact. A stationary (non-transportation) noise source associated with the proposed school development would include heating, ventilation, and air conditioning (HVAC) units. The new HVAC units are expected to be located on the roofs of buildings with the HVAC units most likely grouped into clusters. The nearest receptors that could potentially be affected by HVAC units are the nearby residential uses to the north and east and the outpatient center to the southeast. However, ambient noise levels at the residences and outpatient center are already elevated under existing conditions due to heavy traffic flows on Lincoln Highway. Thus, the noise levels due to school outdoor activities and the proposed project's HVAC units would be lower than ambient noise levels caused by the traffic-related sources. In addition, noise that would be generated by the project's mechanical system would be similar to the types of noise already generated in the area and would not introduce a new type of noise source to the area. Furthermore, all mechanical equipment would comply with the noise standards of the City of Vallejo. Therefore, impacts from mechanical systems associated with the project would be *less than significant* and no mitigation measures would be required.

Outdoor Activities

Less Than Significant Impact. Outdoor activities that occur on school campuses and in parks throughout the city generate noticeable levels of noise. Noise generated on both weekdays (from physical education classes and sports programs) and weekends (from use of the fields) can elevate noise levels somewhat during the timeframe of each particular usage. Because surrounding noise-sensitive uses experience moderate ambient noise levels from existing nearby transportation-related noise sources, the impacts to any existing noise-sensitive uses in the project vicinity from stationary sources would be *less than significant* and no mitigation measures would be required.

Noise Compatibility

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Part 2, the California Building Code. These noise standards are applied to new or renovation construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations are intended to mitigate potential noise impacts at noise-sensitive structures—such as residences, schools, or hospitals—that are near major transportation noise sources and where such traffic-related noise sources create an exterior noise level of 60 dBA CNEL or higher.

The Noise Element establishes the land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment. The proposed project would be a school. For educational land uses, the General Plan classifies normally acceptable sound levels up to 70 dBA CNEL and unacceptable above 70 dBA CNEL. Traffic on nearby roadways is the most influential element of the noise environment at the project site. According to the 2016 General Plan Update, exterior noise levels generated

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by roadways like Lincoln Highway near the project site are in the range of 60 to 70 dBA CNEL. These exterior noise levels would fall within the “Normally Acceptable” land use compatibility classifications. Therefore, the noise environment for the project site would conform to the land use compatibility guidelines of the City’s Noise Element policies and a detailed analysis of the noise reduction requirements is not required.

Per the recent Supreme Court decision regarding the assessment of the environment’s impacts onto proposed projects (*CBLA v BAAQMD*, issued December 17, 2015)[1], it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions onto any given project. For noise, the application of this ruling means that the analysis of traffic, rail, and aircraft noise effects at the project site – regarding land use compatibility issues, including interior noise environments – is no longer part of CEQA. Therefore, no statement of impact significance and no application of Mitigation Measures is germane. Nonetheless, the demonstration of adherence to the California Building Code (CBC) is still necessary for the issuance of building permits by the City’s Community Development Department. As such, a detailed acoustical analysis would need to be conducted for the project to establish a sufficient level of exterior-to-interior noise reduction (along with the adequacy of the associated ventilation system). However, this detailed acoustical analysis is not provided or required as mitigation for the proposed project, as it would be required by City staff during the City’s development review and building plan check process.

Construction Noise

General Plan Noise Policy 2b prescribes allowable hours and noise emissions levels for construction activities within the city limit. The assessment of potential noise impacts due to project construction are discussed below under criterion (d).

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Operations Vibration

Less Than Significant Impact. Section 16.72.080 of the City’s Municipal Code states that no use shall be operated in a manner which produces vibrations discernible without instruments at any point on the property line of the lot on which the use is located. The operation of the proposed project would not include any long-term vibration sources. Thus, vibration effects or impacts from operations sources would be *less than significant* and no mitigation measures would be required.

Construction Vibration

Project construction can generate varying degrees of ground vibration, depending on the construction procedures, the equipment used, and the proximity to vibration-sensitive uses. Construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings near a construction site varies depending on the type and depth of the source, soil type, ground strata, and receptor building construction. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at

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moderate levels, to slight damage at the highest levels. Vibration is typically noticed nearby when objects in a building generate noise from rattling windows or jangling picture frames. It is typically not perceptible outdoors and, therefore, impacts are normally based on the distance to the nearest building.⁴¹ Table 3.12-2 lists typical vibration levels for different types of construction equipment at 25 feet from the source.

Table 3.12-2 Construction Equipment Vibration Levels

Equipment	Approximate RMS ^a Velocity Level at 25 Feet (VdB)	Approximate PPV Velocity at 25 Feet (in/sec)
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Loaded Trucks	86	0.076
Jackhammer	79	0.035
Small Bulldozer	58	0.003

Note: VdB = vibration decibel; PPV = peak particle velocity

a. RMS velocity calculated from vibration level (VdB) using the reference of 1 micro-inch/second and a crest factor of 4.

Source: FTA 2006.

Construction Vibration-Induced Architectural Damage

Less Than Significant Impact. Neither the City of Vallejo nor the County of Solano⁴² has specific and/or quantitative regulatory standards for construction or operational vibration sources. Thus, project-related construction vibration was evaluated for its potential to cause minor architectural damage⁴³ based on FTA's architectural damage criteria. According to guidelines from the FTA for assessing damage from vibration caused by construction equipment, the threshold at which there is a risk of architectural damage for non-engineered timber and masonry buildings is 0.200 peak particle velocity (PPV) in inches per second. According to Caltrans' research and measurements, earthmovers and haul trucks have never exceeded PPV of 0.100 inches per second (in/sec) at 10 feet.⁴⁴ Likewise, ground vibration from construction activities rarely reach levels that can damage structures, but can achieve levels in buildings close to a construction site that are in the perceptible ranges.⁴⁵ Groundborne vibration generated by construction projects is usually highest

⁴¹ Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment. United States Department of Transportation. FTA-VA-90-1003-06.

⁴² Like the City's Municipal Code, the Solano County Code states: All uses of land and structures shall be conducted in a manner, and provide adequate controls and operational management to prevent: Dust, offensive odors, or vibrations detectable beyond any property line (Section 28.70.10, General Development Standards Applicable to All Uses in Every Zoning District, Sub-section B, Paragraph 1., Part a.

⁴³ The term architectural damage is typically used to describe effects such as cracked plaster, cracks in drywall seams, sticking doors or windows, loosened baseboard/crown moldings, and the like.

⁴⁴ California Department of Transportation Division of Environmental Analysis, 2002. *Transportation Related Earthborne Vibration (Caltrans Experiences)*, Technical Advisory, Vibration. TAV-02-01-R9601. Prepared by Rudy Hendricks.

⁴⁵ Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. United States Department of Transportation. FTA-VA-90-1003-06, May.

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during pile driving and rock blasting. No pile driving and rock blasting activities are anticipated to be required during project construction.

Since the potential architectural damage to structures is directly related to the amount of vibrational energy at the source being transmitted through the ground to the receptor structure, this assessment uses the maximum vibration velocity at a specific distance from the edge of the project site to the receptor. The nearest off-site structures is the single-family home approximately 50 feet to the east of the edge of the project site, and the single-family homes 90 feet to the north of the edge of the project site. There is also an outpatient facility approximately 130 feet to the southeast of the edge of the project site. Table 3.12-3 shows the vibration levels from typical earthmoving construction equipment nearby receptors.

Table 3.12-3 Maximum Vibration Levels from Construction Equipment

Equipment	Vibration Levels (PPV) at Offices (50 Feet)	Vibration Levels (PPV) at Hotel (90 Feet)	Vibration Levels (PPV) at Outpatient Center (130 Feet)
Vibratory Roller	0.074	0.031	0.018
Cassion Drill	0.031	0.013	0.008
Large Bulldozer	0.031	0.013	0.008
Small Bulldozer	0.001	0.000	0.000
Jackhammer	0.012	0.005	0.003
Loaded Trucks	0.027	0.011	0.006

Note: PPV = peak particle velocity

Source: Federal Transit Administration (FTA), 2006. Transit Noise and Vibration Impact Assessment, May.

As shown in Table 3.12-3, construction activities associated with the project would not exceed 0.074 PPV in/sec at the nearest structures in the vicinity of the project site. This value is well below the FTA's criteria for vibration-induced structural damage of 0.200 PPV in/sec. Therefore, impacts from vibration-induced architectural damage at off-site structures would be *less than significant* and no mitigation measures would be required.

Construction Vibration Annoyance

Less Than Significant Impact. While not presenting potential impacts relative to architectural damage, some construction activities may be perceptible at the nearest off-site receptors due to of proximity to the activities. However, vibration-related construction activities would occur in the daytime when people are least sensitive to vibration levels (as many people would be away from their residences during the day). The level where vibration becomes annoying is 78 VdB for residential uses and 84 VdB for office uses. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time.

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Construction activities are typically distributed throughout the project site and would only occur for a very limited duration when equipment would be working in close proximity. Therefore, distances to the nearest receptors are measured from the center of the construction site, to represent the average vibration level. The nearest sensitive receptor is an adjacent single-family residence to the east, approximately 290 feet from the center of the project site. Table 3.12-4 shows the vibration levels from typical earthmoving construction equipment at the nearest sensitive receptors.

Table 3.12-4 Average Vibration Levels from Construction Equipment

Equipment	Vibration Levels (VdB) at Home to the East (290 Feet)	Vibration Levels (VdB) at Homes Across Valle Vista (320 Feet)	Vibration Levels (VdB) at Outpatient Center (330 Feet)
Vibratory Roller	73	72	72
Cassion Drill	66	65	65
Large Bulldozer	66	65	65
Small Bulldozer	37	36	36
Jackhammer	58	57	57
Loaded Trucks	65	64	64

Note: VdB = vibration decibel

Source: Federal Transit Administration (FTA), 2006. Transit Noise and Vibration Impact Assessment, May.

On average, construction-generated vibration levels would not exceed 73 VdB, and would not exceed the threshold for human annoyance at nearby sensitive receptors. Heavy equipment would only operate at the project boundary for brief periods, if at all. As heavy construction equipment moves around the project site, average vibration levels at the nearest structures would diminish with increasing distance between structures and the equipment and would generally not be perceptible. Vibration during construction would not exceed the FTA’s annoyance threshold at the nearest structures, and therefore the impact would be *less than significant* and no mitigation measures would be required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. As described under criterion (a) above, increases in noise levels related to stationary noise sources for the proposed project would not substantially elevate the existing ambient noise environment. Similarly, noise from project-related traffic along local roadways would not significantly increase noise levels in the project area. Accordingly, impacts would be *less than significant* and no mitigation measures would be required.

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

Potential temporary increases in ambient noise levels would be associated with construction activities. Sensitivity to noise is based on the location of the equipment relative to sensitive receptors, the time of day, and the duration of the noise-generating activities. Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from the transport of workers, material deliveries, and debris/soil hauling; and (2) on-site noise from use of construction equipment. Construction activities are anticipated to last approximately 10 months. The following discusses construction noise impacts to the off-site sensitive receptors.

Construction Vehicles

Less Than Significant Impact. The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. The primary access routes for construction vehicles to the project site would be Lincoln Highway, Valle Vista Ave, Oregon Street, and Napa Street. Project-related construction worker vehicles, haul trucks, and vendor trucks could pass by existing hotel and residential uses along Lincoln Highway/Broadway Street and Valle Vista Avenue north and east of the project site. Construction-related activities would generate worker, vendor, and soil haul trips. The demolition and grading phases would generate the most trips due to soil haul. Regardless, the construction-related trips, which could be up to 15 truck trips per day, would result in negligible noise level increases when compared to the traffic flow noise currently generated on the roadways. In addition, these truck trips would be spread throughout the workday and would primarily occur during non-peak traffic periods. Therefore, noise impacts from construction-related truck traffic would be *less than significant* at noise-sensitive receptors along the construction routes and no mitigation measures would be required.

Construction Equipment

Less Than Significant Impact. The City of Vallejo's General Plan Noise Policy 2b provides limitations on construction activities, stating "Where appropriate, limit noise generating activities (for example, construction and maintenance activities and loading and unloading activities) to the hours of 7:00 a.m. to 9:00 p.m."

Construction activities are typically temporary; occurring in any one location and only for a relatively limited period of time. Typically, demolition and grading activities generate the loudest noise because they involve the largest and most powerful equipment. In general, construction activities for the project would utilize relatively small- to medium-sized equipment such as delivery trucks, loaders/backhoes, dozers, excavators, graders, rollers, and pavers. As shown in Table 3.12-5 typical operational noise levels of most construction equipment range between 80 and 88 dBA at 50 feet.⁴⁶

⁴⁶ Neglecting detailed sound propagation considerations for the near-field/transition-zone/far-field environs, these reference sound levels would simplistically be adjusted to 86 to 94 dBA at 25 feet. Thus, several equipment items could potentially have typical sound emissions that would be higher than the Section 10.48.053 standards.

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Table 3.12-5 Typical Construction Equipment Noise Level

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Jack Hammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Bolt, Beranek & Newman, 1987. Noise Control for Buildings and Manufacturing Plants.

Construction equipment typically moves around on the project site and uses various power levels. Noise from localized point sources (such as construction equipment) decreases by approximately 6 to 7.5 dB with each doubling of distance between the source and receptor.⁴⁷ For example, the noise levels from a dozer that generates 85 dBA at 50 feet would measure 79 dBA at 100 feet, 73 dBA at 200 feet, 67 dBA at 400 feet, and 61 dBA at 800 feet (conservatively using a 6 dB per doubling of distance attenuation factor).

Temporary noise impacts during construction are mostly related to demolition, grading, and building construction. Construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in one location for one or more days; mobile equipment moves around a construction site with variations in power settings and loads. To determine the energy-average L_{eq} sound level from the equipment's operation under varying power settings, the equipment's noise rating at a reference

⁴⁷ As sound energy travels outward from the source, spreading loss accounts for a 6 dB decrease in noise level. Soft ground and atmospheric absorption effects can decrease this by an additional 1.5 dB.

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distance while operating at full power is adjusted by considering the duty cycle of the activity. The nearest off-site receptors are the single-family homes to the north and east of the site, and an outpatient center to the southeast of the project site. Because construction activities are distributed throughout the site and may be disturbing on residential property, the distance to sensitive receptors is measured from the center of the project site to the residential property boundary. Table 3.12-6 lists maximum construction equipment noise levels at nearby sensitive receptors.

Table 3.12-6 Construction Noise Impacts (dBA L_{eq})

Sensitive Receptors	Demolition	Site Prep	Asphalt Crushing
Single-Family Home to the East (185 Feet)	69	72	61
Residences Across Valle Visa Avenue (320 Feet)	64	67	61
Outpatient Center to the Southeast. (330 Feet)	64	67	61

Notes: Construction noise calculations were performed with the roadway construction noise model and are included in Appendix G, Noise Data, of this Initial Study.

Average noise levels during construction activities would range from 61 to 72 dBA L_{eq}. Construction activity may temporarily increase the ambient noise environment at nearby sensitive receptors during the different construction phases of the proposed project. Sound attenuation provided by topography at sensitive receptor locations was not taken into account. Therefore, these estimates are conservative, since they do not take into consideration the attenuation provided. At times, noise from heavy equipment would be above the existing ambient noise and would be readily perceptible. Generally, noise from construction equipment would be overshadowed by traffic noise from Lincoln Highway/Broadway Street. The overall construction would last for approximately 10 months; however, the loudest and more constant noise would occur during the demolition and grading phases, which together would last for approximately one month. Subsequent phases would generate noise that would be sporadic and intermittent. Noise from construction activities at a given receptor would be sporadic and limited during the construction period. Because construction activity would occur during the daytime hours allowed by the City’s General Plan, construction is temporary and short-term, and traffic noise would at times overshadow noise from construction equipment, noise impacts during construction would be *less than significant* and no mitigation measures would be required.

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

No Impact. The proposed project is not located within an airport land use plan or within the 65 dBA CNEL contour of any airports or heliports. The nearest commercial airport is Napa County Airport (identified code APC), which is approximately 6.5 miles to the north of the project site. At these distances, aircraft operations noise would not be expected to notably affect the community noise environment within Vallejo or at the project site. *No impact* related to noise from public airport would occur and no mitigation measures are necessary.

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- f) **For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact. The proposed project is not located within the immediate vicinity of a private airstrip or heliport. Private air facilities generally consist of helipads, such as the Infineon Raceway Heliport and the Doctors Medical Center Heliport; both approximately 10 miles from Vallejo. Other private facilities—both heliports and private airstrips—are at least 12 miles from Vallejo. At these relatively long distances from the aircraft facilities, the proposed project would not expose residents to excessive noise levels from private airstrip or heliport noise. *No impact* related to noise from private airstrip would occur and no mitigation measures would be required.

3.14 POPULATION AND HOUSING

- a) **Induce substantial 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)?**

Less than Significant. The project proposes construction of a TK-8 elementary school to accommodate up to 900 students and a staff of up to 70. The proposed project would not develop new homes or businesses that would typically result in population growth. Further, the proposed project does not contain any components, such as extension of roads or other infrastructure, that would indirectly result in substantial population growth in the area. Although construction workers could temporarily relocate to the area during construction, this increase in population would be temporary and only last during construction of the school. Thus, the proposed project would result in a *less-than-significant* impact and no mitigation is required.

- b) **Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

No Impact. The proposed project does not include housing and would not displace any existing housing. Thus, *no impact* due to the displacement of existing housing would occur, and no mitigation is required.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

No Impact. There are no existing housing structures on the project site, thus, displacement of residents would not occur. Therefore, *no impact* would occur in this respect and no mitigation measures are required.

3.15 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts to:

- a) **Fire protection?**

Less Than Significant Impact. The City of Vallejo Fire Department (VFD) would respond to fires or other emergencies at the project site as they do for other locations in the City of Vallejo. The project site is

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located less than a half mile south of Fire Station #23 (900 Redwood Street), and just over one-mile north of Station #21 (1220 Marin Street). Therefore, given the project sites proximity to these stations, it is not expected that proposed project would substantially interfere with existing response times or increase the volume or frequency of emergency responder calls relative to existing volumes. Furthermore, the project would not result in a population increase in the City, which could possibly increase the need for fire services. Therefore, implementation of the proposed project would not trigger the need for new or altered facilities to house personnel or equipment for the VFD.⁴⁸ As a result, a *less-than-significant* impact would occur in relation to fire protection and no mitigation measures are required.

b) Police protection?

Less Than Significant Impact. The City of Vallejo Police Department (VPD) would respond to calls for police protection services at the project site as they do for other locations in the City of Vallejo. The project site is located 1.5 miles north of the VPD station (111 Amador Street). Given the project sites proximity to the police station, it is not expected that proposed project would substantially interfere with existing response times or increase the volume or frequency of police protection calls relative to existing volumes. Furthermore, the project would not result in a population increase in the City, which could possibly increase the need for police protection services. Therefore, implementation of the proposed project would not likely trigger the need for new or altered facilities to house personnel or equipment for the VPD. As a result, a *less-than-significant* impact would occur in relation to police protection and no mitigation measures are required.

c) Schools?

Less Than Significant Impact. The project proposes demolition of existing structures and construction of a TK-8 elementary school. The impacts associated with construction and operation of the proposed improvements would result in physical impacts; however, as described throughout this document, potential environmental impacts associated with the proposed project would be reduced to less-than-significant impacts through the incorporation of several mitigation measures. Further, the proposed project does not include a housing component, and therefore would not result in a permanent increase to the population such that it could generate students that could impact existing school districts within the City of Vallejo. As a result, a *less-than-significant* impact would occur and no mitigation measures are required.

d) Parks?

No Impact. The project proposes demolition of existing structures and construction of a TK-8 elementary school. The proposed project would not include a housing component that would result in a permanent increase to the population which could increase the use of or otherwise result in adverse physical impacts to existing parks. Further, the proposed project itself would not directly impact existing parks and would include construction of play structures and paved surface sports courts for its students. Thus, *no impacts* to parks would occur and no mitigation measures are required.

⁴⁸ Personal communication between Ricky Caperton, Associate, PlaceWorks and Bill Tuikka, City Planner, City of Vallejo based on communication with Vincent Sproete, Division Chief/Fire Prevention Manager, Vallejo Fire Department, on July 25, 2016.

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e) Other public facilities?

No Impact. The project proposes demolition of existing structures and construction of a TK-8 elementary school. The proposed project would not include a housing component that would result in a permanent increase to the population which could increase the use of or otherwise result in adverse physical impacts to other public facilities. Further, the proposed project itself would not directly impact existing public facilities as a result of construction and operation. Thus, *no impacts* to other public facilities would occur and no mitigation measures are required.

3.16 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project does not include residential housing and would not directly contribute to any population growth. However, the school facilities would allow for the potential for an increased daytime population, but users of the space would be primarily composed of students and employees. Therefore, the proposed project would not result in a substantial physical deterioration of a recreational facility. Therefore, *no impact* would occur in this respect and no mitigation measures are required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed project does not include any residential housing and would not result in a permanent increase to the population. Thus, the proposed project would not require construction or expansion of recreational facilities. Therefore, *no impact* would occur and no mitigation measures are required.

3.17 TRANSPORTATION/TRAFFIC

This section of the Initial Study evaluates the potential for implementation of the project to result in transportation and traffic impacts in the City of Vallejo. The analysis in this section is based in part on the following technical report:

- Caliber Charter School Vallejo Traffic Impact Study, PRISM Engineering, July 12, 2016.

This traffic impact analysis (TIA) was prepared in accordance with the City of Vallejo traffic impact study requirements.⁴⁹

Operating Conditions and Criteria for Intersections

Analysis of significant environmental impacts at intersections is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions, and

⁴⁹ City of Vallejo, Public Works Department, Traffic Impact Analysis/Study Guidelines.

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ranges from LOS A (best, minimal delay), to LOS F (worst, heavy delays) where the intersection is operating at or near its functional capacity. Levels of Service for this study were determined using the Highway Capacity Manual, 2000 (HCM) methodologies which are implements in the SynchroPro (Version 9) traffic analysis software. Table 3.16-1 relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

The HCM includes procedures for analyzing side-street stop controlled (SSSC), all-way stop-controlled (AWSC), and signalized intersections. The SSSC procedure defines LOS as a function of average control delay for each minor street approach movement. Conversely, the AWSC and signalized intersection procedures define LOS as a function of average control delay for the intersection as a whole. For SSSC intersections, level of service is report for the worst approach as well as for the intersection as a whole.

Table 3.16-1 Intersection Level of Service Definitions

Level of Service	Description	Avg. Delay Per Vehicle, Sec/Veh	
		Signalized	Un-Signalized
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	≤ 10	≤ 10
B	Stable traffic. Traffic flows smoothly with few delays.	> 10 – 20	> 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	> 20 – 35	> 15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	> 35 – 55	> 25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	> 55 – 80	> 35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	> 80	> 50

Source: Prism Engineering, 2016.

Existing Conditions

Existing Roadway Network

Sonoma Boulevard (State Route 29) is a north south four lane arterial with left turn bays at signalized intersections south of Couch Street, but then is a divided arterial with a large 26' partially landscaped median which allows for dual left turn bays at signalized intersections. This arterial is in a commercial district, but the speed limit is posted at 30 mph near Nebraska Street. The speed limit on this state highway is set at 40 mph just north of Sereno Drive in both the northbound and southbound directions. All major intersections are signalized along this corridor.

Broadway Street (Lincoln Highway) is a north-south four lane arterial roadway in the study area with left turn bays at signalized intersections. At unsignalized intersections there are no left turn bays, but because the road width is generally the same, in these locations there is also on-street parking. This road is posted at 35 mph north of Nebraska and 30 mph to the south. This roadway's T-intersection with Oregon Avenue near

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the project site is unsignalized, does not have a left turn bay on Broadway Street, and has stop sign control for Oregon Avenue traffic. All major intersections along this corridor are signalized control.

Redwood Street-Redwood Parkway is an east-west arterial roadway connecting Sacramento Street to the west and the I-80 Interchange to the east and Columbus Parkway to the east. East of I-80, it becomes Redwood Parkway and serves numerous residential neighborhoods in eastern Vallejo. Redwood Street is a four-lane undivided roadway with a posted speed limit of 35 mph. Redwood Parkway is a four-lane divided roadway with a posted speed limit of 30 mph.

Couch Street is a north-south four lane arterial roadway connecting with Sonoma Blvd on the south end and Broadway Street on the north end. In some segments it has a two-way left turn lane in the median area, with some left turn bays in others. Much of the centerline striping is also dual yellow no passing. The speed limit is set at 30 mph north of Sonoma Boulevard

Valle Vista Avenue varies in width, but generally is a two lane east-west collector level roadway connecting to Sacramento Street on its west end and Tuolumne Street on its east end. To the west of Couch Street, it is a residential street with houses fronting on at least one side, but continually on both sides east of Broadway to Tuolumne. The speed limit is posted at 25 mph west of Broadway.

Napa Street is a north-south collector road that connects Valle Vista Avenue on the north with Oregon Street on the south. Napa Street connects to Oregon Street at a right angle and is a continuous roadway. Napa Street NB approach is stop controlled at its intersection with Valle Vista Avenue. There is perpendicular and angled parking on both sides of the street where there are not driveways present. The street width is 60 feet from curb to curb, with one lane of travel in each direction. Speed limits are not posted on this street.

Oregon Street is an east-west collector road that connects Napa Street on the west end with Broadway Street on the east end. Oregon Street connects to Napa Street at a right angle and is a continuous roadway. There is perpendicular and angled parking on both sides of the street where there are not driveways present. The street width is 60 feet from curb to curb, with one lane of travel in each direction. Oregon Street EB approach is stop controlled at its intersection with Broadway Street. Speed limits are not posted on this street.

Nebraska Street is an east-west collector level two lane roadway generally with a 36-foot curb to curb width. It connects to Sacramento Street on its west end and Slate Street on its east end. For the majority of its length it is a residential street with housing frontage on both sides of the road. It is classified as a residential district for prima facie speed limit purposes and is posted at 25 mph with regulatory signage.

Existing Transit Facilities

The charter school project site is served by transit service which passes along its north border on Valle Vista Avenue. Solano County Transit (SolTrans) provides bus service throughout the City, but Line 1 travels primarily north and south along Broadway Street and Sonoma Boulevard with the mid portion of the route traveling east-west on Valle Vista Avenue adjacent to the project site. Line 1 travels to and from the Vallejo Transit Center (VTC) where numerous transfers to other locations throughout the City can take place (1.8 miles away), and the Serrano Transit Center which is located approximately ¾-mile to the north from the

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project site. Figure 1 shows the location of the project SCHOOL site in relation to the transit network in the City.

Existing Bicycle and Pedestrian Facilities

Sidewalks currently provide walking facilities between the proposed charter school project site to nearby transit stops, and the adjacent residential and commercial land uses. These sidewalks also connect to the existing Sereno Transit Center at about 3,500 feet to the north of the school on Sereno Drive via Couch Street, however, one portion of Couch Street does not have sidewalks, but has a dirt shoulder upon which pedestrians can walk.

There are no bike lanes in the immediate vicinity of the school site (over a mile away to the nearest dedicated bike lane). Bike lanes can provide safe travel for cyclists who must share the roadway with motor vehicles. The challenge for the existing roadways in the vicinity of the project site is roadway width especially on Broadway Street or Sonoma Boulevard. Within the project's vicinity, there is a designated Bike Route with signage along Valle Vista Avenue from Sacramento Street on the west to Tuolumne Street on the east end.

Bike Route signs are installed on Valle Vista Avenue, a two-lane residential collector road with slower speeds (25 mph posted). Other "bicycle friendly" routes are located about a mile to the south of Valle Vista Avenue including Tennessee Street and Louisiana Street. These are also east-west roadways, Tennessee being a four lane facility and Louisiana being a two lane collector. These roads do not have dedicated lane striping for bike lanes. They do feed potential bike traffic westerly into Mare Island Way which is a two lane arterial to the north of Hickborn Street, and four lanes to the south. Mare Island Way is a bike friendly facility, generally about 1 mile to the west of Napa Street and accessible via Valle Vista Avenue to Sacramento Street (which also has dedicated bike lane striping about 1/3 of a mile to the north of Valle Vista Avenue). Mare Island has dedicated striped bike lanes on each side of the road from Florida Street on the south to where it transitions into Sacramento Street on the north end. This north-south bike lane route is not proximate to the Charter School proposed site, and is about 1.5 miles to the west of the school site. There are no existing north to south roadways with bike lanes or bike routes that would serve the school site.

Sidewalks for pedestrians exist on both sides of all study streets and intersections, with the exception of the north side of Oregon Street at its west end where it connects with Napa Street having about 360 feet of curb only mixed with a long driveway opening currently used as parking spaces, but no sidewalk exists. All other study roads have complete sidewalks or a pedestrian walkable path or area safely off the traveled way of vehicles.

Existing (2015) Levels of Service at Study Intersections

The proposed project will generate new vehicular trips that will increase traffic volumes on the nearby street network. To assess changes in traffic conditions associated with the project, the following intersections, illustrated in Figure 1, were selected in coordination with the City of Vallejo for evaluation in this traffic study:

1. Broadway Street at Nebraska Street
2. Sonoma Boulevard at Nebraska Street

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3. Sonoma Boulevard and Couch Street
4. Sonoma Boulevard at Valle Vista Avenue
5. Redwood Street and Sonoma Boulevard
6. Redwood Street and Couch Street
7. Broadway Street at Redwood Street
8. Couch Street at Valle Vista Avenue
9. Napa Street at Valle Vista Avenue
10. Broadway Street at Valle Vista
11. Broadway Street at Oregon Street

Existing intersection lane configurations, traffic controls, and weekday intersection turning movement volumes are illustrated in Figures 3.3 and 3.4 of the TIA for the AM Peak Hour and PM Peak Hour, respectively. Traffic signals in the study area are located at all study intersections with the exception of Valle Vista Avenue at Napa Street, and Broadway Street at Oregon Street.

Weekday intersection turning movement volumes were collected at project study area intersections on November 19, 2015. Intersection turning movement volumes were collected by video during the AM (7:00 a.m. to 9:00 a.m.) and PM (4:00 p.m. to 6:00 p.m.) peak periods. Weekday counts were collected when local schools were in session and outside of holiday periods.

Current existing levels of service in the study area as shown in Table 3.16.2 range from LOS A to LOS C conditions for the AM peak hour or the PM peak hour. This indicates that traffic is in a free flow and mostly delay-free condition throughout the study area.

Table 3.16-2 Existing Conditions Intersection Level of Service Summary

	Intersection	AM Peak Hour			PM Peak Hour		
		LOS	Delay	V/C ^a	LOS	Delay	V/C ^a
1	Nebraska Street and Broadway Street	C	21.2	0.40	C	21.0	0.43
2	Nebraska Street and Sonoma Boulevard	B	18.0	0.30	C	20.1	0.51
3	Couch Street and Sonoma Boulevard	B	16.0	0.32	B	13.2	0.52
4	Valle Vista Street and Sonoma Boulevard	B	16.6	0.33	B	19.3	0.47
5	Redwood Street and Sonoma Boulevard	C	24.5	0.36	C	28.0	0.61
6	Redwood Street and Couch Street	B	15.0	0.25	B	15.7	0.35
7	Redwood Street and Broadway Street	C	23.9	0.47	C	29.3	0.65
8	Valle Vista Avenue and Couch Street	A	7.6	0.13	A	9.5	0.20
9	Valle Vista Avenue and Napa Street	A	9.9	N/A	B	10.6	N/A
10	Valle Vista Avenue and Broadway Street	B	18.4	0.28	B	15.4	0.37
11	Oregon Street and Broadway Street	B	14.4	N/A	B	14.0	N/A

Notes: V/C = volume per capacity
Source: Prism Engineering, 2016.

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In addition, the City has identified three street segment locations as needing analysis and assessment in the traffic study:

- **Napa Street (Valle Vista Avenue to Oregon Street):** Current volumes on this street from Valle Vista Avenue to Oregon Street during the AM or PM peak hour do not create any queue lengths that overrun existing turn pockets or lanes. Level of service is LOS A conditions throughout this street, since LOS A exists at Valle Vista (with LOS B for the NB stop sign), and LOS A exists at Oregon Street (which is currently an uncontrolled right angle intersection, a continuous connection).
- **Oregon Street (Napa Street to Broadway Street):** Current volumes on this street from Napa Street to Broadway Street during the AM or PM peak hour do not create any significant queue lengths at the stop controlled intersection approach at Broadway Street. Level of service is LOS A conditions throughout this street, since LOS A exists at Broadway Street (with LOS B for the EB stop sign), and LOS A exists at Napa Street (which is currently an uncontrolled right angle intersection, a continuous connection).
- **Valle Vista Avenue (Sonoma Boulevard to North Camino Alto):** Current volumes on this street from Sonoma Boulevard to North Camino Alto during the AM or PM peak hour do not create any queue lengths that overrun existing turn pockets or lanes. Level of service is generally LOS B or better conditions, since LOS B exists at Sonoma Blvd, and at Couch Street, and at Broadway Street.

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Less Than Significant Impact With Mitigation Incorporated. The school is planned to have 900 elementary/middle school students in attendance by Year 2018. It was assumed for the purpose of this analysis that the elementary school of 900 students and 70 faculty and staff would be in full attendance by the Year 2018.

Trip generation for development projects is typically calculated based on rates contained in the Institute of Transportation Engineer's publication, Trip Generation 9th Edition. Trip Generation is a standard reference used by jurisdictions throughout the country for the estimation of trip generation potential of proposed developments. For the purpose of this analysis, the TIA utilized trip rates for private schools to quantify and predict the future traffic for the Caliber Charter School in Vallejo, as explained in more detail in section 3.3 of the TIA. The project would generate 2,484 daily trips, which 810 would occur in the AM peak hour and 171 in the PM peak hour.

Four scenarios for traffic assignment were studied and considered in the TIA:

- **Scenario A:** Unconstrained scenario where school traffic arrives according to shortest and most convenient pathway from home to school

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- **Scenario B:** Constrained scenario where charter school members are required to enter on Oregon Street from Southbound Broadway Street. School traffic would not be allowed to enter from Napa Street. However, there are no raised medians to help guide traffic on Napa Street at Valle Vista Avenue, and the existing lane striping on Valle Vista remains.
- **Scenario C:** Constrained scenario as in Scenario B above, but with raised medians to allow guidance of all school traffic northbound on Napa Street to turn right only onto Valle Vista Avenue.
- **Scenario D:** Constrained scenario as in Scenario B and Scenario C above, but with a 50 percent reduced volume for AM peak hour charter school traffic because half of the students would arrive for earlier classes of a staggered start time program at the school. This traffic demand management scenario is based on staggered start times at the charter school beginning at 7:30 a.m., then at 7:45 a.m., and finally at 8:00 a.m. for various grade groups.

The proposed project lane geometries modifications and travel patterns are discussed in detail in Section 3.5 and 3.6 of the TIA.

Per the City of Vallejo Traffic Impact/Analysis Study Guidelines, significant impacts for City controlled intersections would occur if traffic from the proposed project would result in an increase in Volume-to-Capacity (V/C) of more than the allowable thresholds presented in Table 3.16-3. If an impact would occur, LOS with mitigations must be improved to LOS D or better.⁵⁰

Table 3.16-3 Thresholds for Project Impacts

LOS Without Project	Increase in V/C With Project
C	> 0.04
D	> 0.02
E or F	> 0.01

Source: City of Vallejo, Public Works Department, Traffic Impact Analysis/Study Guidelines; Prism Engineering 2016.

Near Term (2018) Levels of Service at Study Intersections

Traffic operations were evaluated in this section for Near-Term (2018) Traffic Conditions without project, and with the project. The baseline Year 2018 traffic projections include the growth from background projects being developed (as calculated with approved growth rates defined earlier in this report), and the projected traffic from the adjacent future Post Office project across the street on Napa Street from the project. Four different Scenarios for traffic assignments (A, B, C and D discussed above) were considered in this traffic study.

Scenario A

Intersection LOS for 2018 conditions under Scenario A assumptions are presented in Table 3.16-4. The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.43 to 0.61, an increase of 0.18.
2. Nebraska at Sonoma V/C increased 0.31 to 0.41, an increase of 0.10.

⁵⁰ City of Vallejo Traffic Impact Analysis/Study Guidelines.

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4. Valle Vista at Sonoma V/C increased from 0.38 to 0.43, an increase of 0.05.
7. Redwood at Broadway V/C increased from 0.54 to 0.64, an increase of 0.10.

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Table 3.16-4 Near Term Year 2018 Scenario A LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	21.7	0.43	C	22.0	0.45	C	26.7	0.61	0.18	C	22.6	0.49	0.04
2 Nebraska Street and Sonoma Boulevard	S	D	C	29.2	0.31	C	30.8	0.51	C	30.8	0.41	0.10	C	31.4	0.53	0.02
3 Couch Street and Sonoma Boulevard	S	D	C	30.7	0.36	C	32.6	0.55	C	31.0	0.39	0.03	C	33.0	0.56	0.01
4 Valle Vista Street and Sonoma Boulevard	S	D	C	27.6	0.38	C	30.1	0.57	C	29.0	0.43	0.05	C	30.4	0.57	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	27.1	0.41	C	31.2	0.68	C	26.9	0.42	0.01	C	31.2	0.68	0.00
6 Redwood Street and Couch Street	S	D	B	14.1	0.23	B	16.0	0.37	B	14.2	0.23	0.00	B	16.0	0.37	0.00
7 Redwood Street and Broadway Street	S	D	C	23.0	0.54	C	29.8	0.68	C	32.5	0.64	0.10	C	30.3	0.71	0.03
8 Valle Vista Avenue and Couch Street	S	D	A	7.3	0.14	A	8.9	0.22	A	7.7	0.19	0.05	A	9.0	0.23	0.01
9 Valle Vista Avenue and Napa Street	ST	D	A	1.0	N/A	A	1.1	N/A	A	2.1	N/A	N/A	A	1.3	N/A	N/A
	NB		B	10.4	N/A	B	11.3	N/A	B	11.2	N/A	N/A	B	10.3	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	15.5	0.29	B	17.0	0.40	B	16.6	0.43	0.14	B	17.3	0.44	0.04
11 Oregon Street and Broadway Street	ST	D	A	0.3	N/A	A	0.1	N/A	A	3.0	N/A	N/A	A	0.6	N/A	N/A
	EB		B	10.9	N/A	B	14.7	N/A	D	33.0	N/A	N/A	C	16.4	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prisms Engineering, 2016.

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Scenario B

Intersection LOS for 2018 conditions under Scenario B assumptions are presented in Table 3.16-5. The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.43 to 0.61, an increase of 0.18.
2. Nebraska at Sonoma V/C increased 0.31 to 0.41, an increase of 0.10.
3. Valle Vista at Sonoma V/C increased from 0.38 to 0.43, an increase of 0.05.
7. Redwood at Broadway V/C increased from 0.54 to 0.64, an increase of 0.10.

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Table 3.16-5 Near Term Year 2018 Scenario B LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	21.7	0.43	C	22.0	0.45	C	27.7	0.63	0.20	C	22.7	0.50	0.05
2 Nebraska Street and Sonoma Boulevard	S	D	C	29.2	0.31	C	30.8	0.51	C	32.4	0.50	0.19	C	31.8	0.55	0.04
3 Couch Street and Sonoma Boulevard	S	D	C	30.7	0.36	C	32.6	0.55	C	31.9	0.43	0.07	C	33.5	0.58	0.03
4 Valle Vista Street and Sonoma Boulevard	S	D	C	27.6	0.38	C	30.1	0.57	C	28.8	0.40	0.02	C	30.3	0.57	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	27.1	0.41	C	31.2	0.68	C	27.0	0.41	0.00	C	31.2	0.68	0.00
6 Redwood Street and Couch Street	S	D	B	15.1	0.26	B	16.0	0.37	B	15.1	0.26	0.00	B	16.0	0.37	0.00
7 Redwood Street and Broadway Street	S	D	C	23.0	0.54	C	29.8	0.68	C	32.7	0.65	0.11	C	30.3	0.71	0.03
8 Valle Vista Avenue and Couch Street	S	D	A	7.3	0.14	A	8.9	0.22	A	8.4	0.22	0.08	A	9.1	0.24	0.02
9 Valle Vista Avenue and Napa Street	ST	D	A	1.0	N/A	A	1.1	N/A	A	1.2	N/A	N/A	A	1.1	N/A	N/A
	NB		B	10.4	N/A	B	11.3	N/A	C	24.9	N/A	N/A	B	10.8	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	15.5	0.29	B	17.0	0.40	C	22.7	0.61	0.32	B	16.9	0.44	0.04
11 Oregon Street and Broadway Street	ST	D	A	0.3	N/A	A	0.1	N/A	A	0.5	N/A	N/A	A	0.1	N/A	N/A
	EB		B	10.9	N/A	B	14.7	N/A	B	16.1	N/A	N/A	B	16.4	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

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Scenario C

Intersection LOS for 2018 conditions under Scenario B assumptions are presented in Table 3.16-6.

The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.43 to 0.63, an increase of 0.20.
2. Nebraska at Sonoma V/C increased 0.31 to 0.50, an increase of 0.19.
3. Valle Vista at Sonoma V/C increased from 0.36 to 0.43, an increase of 0.07.
7. Redwood at Broadway V/C increased from 0.54 to 0.65, an increase of 0.11.

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Table 3.16-6 Near Term Year 2018 Scenario C LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	21.7	0.43	C	22.0	0.45	C	27.7	0.63	0.20	C	22.7	0.50	0.05
2 Nebraska Street and Sonoma Boulevard	S	D	C	29.2	0.31	C	30.8	0.51	C	32.4	0.50	0.19	C	31.8	0.55	0.04
3 Couch Street and Sonoma Boulevard	S	D	C	30.7	0.36	C	32.6	0.55	C	31.9	0.43	0.07	C	33.5	0.58	0.03
4 Valle Vista Street and Sonoma Boulevard	S	D	C	27.6	0.38	C	30.1	0.57	C	28.8	0.40	0.02	C	30.3	0.57	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	27.1	0.41	C	31.2	0.68	C	27.0	0.41	0.00	C	31.2	0.68	0.00
6 Redwood Street and Couch Street	S	D	B	15.1	0.26	B	16.0	0.37	B	15.1	0.26	0.00	B	16.0	0.37	0.00
7 Redwood Street and Broadway Street	S	D	C	23.0	0.54	C	29.8	0.68	C	32.7	0.65	0.11	C	30.3	0.71	0.03
8 Valle Vista Avenue and Couch Street	S	D	A	7.3	0.14	A	8.9	0.22	A	8.4	0.22	0.08	A	9.1	0.24	0.02
9 Valle Vista Avenue and Napa Street	ST	D	A	1.0	N/A	A	1.1	N/A	A	1.2	N/A	N/A	A	1.1	N/A	N/A
	NB		B	10.4	N/A	B	11.3	N/A	C	24.9	N/A	N/A	B	10.8	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	15.5	0.29	B	17.0	0.40	C	22.7	0.61	0.32	B	16.9	0.44	0.04
11 Oregon Street and Broadway Street	ST	D	A	0.3	N/A	A	0.1	N/A	A	0.5	N/A	N/A	A	0.1	N/A	N/A
	EB		B	10.9	N/A	B	14.7	N/A	B	16.1	N/A	N/A	B	16.4	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

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Scenario D

Intersection LOS for 2018 conditions under Scenario B assumptions are presented in Table 3.16-7.

The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.43 to 0.53, an increase of 0.10.
2. Nebraska at Sonoma V/C increased 0.31 to 0.39, an increase of 0.08.
7. Redwood at Broadway V/C increased from 0.54 to 0.61, an increase of 0.07.

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Table 3.16-7 Near Term Year 2018 Scenario D LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	Δ V/C	LOS	Delay	V/C ^a	Δ V/C
1 Nebraska Street and Broadway Street	S	D	C	21.7	0.43	C	22.0	0.45	C	24.1	0.53	0.10	C	22.5	0.49	0.04
2 Nebraska Street and Sonoma Boulevard	S	D	C	29.2	0.31	C	30.8	0.51	C	30.4	0.39	0.08	C	32.0	0.54	0.03
3 Couch Street and Sonoma Boulevard	S	D	C	30.7	0.36	C	32.6	0.55	C	31.3	0.40	0.04	C	33.6	0.57	0.02
4 Valle Vista Street and Sonoma Boulevard	S	D	C	27.6	0.38	C	30.1	0.57	C	28.0	0.40	0.02	C	31.0	0.58	0.01
5 Redwood Street and Sonoma Boulevard	S	D	C	27.1	0.41	C	31.2	0.68	C	27.3	0.42	0.01	C	31.8	0.69	0.01
6 Redwood Street and Couch Street	S	D	B	15.1	0.26	B	16.0	0.37	B	15.1	0.26	0.00	B	16.0	0.37	0.00
7 Redwood Street and Broadway Street	S	D	C	23.0	0.54	C	29.8	0.68	C	25.5	0.61	0.07	C	30.5	0.71	0.03
8 Valle Vista Avenue and Couch Street	S	D	A	7.3	0.14	A	8.9	0.22	A	7.6	0.18	0.04	A	9.0	0.23	0.01
9 Valle Vista Avenue and Napa Street	ST	D	A	1.0	N/A	A	1.1	N/A	A	1.1	N/A	N/A	A	1.1	N/A	N/A
	NB		B	10.4	N/A	B	11.3	N/A	B	12.1	N/A	N/A	B	10.5	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	15.5	0.29	B	17.0	0.40	B	15.6	0.35	0.06	B	17.1	0.43	0.03
11 Oregon Street and Broadway Street	ST	D	A	0.3	N/A	A	0.1	N/A	A	0.4	N/A	N/A	A	0.1	N/A	N/A
	EB		B	10.9	N/A	B	14.7	N/A	B	13.0	N/A	N/A	B	15.8	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

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Long Term (2035) Levels of Service at Study Intersections

Transportation improvements are not anticipated by City staff for the study area intersections for the year 2035. All of the study intersections remain the same as compared to existing conditions. Future (Year 2035) AM and PM peak hour traffic volumes are based on future year traffic forecasts obtained from the STA Travel Demand Forecast model. Consistent with the near term scenarios, four scenarios (A to D) were evaluated under 2035 conditions as follows:

Scenario A

Intersection LOS for 2035 conditions under Scenario A assumptions are presented in Table 3.16-8. The table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.53 to 0.70, an increase of 0.17.
2. Nebraska at Sonoma V/C increased 0.37 to 0.48, an increase of 0.11.
4. Valle Vista at Sonoma V/C increased from 0.46 to 0.51, an increase of 0.05.
7. Redwood at Broadway V/C increased from 0.66 to 0.77, an increase of 0.11.

Two locations are at LOS C conditions (Nebraska at Broadway and Sonoma) and two other locations are at LOS D conditions with significant increases to V/C ratio (Valle Vista at Sonoma and Redwood at Broadway). Although these three locations had significant change in V/C ratio, the intersection level of service remains at LOS D conditions for all four intersections indicating that the traffic flows would still be satisfactory without mitigation.

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Table 3.16-8 Long Term Year 2035 Scenario A LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	23.5	0.53	C	23.7	0.54	C	31.7	0.70	0.17	C	24.5	0.58	0.04
2 Nebraska Street and Sonoma Boulevard	S	D	C	32.8	0.37	D	43.3	0.61	D	36.7	0.48	0.11	D	45.3	0.63	0.02
3 Couch Street and Sonoma Boulevard	S	D	C	33.0	0.44	D	40.8	0.65	C	33.9	0.48	0.04	D	42.2	0.66	0.01
4 Valle Vista Street and Sonoma Boulevard	S	D	C	28.8	0.46	D	37.7	0.68	C	30.6	0.51	0.05	D	38.0	0.68	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	31.2	0.51	D	40.3	0.81	C	31.0	0.52	0.01	D	40.4	0.81	0.00
6 Redwood Street and Couch Street	S	D	B	15.9	0.32	B	17.6	0.49	B	15.9	0.32	0.00	B	17.6	0.49	0.00
7 Redwood Street and Broadway Street	S	D	C	25.9	0.66	D	36.9	0.81	D	36.8	0.77	0.11	D	37.6	0.83	0.02
8 Valle Vista Avenue and Couch Street	S	D	A	7.9	0.17	A	9.3	0.26	B	8.6	0.22	0.05	A	9.5	0.27	0.01
9 Valle Vista Avenue and Napa Street	ST	D	A	0.9	N/A	A	1.0	N/A	A	2.0	N/A	N/A	A	1.2	N/A	N/A
	NB		B	10.8	N/A	B	12.0	N/A	B	11.5	N/A	N/A	B	10.8	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	16.2	0.35	B	18.4	0.48	B	17.4	0.48	0.13	B	18.7	0.51	0.03
11 Oregon Street and Broadway Street	ST	D	A	0.4	N/A	A	0.1	N/A	A	2.8	N/A	N/A	A	0.6	N/A	N/A
	EB		B	11.4	N/A	B	17.4	N/A	E	47.8	N/A	N/A	C	20.8	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

3. Environmental Analysis

Scenario B

Intersection LOS for 2035 conditions under Scenario B assumptions are presented in Table 3.16-9. The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.53 to 0.72, an increase of 0.19.
2. Nebraska at Sonoma V/C increased 0.37 to 0.57, an increase of 0.20.
3. Valle Vista at Sonoma V/C increased from 0.44 to 0.51, an increase of 0.07.
7. Redwood at Broadway V/C increased from 0.66 to 0.77, an increase of 0.11.

One locations are at LOS C conditions (Nebraska at Broadway) and three other locations are at LOS D conditions with significant increases to V/C ratio (Nebraska at Broadway, Valle Vista at Sonoma and Redwood at Broadway). Although these four locations had significant change in V/C ratio, the intersection level of service remains at acceptable conditions for all four intersections indicating that the traffic flows would still be satisfactory without mitigation.

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Table 3.16-9 Long Term Year 2035 Scenario B LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	23.5	0.53	C	23.7	0.54	C	33.0	0.72	0.19	C	24.7	0.59	0.05
2 Nebraska Street and Sonoma Boulevard	S	D	C	32.8	0.37	D	43.3	0.61	D	39.0	0.57	0.20	D	45.9	0.65	0.04
3 Couch Street and Sonoma Boulevard	S	D	C	33.0	0.44	D	40.8	0.65	D	35.7	0.51	0.07	D	44.3	0.67	0.02
4 Valle Vista Street and Sonoma Boulevard	S	D	C	28.8	0.46	D	37.7	0.68	C	30.2	0.49	0.03	D	38.0	0.68	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	31.2	0.51	D	40.3	0.81	C	31.1	0.51	0.00	D	40.3	0.81	0.00
6 Redwood Street and Couch Street	S	D	B	15.9	0.32	B	17.6	0.49	B	15.9	0.32	0.00	B	17.6	0.49	0.00
7 Redwood Street and Broadway Street	S	D	C	25.9	0.66	D	36.9	0.81	D	37.0	0.77	0.11	D	37.6	0.83	0.02
8 Valle Vista Avenue and Couch Street	S	D	A	7.9	0.17	A	9.3	0.26	A	9.8	0.25	0.08	A	9.6	0.28	0.02
9 Valle Vista Avenue and Napa Street	ST	D	A	0.9	N/A	A	1.0	N/A	A	1.1	N/A	N/A	A	1.0	N/A	N/A
	NB		B	10.8	N/A	B	12.0	N/A	D	30.0	N/A	N/A	B	11.6	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	16.2	0.35	B	18.4	0.48	D	35.5	0.74	0.33	B	18.5	0.53	0.03
11 Oregon Street and Broadway Street	ST	D	A	0.4	N/A	A	0.1	N/A	A	0.6	N/A	N/A	A	0.2	N/A	N/A
	EB		B	11.4	N/A	B	17.4	N/A	C	17.8	N/A	N/A	B	19.7	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

3. Environmental Analysis

Scenario C

Intersection LOS for 2035 conditions under Scenario C assumptions are presented in Table 3.16-10. The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.53 to 0.72, an increase of 0.19.
2. Nebraska at Sonoma V/C increased 0.37 to 0.57, an increase of 0.20.
3. Valle Vista at Sonoma V/C increased from 0.44 to 0.51, an increase of 0.07.
7. Redwood at Broadway V/C increased from 0.66 to 0.77, an increase of 0.11.

One location is at LOS C conditions (Nebraska at Broadway) and three other locations are at LOS D conditions with significant increases to V/C ratio (Nebraska at Sonoma, Valle Vista at Sonoma and Redwood at Broadway). Although these four locations had significant change in V/C ratio, the intersection level of service remains at acceptable conditions for all four intersections indicating that the traffic flows would still be satisfactory without mitigation.

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Table 3.16-10 Long Term Year 2035 Scenario C LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	ΔV/C	LOS	Delay	V/C ^a	ΔV/C
1 Nebraska Street and Broadway Street	S	D	C	23.5	0.53	C	23.7	0.54	C	33.0	0.72	0.19	C	24.7	0.59	0.05
2 Nebraska Street and Sonoma Boulevard	S	D	C	32.8	0.37	D	43.3	0.61	D	39.0	0.57	0.20	D	45.9	0.65	0.04
3 Couch Street and Sonoma Boulevard	S	D	C	33.0	0.44	D	40.8	0.65	D	35.7	0.51	0.07	D	44.3	0.67	0.02
4 Valle Vista Street and Sonoma Boulevard	S	D	C	28.8	0.46	D	37.7	0.68	C	30.2	0.49	0.03	D	38.0	0.68	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	31.2	0.51	D	40.3	0.81	C	31.1	0.51	0.00	D	40.3	0.81	0.00
6 Redwood Street and Couch Street	S	D	B	15.9	0.32	B	17.6	0.49	B	15.9	0.32	0.00	B	17.6	0.49	0.00
7 Redwood Street and Broadway Street	S	D	C	25.9	0.66	D	36.9	0.81	D	37.0	0.77	0.11	D	37.6	0.83	0.02
8 Valle Vista Avenue and Couch Street	S	D	A	7.9	0.17	A	9.3	0.26	A	9.8	0.25	0.08	A	9.6	0.28	0.02
9 Valle Vista Avenue and Napa Street	ST	D	A	0.9	N/A	A	1.0	N/A	A	1.0	N/A	N/A	A	1.0	N/A	N/A
	NB		B	10.8	N/A	B	12.0	N/A	C	21.0	N/A	N/A	B	11.2	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	16.2	0.35	B	18.4	0.48	C	25.2	0.68	0.33	B	18.3	0.51	0.03
11 Oregon Street and Broadway Street	ST	D	A	0.4	N/A	A	0.1	N/A	A	0.3	N/A	N/A	A	0.2	N/A	N/A
	EB		B	11.4	N/A	B	17.4	N/A	C	19.0	N/A	N/A	B	19.7	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop

a. Volume-to-Capacity

Source: Prism Engineering, 2016.

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Scenario D

Intersection LOS for 2035 conditions under Scenario D assumptions are presented in Table 3.16-11. The Table shows that the project would result in a potentially significant impact at four intersections:

1. Nebraska and Broadway V/C increased from 0.53 to 0.62, an increase of 0.09.
2. Nebraska at Sonoma V/C increased 0.37 to 0.46, an increase of 0.09.
7. Redwood at Broadway V/C increased from 0.66 to 0.72, an increase of 0.06

All locations are at LOS C conditions with significant increases to V/C ratio. Although these three locations had significant change in V/C ratio, the intersection level of service remains at acceptable conditions for all intersections indicating that the traffic flows would still be satisfactory without mitigation. Impacts would be less than significant.

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Table 3.16-11 Long Term Year 2035 Scenario D LOS Summary

Intersection Location	Control	Target LOS	NEAR TERM YEAR 2018						NEAR TERM YEAR 2018 plus Project ALT A							
			AM Peak Hour			PM Peak Hour			AM Peak Hour				PM Peak Hour			
			LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	LOS	Delay	V/C ^a	Δ V/C	LOS	Delay	V/C ^a	Δ V/C
1 Nebraska Street and Broadway Street	S	D	C	23.5	0.53	C	23.7	0.54	C	26.6	0.62	0.09	C	24.2	0.57	0.03
2 Nebraska Street and Sonoma Boulevard	S	D	C	32.8	0.37	D	43.3	0.61	C	34.7	0.46	0.09	D	44.5	0.63	0.02
3 Couch Street and Sonoma Boulevard	S	D	C	33.0	0.44	D	40.8	0.65	C	34.0	0.48	0.04	D	42.3	0.66	0.01
4 Valle Vista Street and Sonoma Boulevard	S	D	C	28.8	0.46	D	37.7	0.68	C	29.3	0.47	0.01	D	37.8	0.68	0.00
5 Redwood Street and Sonoma Boulevard	S	D	C	31.2	0.51	D	40.3	0.81	C	31.2	0.51	0.00	D	40.3	0.81	0.00
6 Redwood Street and Couch Street	S	D	B	15.9	0.32	B	17.6	0.49	B	15.9	0.32	0.00	B	17.6	0.49	0.00
7 Redwood Street and Broadway Street	S	D	C	25.9	0.66	D	36.9	0.81	C	28.7	0.72	0.06	D	37.2	0.82	0.01
8 Valle Vista Avenue and Couch Street	S	D	A	7.9	0.17	A	9.3	0.26	A	8.5	0.20	0.03	A	9.4	0.27	0.01
9 Valle Vista Avenue and Napa Street	ST	D	A	0.9	N/A	A	1.0	N/A	A	1.0	N/A	N/A	A	1.0	N/A	N/A
	NB		B	10.8	N/A	B	12.0	N/A	B	12.4	N/A	N/A	B	10.8	N/A	N/A
10 Valle Vista Avenue and Broadway Street	S	D	B	16.2	0.35	B	18.4	0.48	B	16.3	0.40	0.05	B	18.3	0.50	0.02
11 Oregon Street and Broadway Street	ST	D	A	0.4	N/A	A	0.1	N/A	A	0.5	N/A	N/A	A	0.1	N/A	N/A
	EB		B	11.4	N/A	B	17.4	N/A	B	13.9	N/A	N/A	B	18.4	N/A	N/A

Note: Control: S=Signal, ST=Stop Sign Side Street, NB=NB approach Stop
a. Volume-to-Capacity
Source: Prism Engineering, 2016.

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In summary, although the locations identified above had significant change in V/C ratio, the intersection level of service remains at acceptable conditions (less than the LOS D target threshold LOS in the City of Vallejo) for all intersections indicating that the traffic flows would still be satisfactory without mitigation. However, per City's guidelines due to the increase in V/C due to project-related traffic, the project would result in a significant impact.

A total of four (4) intersections met at least one of the City's criteria for mitigation under the Scenario D Project condition, which is the preferred project alternative. These intersections included the following:

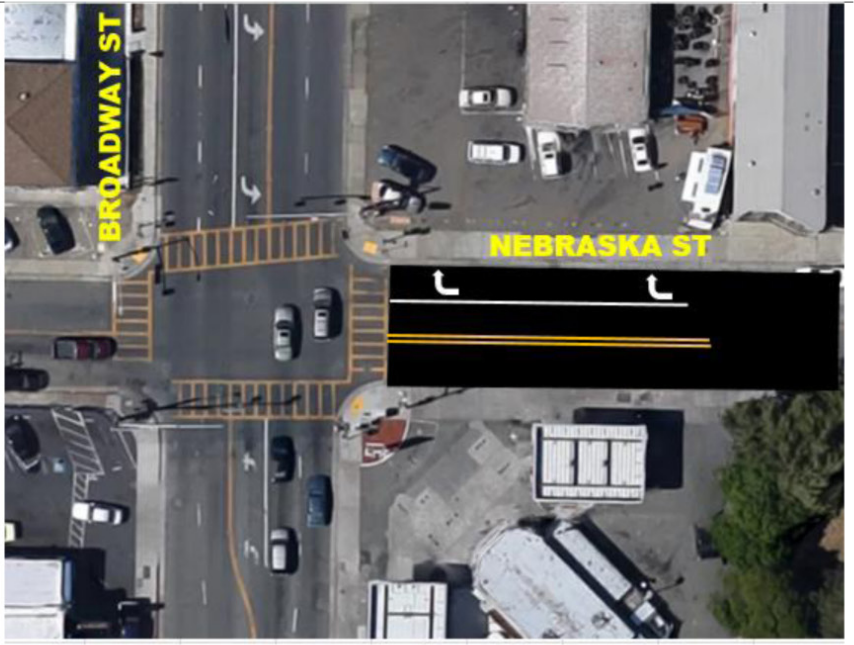
- 1: Nebraska Street at Broadway Street, change in LOS C V/C ratio = 0.09 for AM peak hour
- 2: Nebraska Street at Sonoma Boulevard, change in LOS C V/C ratio = 0.09 for AM peak hour
- 7: Redwood Street at Broadway Street, change in LOS C V/C ratio = 0.06 for AM peak hour

The following describes the mitigation measures required for each impacted intersection:

Mitigation Measure TRANS-1: The project applicant shall construct or provide funding to implement the following off-site improvements prior to opening and operations of the project:

- Intersection of **Nebraska Street at Broadway Street:** Add a westbound right turn pocket and restripe centerline to accommodate shift.
- Intersection of **Nebraska Street at Sonoma Boulevard:** Add a westbound right turn pocket, restripe centerline to accommodate shift, and change signal timing from split phase for the east-west approaches to a permissive phasing.
- Intersection of **Redwood Street at Broadway Street:** Install an additional westbound left turn pocket. Move median 12 feet south from centerline to accommodate the additional westbound approach lane, resulting in room for only one eastbound lane. The eastbound approach would need to be configured with only one through lane to correspond with this change. Advance warning signage with MUTCD "through traffic merge left" for EB approach. Also overhead regulatory signage for the eastbound approach should be used to guide traffic and prevent vehicles from right turn lane advancing forward.

Figures 9 through 11 following show the mitigation measures described above.



Source: Prism Engineering, 2016.

Figure 9
Mitigation for Nebraska Street at Broadway Street



Source: Prism Engineering, 2016.

Figure 10
Mitigation for Nebraska Street at Sonoma Boulevard



Source: Prism Engineering, 2016.

Figure 11
Existing Lanes at Redwood Street and Broadway/Alameda Street

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LOS After Mitigation

At the intersection of Nebraska Street at Broadway Street the intersection would change from LOS D with 50.6 seconds of average delay to a satisfactory LOS C condition with 24.9 seconds of average delay in the AM peak hour.

At the intersection of Nebraska Street at Sonoma Boulevard the intersection would change from LOS D with 42.2 seconds of average delay to a satisfactory LOS B condition with 17.5 seconds of average delay in the AM peak hour.

At the intersection of Redwood Street at Broadway Street the intersection would change from LOS C with 28.7 seconds of average delay to a satisfactory LOS B condition with 16.2 seconds of average delay in the AM peak hour.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Less Than Significant Impact. The Solano County Congestion Management Program (CMP) of the Solano Transportation Authority (STA) requires Cities within Solano County, including the City of Vallejo, to establish performance measures to evaluate current and future multimodal system performance for the movement of goods and people. Purposes of the CMP include identifying existing and future transportation facilities that would operate below an acceptable level of service and provide mitigation where future growth would degrade that service level on CMP-designated local and regional roadways and transit systems. The CMP designates a roadway system for which all routes are required to maintain a LOS standard of E, except for those areas designated as “infill opportunity zones.”⁵¹

In the City of Vallejo, I-80, SR-29, SR-37, Tennessee Street (between Mare Island Way and I-80), Curtola Parkway (from Lemon Street to Maine Street), Mare Island Way (from Maine Street to Tennessee Street), Tennessee Street at Sonoma Boulevard, Curtola Parkway at Sonoma Boulevard, and Mare Island Way at Tennessee Street are designated CMP network facilities. The proposed project would not result in direct physical impacts to these facilities. Consequently, impacts would be *less than significant*.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

No Impact. The project is a single story structure outside any airport influence area and would not modify air traffic patterns, there would be no impact.

⁵¹ Solano Transportation Authority, 2013 *Congestion Management Program*, page 14.

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d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact With Mitigation Incorporated. An analysis was performed to determine if any significant impacts to queues took place for any scenario, or if through lanes were blocked in any way. This is based on an examination of the 95th percentile queue for all study intersections. The 95th percentile queue length represents a condition where 95 percent of the time the queue reported would take place, and this queue length is compared to the storage length to see if say, a left turn pocket length is exceeded. If the queues exceed turn pocket length, this condition can create potentially hazardous situations by blocking or disrupting through traffic in adjacent travel lanes in the same direction of travel. A queuing impact is considered to occur when the queue in a left turn pocket extends 25 feet or more beyond the turn pocket (about one vehicle in length). Where the vehicle queue already exceeds that turn pocket length under pre-project conditions, a project impact would occur if project traffic lengthens the queue by 25 feet or more. Table 4.1 of the TIA summarizes the AM peak hour queues at the study intersections for the Year 2018, with and without the project for the preferred scenario D. Table 4.2 of the TIA summarizes the Year 2035 scenarios. At certain locations, queues are projected to exceed the available storage at a few intersections in both the Year 2018 and Year 2035 scenarios, even without the project. When the project traffic is added in the queue length would further increase at three locations:

- **Broadway Street at Nebraska Street:** The Year 2018 without project scenario at the intersection of Broadway Street at Nebraska Street for the southbound left turn pocket (SBL) is expected to have a queue 115 feet in length, exceeding the existing striped pocket of only 80 feet in length. The Alternative D project traffic would increase the queue to 174 feet. Broadway Street is wide enough to allow for the lengthening of this left turn pocket to be longer through a restriping of lane lines. Since the ultimate Year 2035 volume would expect to see a queue length of 206 feet at this same left turn pocket (see Table 4.2), it is recommended to install a 210 foot left turn pocket at this location, which can be accomplished through restriping of the lanes. This would mean extending the left turn pocket nearly back to Texas Street since the curb-to-curb width of Broadway Street at that intersections is the same as it is at Nebraska Street (60 feet). This means that there is room to accomplish this striping change without widening of the street. Centerline striping would need to be adjusted on Broadway Street just north of Texas Street to accommodate the transition of through lanes to their new location south of Texas Street (shifted 12 feet).
- **Couch Street at Sonoma Boulevard:** The Year 2018 without project scenario at the intersection of Couch Street at Sonoma Boulevard for the westbound left turn pocket (WBL) is expected to have a queue 109 feet in length, exceeding the existing striped pocket of only 75 feet in length. In the Year 2035 this queue without the project would increase to 130 feet. When the Alternative D project traffic is added to the Year 2018 a slight increase from 109 to 112 is projected, an insignificant amount. In the Year 2035 scenario, the Alternative D project traffic does not further increase the queue of 130, but remains at 130. This location shows a queue problem at the WBL movement which has a 75-foot pocket, and an additional left turn storage lane extending north from Mississippi Street. Because of this, the WBL pocket being broken into two parts, it effectively has over 150 in length/storage. No mitigations are recommended here since the Year 2035 queue length (130 feet)

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can be handled by the two existing left turn storage areas (one of which serves left turns into Mississippi Street).

- **Redwood Street at Broadway Street:** This location will have an overage on the WBL movement, a movement that does serve the project traffic to some degree. It also will have a queue overage even without the project by about two vehicles in length in the Year 2035. When the Alternative D project traffic is added in, there will be 3 more cars that will not fit in the WBL left turn pocket (a total overage of 5 cars). The left turn bay needs additional storage to be able to accommodate Year 2035 traffic projections. There is a traffic operations problem that would conflict with making any changes to this left turn pocket because of the close proximity of the intersection of Redwood and Alameda Street which is 150 feet away from the stop bar at the rail road tracks along Broadway Street. These constraints require a more creative solution than extending the current length of the WBL turn pocket, which cannot be lengthened any further. An additional lane is needed.
- **Valle Vista Avenue at Broadway Street:** Queue Length overruns for the eastbound left turn lane in AM peak hour

Mitigation Measure TRANS-2: The project applicant shall construct or provide funding to implement the following off-site improvements prior to opening and operations of the project:

- Intersection of **Valley Vista Avenue at Broadway Street:** Add the eastbound right exclusive lane by restriping Valle Vista Ave in the eastbound direction to allow for two lanes, a thru/left and a right turn pocket lane.
- Intersection of **Broadway Street at Nebraska Street:** Install a 210-foot southbound left turn pocket at this location between Texas and Nebraska Streets. This installation can be accomplished through restriping of the lanes since there is room for a five lane cross-section here. Centerline striping will also need to be adjusted on Broadway Street just north of Texas Street to accommodate the transition of through lanes to their new location south of Texas Street.
- Intersection of **Redwood Street at Broadway Street:** Restripe the eastbound left turn pocket to a 110-foot distance to accommodate future volumes.
- Intersection of Redwood Street at Broadway Street:
 - Modify the eastbound approach of Redwood Street at Broadway to change two through lanes to one through lane and one right turn only lane.
 - Move the raised median on Redwood Street east of Broadway Street to the south 12 feet to make room for a dual left turn pocket additional lane
 - Extend left turn pocket back about 140 feet to the Alameda Street intersection.
 - Accommodate eastbound left turn 50-foot pocket into Alameda Street on reverse side of this WBL dual left turn pocket.
 - Redwood Street just east of Broadway Street is a single travel lane for eastbound traffic until Alameda Street, then transitions to two through eastbound lanes again.
 - Restripe Redwood Street just west of Broadway Street, for the eastbound approach, needs to be restriped to only have one through eastbound lane. Right-most lane is converted into a

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right turn pocket, and inside through lane is already directed at the single receiving lane because of the slight change in direction (skew) for Redwood Street after Broadway Street.

e) Result in inadequate emergency access?

No Impact. The proposed project would not include any hazardous design features, such as sharp curves or intersections with inadequate signalization, nor would it increase incompatible uses on local roads resulting in hazards. No emergency access routes would be affected, nor does the project create obstructions to such routes. Accordingly, *no impact* would occur and no mitigation measures are required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The project was evaluated to determine if it would likely conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) or generate pedestrian, bicycle, or transit travel demand that would not be accommodated by transit, bicycle, or pedestrian facilities and plans.

Students or parents of students have the option of driving, taking transit, walking or bicycling to and from the proposed charter school location. For those taking transit, they can reach the site via SolTrans Routes 1 which passes along Valle Vista Avenue directly alongside the northern boundary of the school site (there is a bus stop there). Valle Vista Avenue has an existing sidewalk along Valle Vista Avenue along the project site frontage from the bus stop, and connecting westerly to Napa Street. Valle Vista Avenue in the vicinity of the project site is designated as a Class III Bike Route, and as such a cyclist must share the lane with an automobile as there are no striped bike lanes present. Sidewalks for pedestrians exist on both sides of nearly all study area streets, including Valle Vista. The project does not conflict with these systems, there would be no impact.

3.18 UTILITIES AND SERVICE SYSTEMS

Existing Conditions

Existing conditions and the basis for analysis of impacts related to water supply, wastewater, solid waste, storm water infrastructure and energy conservation are found in the following documents:

- Coastland, 2016. *Infrastructure Analysis Report*, dated March 7, 2016. This infrastructure report was prepared in support of the evaluation of public utility (water, wastewater and storm water) improvements needed to support the Preferred Scenario 2040 for buildout of the General Plan update currently under development for the City of Vallejo.
- CSW/Stuber-Stroeh Engineering Group, Inc., 2016. *Preliminary Stormwater Control Plan for Caliber Charter School – Vallejo Campus*, dated April 18, 2016.
- Caliber Charter School, 2016. *Site Planning Permit Application*, dated April 18, 2016. This application package includes a Utilities Plan showing existing and proposed utilities lines and connections, as well

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as a Grading and Drainage Plan showing proposed storm drainage collection and treatment infrastructure.

- Ramboll Environ, 2016. *Phase I Environmental Site Assessment, 211 Valle Vista Avenue and 500 Oregon Street, Vallejo, California*, dated March 25, 2016.
- Michael Brandeman & Associates, 2012. *Water Supply Assessment, Solano360 Specific Plan*, dated September 2012. This water supply assessment (WSA) was prepared, in accordance with California Senate Bill 610, for the Solano360 Specific Plan for the redevelopment of the Solano County Fairgrounds located in Vallejo, California.
- City of Vallejo, 2006. *2005 Urban Water Management Plan*, dated February 2006.
- City of Vallejo, 2014. *Water Management Plan*, dated September 19, 2014.
- Appendix A, *Air Quality and Greenhouse Gas Background and Modelling Data*, Initial Study, Caliber Charter School, City of Vallejo.

Utility providers are summarized below:

Water

The City of Vallejo is the water supplier for the proposed project. The City brings water from five different sources to three treatment plants in order to serve customers in two counties, an active military base and a former military base. The three water treatment plants (WTPs) consist of Fleming Hill WTP, Green Valley WTP and Travis WTP. Vallejo's five source water entitlements are briefly summarized below.

Solano Project

Solano Project Water is delivered from Lake Berryessa via the Putah South Canal to either Cordelia where it is pumped into Vallejo or the Travis WTP, or via Solano Irrigation District's distribution system to an intertie in Green Valley. The majority of Vallejo's Solano Project water entitlement is delivered to Fleming Hill WTP from United States Bureau of Reclamation (USBR) terminal reservoir via the Cordelia reservoir.

State Water Project

State Water Project water is delivered from Lake Oroville through the Sacramento River to the North Bay Aqueduct Pumping facility at Barker Slough where it is pumped to the Department of Water Resources (DWR) Forebay at Cordelia.

Sacramento Delta Entitlement

Delivery of this entitlement (also referred to as "Vallejo Permit Water") is through the intake of the North Bay Aqueduct (NBA) facilities at Barker Slough. NBA water is also treated at the Travis WTP.

Lakes Frey and Madigan

Lakes Frey and Madigan are located in northern Solano County. The City owns both lakes and the surrounding watershed land. Water flows from Lake Madigan into Lake Frey and then into the Diversion

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Dam, from which the water continues to flow under gravity through a pipe into the Green Valley WTP located at the end of Green Valley Road.

Lake Curry

Lake Curry is currently providing instream flow to Suisun Creek and is anticipated to be used in this manner until such time that plans are in place for a conveyance system to deliver water from the lake.

Table 3.17-1 summarizes the capacity and safe yield⁵² in acre-feet per year (afy) of each of five surface water entitlements of the City. The table also lists other water agencies involved in administering and/or conveying the water to Vallejo.

Table 3.17-1 Surface Water Entitlements/Sources – City of Vallejo

Water Entitlement/Source	Water Entitlements (afy)	Safe Yield (afy)	Other Involved Agencies	Contract Restrictions)
State Water Project/North Bay Aqueduct	5,600	5,600	Solano County Water Agency (SCWA)	Subject to Drought Restrictions
Solano Project Water	14,600	14,600	USBR; SCWA	Subject to Drought Restrictions
Vallejo Permit Water (Sacramento Delta)/ North Bay Aqueduct ^a	22,800	22,800	SCWA	Subject to Drought Restrictions
Lakes Frey and Madigan	400	400	-	-
Lake Curry ^b	3,750	3,750	-	-
TOTAL	47,150	47,150	-	-

a. The Vallejo Permit Water full entitlement supply of 22,800 afy is not currently available to Vallejo pending an amended contractual agreement with DWR to allow the full amount (22,800 afy) through the North Bay Aqueduct; the current contract with DWR limits Vallejo to receiving 17,200 afy.

b. Lake Curry is currently being used only for instream flow until such time as a new conveyance system is in place.

Sources: City of Vallejo Water Management Plan, September 19, 2014; personal communication, Pamela Sahin, Water Conservation Coordinator, City of Vallejo, April 7, 2016.

The City currently operates two separate distribution systems: the City of Vallejo service area and the Vallejo Lakes service area. There is also a transmission system to Travis Air Force Base (AFB).

The existing distribution system serving the City originates at the clearwell reservoir of the Fleming Hill WTP. It consists of facilities for pumping, pressure regulation, storage, and transmission. The City's raw water is pumped from Cordelia through a single 27-inch pipeline that parallels Interstate 80 (I-80). The Jameson Canyon pump station and pipeline project provides a secondary raw water supply through a 30-inch pipeline. The pump station is built at the existing Cordelia Reservoir Complex, and the pipeline is aligned along Highway 12.

⁵² The safe yield is the rate of surface water diversion from a basin for consumptive use over an indefinite period of time that can be maintained without producing negative effects.

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The City reports that total water system outflows (i.e., all water delivered to customers, plus unaccounted for water) typically average about 20,000 afy. The City's total surface water entitlement, from all sources, exceeds 43,000 afy.⁵³

There is no active water service at the project site, which is currently unoccupied. Vallejo City Unified School District (VCUSD) previously developed the site for use as a district administration and maintenance facility. City of Vallejo Water Division previously provided water to the site when it was used by VCUSD, and will provide water service in the future as part of the proposed project. The project site will obtain its water from Fleming Hill Water Treatment Plant, which ultimately obtains its water from Lake Madigan and Frey and/or Putah South Canal (Solano Project Water).

Wastewater and Storm Water

The Vallejo Sanitation & Flood Control District (VSFCD) is an independent special district that was formed in 1952 to collect and treat wastewater and provide storm water and flood control services to the Vallejo community. In order to meet the demands on the wastewater treatment plant and storm drain system as the City grows, the VSFCD imposes sewer and storm drain user fees. The District Code includes General Provisions under Title 1, provisions for the Sanitary Sewer System under Title 4, and provisions for Sewer Laterals under Title 5. Sanitary Sewer Connection Fees are found under Chapter 4.04; Sanitary Sewer User Fees are in Chapter 4.08; and Non-Domestic Sewer Use Regulations are in Chapter 4.12.

The VSFCD provides uninterrupted wastewater collection, treatment, and disposal, and stormwater transmission and pollution control services, generally on a 24-hour basis, to all customer connections within its boundary, including the City of Vallejo, unincorporated areas of Solano County, and Mare Island. The District owns 436 miles of sewer main and 226 miles of stormwater main and channel, operates 36 wastewater pump stations together with nine stormwater pump stations, operates a secondary treatment wastewater treatment plant and manages biosolids disposal through District-owned land on Tubbs Island in Sonoma County.

The VSFCD has developed a Sewer System Management Plan (SSMP) with the overall goal to reduce blockages and sewer system overflow (SSO) occurrences in the collection system, as well as to properly manage, operate, and maintain all parts of the sanitary sewer collection system. The SSMP was prepared in compliance with SWRCB Order 2006-0003: Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR), as revised by Order No. WQ 2008-0002.EXEC on February 20, 2008. The WDR prohibits sanitary SSOs, requires reporting of SSOs using the statewide electronic reporting system, and requires the preparation of an SSMP.

In addition to a collection system, VSFCD owns and operates a wastewater treatment facility. The treatment plant is located at 450 Ryder Street, Vallejo and VSFCD is currently discharging under Order No. R2-2012-0017 and NPDES Permit No. CA0037699. This discharge is also currently regulated under Order No. R2-

⁵³ City of Vallejo, 2016. Water Division/Water Conservation/Monticello Pipeline Project web page, <http://www.ci.vallejo.ca.us/cms/One.aspx?portalId=13506&pageId=65888>, accessed July 7, 2016.

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2007-0077 (NPDES Permit CA0038849), as amended, which supersedes all requirements on mercury and polychlorinated biphenyls (PCBs) from wastewater discharges in the region.

As noted above, a SSMP is required by the San Francisco Bay RWQCB. Requirements are outlined in the Sewer System Management Plan Development Guide dated July 2005 by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA).

NPDES Discharge Permit (CA0037699)

The NPDES permit for the treatment facility establishes a permitted flow of 15.5 mgd.⁵⁴ Treatment facility design flows are: 15.5 mgd average Dry Weather Flow (ADWF); 35 mgd Maximum Wet Weather Secondary Treatment Capacity; and 60 mgd Maximum Wet Weather Capacity. The permit also states discharge of “blended wastewater,” which is biologically treated wastewater blended with wastewater that has been diverted around biological treatment units or advanced treatment units, is approved under the bypass conditions stated in 40 CFR 122.41(m)(4) when (1) the VSFCDD’s peak wet weather influent flow volumes exceed the capacity of the secondary treatment units of 30 mgd.

The NPDES permit reported that the average dry weather flow in 2010 was 9.3 mgd.⁵⁵ The maximum daily wet weather flow between October 2006 and December 2010 was 43.3 mgd. The current average dry weather flow is less than 10 mgd.⁵⁶

Collection System

VSFCDD’s wastewater collection system includes about 436 miles of sanitary sewer lines, and 36 pump stations. In 2005 and 2006, VSFCDD completed significant capital improvement projects to the collection system to eliminate sanitary sewer overflows from two constructed wet weather overflow structures, the Sears Point Pump Station Overflow and the Ryder Street Overflow. The improvements included a 3 million gallon (mg) underground storage tank constructed to eliminate sanitary sewer overflows from the Sears Pump Station, and an 8.6 mg storage facility adjacent to the Plant to eliminate sanitary sewer overflows from the Ryder Street Pump Station. In addition to eliminating sanitary sewer overflows from these two locations, VSFCDD intends to operate the pump station storage basins, when possible, in a manner similar to equalization basins to reduce blending at the Plant.

Solid Waste

Recology Vallejo⁵⁷ provides residential and commercial garbage, recycling and yard waste collection for the City of Vallejo residents. Subscription to garbage services is mandatory. Recology also offers recycling service for multi-family units, debris box service, and garbage and recycling collection for commercial businesses. In 2014, Vallejo’s per capita solid waste disposal rate for residents was 3.7 pounds per day (ppd);⁵⁸ the CalRecycle

⁵⁴ San Francisco Bay Regional Water Quality Control Board, 2012, Order No. R2-2012-0017 (NPDES Permit No CA0037699).

⁵⁵ San Francisco Bay Regional Water Quality Control Board, 2012, Order No. R2-2012-0017 (NPDES Permit No CA0037699).

⁵⁶ Coastland, 2016, Infrastructure Analysis Report, City of Vallejo General Plan Update, dated March 7, 2016.

⁵⁷ Recology Vallejo, <http://www.recologyvallejo.com/index.htm>, accessed on April 14, 2016.

⁵⁸ CalRecycle Jurisdiction Diversion/Disposal Rate Summary, <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>, accessed on April 14, 2016.

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Target rate is 5.5 ppd per person. The City's per capita solid waste disposal rate for employees in 2014 was 14.5 ppd per employee; the CalRecycle target rate was 24.1 ppd.⁵⁹

CalRecycle reports that in 2014 a total of 80,420 tons of solid waste from Vallejo was disposed at 18 different landfills.⁶⁰ Nearly 99 percent (98.7 percent, 79,396 tons) of Vallejo's solid waste in 2014 went to two of those facilities: Potrero Hills Landfill (75,564 tons) and Recology Hay Landfill (3,832 tons).

Energy

There is no active electricity or natural gas service at the project site, which is currently unoccupied. The VCUSD previously developed the site for use as a district administration and maintenance facility. Pacific Gas & Electric (PG&E) previously provided electricity and natural gas to the site. Future gas and electricity would be supplied to the project site by PG&E.

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The VSFCD's wastewater collection system directs wastewater to the VSFCD-owned wastewater treatment plant located at 450 Ryder Street, Vallejo. The San Francisco RWQCB established wastewater treatment requirements for the treatment plant in an NPDES Permit (Order No. R2-2012-0017; NPDES Permit No. CA0037699), adopted February 8, 2012. The NPDES Order prescribes treatment requirements and discharge limits, and sets out a framework for compliance and enforcement applicable to the VSFCD wastewater treatment plant (WWTP) and its wastewater conveyance system. In addition, the Permit sets out a framework for compliance and enforcement applicable to operation of the WWTP and its effluent, as well as those contributing influent to the WWTP. This NPDES Order currently allows dry weather discharges of treated effluent up to 15.5 mgd, and wet weather discharges of up to 60 mgd.

The proposed project would have a significant environmental impact if it would result in a violation of the sanitary wastewater treatment requirements established in the NPDES Permit issued by the RWQCB.

The Coastland Infrastructure Analysis Report used wastewater generation rates of 100 gpd per resident and 25 gpd per employee.⁶¹ Assuming the 900 students and 70 employees projected for the proposed project at full operation are considered "employees" for purposes of analysis, the estimated net increased wastewater generation rate from the proposed project at full operation will be 24,250 gallons per day, or 0.024 mgd. As shown in Appendix A, *Air Quality and Greenhouse Gas Background and Modelling Data*, the CalEEMod GHG modelling input default assumption is that water use at full operation of the project is 16,246 gpd. Assuming

⁵⁹ CalRecycle Disposal Rate Trends, <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d554%26ReportName%3dDPGraphPopEmpNumbers%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse>, accessed on April 14, 2016.

⁶⁰ CalRecycle Jurisdiction Disposal by Facility Report, <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=ReportYear%3d2014%26ReportName%3dReportEDRSJurisDisposalByFacility%26OriginJurisdictionIDs%3d554>, accessed April 14, 2016.

⁶¹ Coastland, 2016, Infrastructure Analysis Report, City of Vallejo General Plan Update, dated March 7, 2016.

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90 percent of that water use becomes wastewater yields a wastewater generation rate of 14,622 gpd, or about 0.015 mgd. This increase in wastewater generation would be well within the currently available excess dry weather design flow capacity of greater than 5.5 mgd (15.5 mgd design/permitted flow minus less than 10 mgd⁶² current average flow equals greater than 5.5 mgd).

Pursuant to the RWQCB Order, the WWTP routinely (daily, weekly, monthly, etc.) monitors its effluent for numerous chemical and biological parameters in multiple process sample stream locations. Test results are submitted periodically to the RWQCB to verify compliance with effluent discharge limits. This monitoring allows for a very good assessment of the performance of WWTP processes. The VSFCDD facility also implements an approved pretreatment program specified in the NPDES permit, which includes approved local limits as required by the NPDES permit. The permit requires the Discharger (VSFCDD) to evaluate its local limits, such as those established for industrial users contributing to the WWTP, to ensure compliance with updated effluent limits. These local limits are approved as part of the pretreatment program required by the NPDES Permit. The VSFCDD WWTP is required to monitor the permitted discharges into the collection system in order to evaluate compliance with the RWQCB's permit conditions. In addition, the VSFCDD's pollution prevention and minimization programs, as reported annually to the RWQCB, further minimize pollutants of concern that enter the system

The proposed project is a school and does not involve industrial uses likely to substantially increase pollutant loading levels in the sanitary sewer system. Therefore, the proposed project is not expected to exceed treatment standards established by the RWQCB. Impacts to sanitary wastewater quality would be *less than significant* and no mitigation measures would be required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project would result in a significant impact if it would result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which would have a significant effect on the environment. As discussed above in discussion 3.17a and 3.17e, below, future demands from the proposed project would not exceed the design or permitted capacity of the VSFCDD's WWTP that serves the project site. Future water treatment demand is assessed in discussion 3.17d below and includes consideration of development in the City through the 2040 buildout horizon of the pending General Plan update. Therefore, development of the proposed project would not include any improvements not already considered and the impact of the proposed project on the WWTP or the Fleming Hill Water Treatment Plant would be *less than significant* and no mitigation measures would be required.

⁶² Coastland, 2016, Infrastructure Analysis Report, City of Vallejo General Plan Update, dated March 7, 2016.

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c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. In accordance with the discussion under discussion 3.9e above in Section 3.9, Hydrology and Water Quality, the proposed project would not require the expansion of existing storm drain facilities. The proposed project would involve the redevelopment of a previously developed site and a substantial decrease in impervious surface is expected (from 203,575 square feet pre-project condition, to 139,140 square feet post-project condition).⁶³ The project also will include biotreatment for runoff from building roof and site hardscape. The proposed project is expected to decrease peak discharge and runoff quantity compared to pre-development condition

Municipal stormwater discharges in the City of Vallejo are regulated under the San Francisco Bay RWQCB's recently revised Municipal Regional Permit (MRP), NPDES permit Order No. R2-2015-0049, adopted November 19, 2015. Provision C.3 of the MRP addresses post-construction stormwater requirements for new development and redevelopment projects that create and/or replace 10,000 square feet or more of impervious area or special land use categories (i.e., auto service facilities, gasoline stations, restaurants, and uncovered parking lots) that create and/or replace 5,000 square feet of impervious surfaces. Provision C.3 of the MRP also mandates that new development projects implement the following measures:

- Incorporate site design, source control, and stormwater treatment measures into the project design.
- Minimize the discharge of pollutants in stormwater runoff and non-stormwater discharge.
- Prevent increases in runoff flows as compared to pre-development conditions.

All new development that, like the proposed project, creates or replaces 10,000 square feet or more of impervious surface would be subject to Provision C.3 guidelines for stormwater control, as described above. In addition, the Preliminary Stormwater Control Plan⁶⁴ demonstrates the proposed project will comply with the City of Vallejo's Hydromodification Plan, by showing the proposed project will not increase the existing quantity of impervious area and that it will not facilitate the efficiency of drainage collection and conveyance. Through compliance with C.3 and the Hydromodification Plan, the proposed project would involve actions to minimize runoff from the project site as described in Section 3.9, Hydrology and Water Quality, above. Consequently, the proposed project would not require the expansion of existing stormwater facilities or the construction of new facilities, the construction of which could otherwise have significant impacts. Therefore, impacts would be *less than significant* and no mitigation measures would be required.

⁶³ CSW/Stuber-Stroeh Engineering Group, Inc., 2016. *Preliminary Stormwater Control Plan for Caliber Charter School – Vallejo Campus*, dated April 18, 2016.

⁶⁴ CSW/Stuber-Stroeh Engineering Group, Inc., 2016. *Preliminary Stormwater Control Plan for Caliber Charter School – Vallejo Campus*, dated April 18, 2016.

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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. The proposed project would have a significant impact if insufficient water supplies would be available to serve the proposed project from existing entitlements and resources, or if new or expanded entitlements would be needed.

The water demand criteria taken from the City's 2005 UWMP, which is the latest published UWMP, included a rate of 102 gpd per employee. The 2005 UWMP rates also were referenced in the 2016 Infrastructure Analysis Report. If it was assumed the employee water use rate applied to the 70 employees and the 900 students projected for the proposed project, calculated total increased water demand from the proposed project would be 98,940 gallons per day, or 0.10 mgd. However, this assumption would yield an estimate that is unrealistically high compared to the default water use assumed by the CalEEMod model. As shown in Appendix A, *Air Quality and Greenhouse Gas Background and Modelling Data*, the CalEEMod default assumption is that water use at full operation of the project is 16,246 gpd, or 0.016 mgd. With the completion of the Monticello Water Main Project, the existing available water pumping supply for the City of Vallejo's Water Division is approximately 32 mgd.⁶⁵ The current average demand is approximately 19.4 mgd, which results in 12.6 mgd available for future water demands. As described above, water demand increase for the proposed project is projected to be 0.016 mgd based on CalEEMod default assumptions.

Vallejo has cut back on water use in response to the recent drought and associated state and local conservation mandates. For example, Vallejo is required to conserve 16 percent compared to 2013 in accordance with the SWRCB's emergency regulations to achieve 25 percent water savings statewide. Pursuant to these regulations, Vallejo reports water use and conservation on a monthly basis to the SWRCB. Currently, water supplier conservation compliance data are available from June 2015 through May 2016. The cumulative amount saved from June 2015 through May 2016 (as compared to 2013) is 19.5 percent, which better the conservation standard set by the SWRCB by 3.5 percent.⁶⁶

The projected demand of the proposed project -- about 0.016 mgd -- is well below the 12.6 mgd future availability.

Accordingly, the proposed project's water demand at full operation would not have a significant impact on the available water supply and impacts to water supply under the proposed project would be *less than significant* and no mitigation measures would be required.

⁶⁵ Coastland, 2016, Infrastructure Analysis Report, City of Vallejo General Plan Update, dated March 7, 2016.

⁶⁶ State Water Resources Control Board, 2016, February Supplier Conservation Compliance Report, http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/2016apr/suppliercompliance_040416.pdf, accessed on July 8, 2016.

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- e) **Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less Than Significant Impact. The proposed project would have a significant impact if proposed project demand exceeds the wastewater service capacity of the VSFCD's WWTP or collection systems.

Wastewater generation is determined by estimating the flow per employee and student. For purposes of analysis, it is assumed that students generate flow at the same rate as employees. Assuming 90 percent of the CalEEMod water demand for the project at full operation becomes wastewater yields an estimated wastewater generation rate 14,621 gpd (or approximately 0.014 mgd).

RWQCB Order No. R2-2012-0017 (NPDES Permit No CA0037699), adopted February 8, 2012, prescribes treatment requirements and discharge flow capacity limits.

This NPDES Order currently specifies dry weather facility permitted capacity (and design flow) of up to 15.5 mgd, and wet weather design flow of up to 60 mgd. The current average dry weather flow is less than 10 mgd and the maximum daily wet weather flow between October 2006 and December 2010 was 43.3 mgd⁶⁷ average wet weather flow.

The estimated net increased wastewater generation rate from the proposed project at full operation will be 0.014 mgd, assuming 90 percent of the CalEEMod water use estimated for the project becomes wastewater. This increase in wastewater generation would be well within the currently available excess dry weather design flow capacity of greater than 5.5 mgd (15.5 mgd design/permitted flow minus less than 10 mgd current average flow equals greater than 5.5 mgd).

There is no active wastewater service at the Project site⁶⁸, which is currently unoccupied. The VCUSD previously developed the site for use as a school district administration and maintenance facility. VSFCD's WWTP and collection system previously provided wastewater to the site and will provide wastewater service to the proposed Project site in the future. The Project Site Planning Permit Application⁶⁹, dated April 18, 2016, includes a Utilities Plan showing existing and proposed sewer lines and connections. In order to meet the demands on the wastewater treatment plant and collection system as the City grows, the VSFCD imposes sewer user fees. The District Code includes General Provisions under Title 1, provisions for the Sanitary Sewer System under Title 4, and provisions for Sewer Laterals under Title 5. Sanitary Sewer Connection Fees are found under Chapter 4.04; Sanitary Sewer User Fees are in Chapter 4.08; and Non-Domestic Sewer Use Regulations are in Chapter 4.12. The Project permit application package indicates sanitary sewer lines and connections for the proposed project shall be per VSFCD standards.

⁶⁷ RWQCB Order No. R2-2012-0017 (NPDES Permit No CA0037699), adopted February 8, 2012

⁶⁸ Ramboll Environ, 2016. Phase I Environmental Site Assessment, 211 Valle Vista Avenue and 500 Oregon Street, Vallejo, California, dated March 25, 2016.

⁶⁹ Caliber Charter School, 2016. Site Planning Permit Application, dated April 18, 2016.

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As a result, impacts related to wastewater treatment and collection service capacity would be *less than significant* and no mitigation measures would be required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. The proposed project would have a significant impact if it would not be served by landfills with sufficient capacity to accommodate the proposed project's disposal needs.

In 2014, CalRecycle reported that, while the overall total of 80,564 tons of solid waste from Vallejo was disposed at 18 different landfills, the majority (98.8 percent or 75,564 tons) went to two landfills (Recology Hay Landfill and Potrero Hill Landfill).

Recology Hay Landfill

The Recology Hay Landfill is located in Vacaville, California. It has a permitted throughput capacity of 2,400 tons per day. Its remaining permitted capacity is 30, 433,000 cubic yards. It has an estimated "cease operation date" of January 1, 2077.⁷⁰

Potrero Hills Landfill

The Potrero Hills Landfill is located in Suisun city, California. It has a permitted throughput capacity of 4,330 tons per day. Its remaining permitted capacity is 13,872,000 cubic yards. It has an estimated "cease operation date" of February 14, 2048.⁷¹

The City's disposal rate per resident in 2014 was 3.7 ppd of solid waste per person, which was below the CalRecycle target of 5.5 ppd per resident. The disposal rate per business employee in the city in 2014 was 14.55 ppd, which was below the CalRecycle target rate of 24.1 ppd per employee. The City's disposal rates for both residents and employees have been below target rates since 2007.⁷²

The proposed project at full operation would have 70 employees and 900 students. For analysis purposes, solid waste generation for employees and students is assumed to be the default values used in the CalEEMod modeling presented in Appendix A. Accordingly, the total solid waste generated by the proposed project's students and employees is estimated to be 74.4 tons per year, or about 0.2 tons per day.

The total estimated solid waste generation rate for the proposed project of 0.2 tons per day is less than 0.005 percent of the daily capacity (i.e., 4,330 tons per day) of the Potrero Hills Landfill. The solid waste generated

⁷⁰ CalRecycle, "Recology Hay Landfill (48-AA-0002)" <http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0002/Detail/>, accessed on July 8, 2016.

⁷¹ CalRecycle, "Potrero Hills Landfill (48-AA-0075)" <http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0075/Detail/>, accessed on July 8, 2016.

⁷² The per capita disposal rate target is also known as "the 50 percent equivalent per capita disposal target." It is the amount of disposal Vallejo would have had during the 2003 to 2006 base period (designated by CalRecycle) if it had been exactly at a 50 percent diversion rate. It is calculated by CalRecycle using the average base period per capita generation for Vallejo (in pounds), then dividing this generation average in half to determine the 50 percent equivalent per capita disposal target. The target is an indicator for comparison with that jurisdiction's annual per capita per day disposal rate beginning with the 2007 program year.

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from buildout of the proposed project is also less than 0.008 percent of the permitted daily capacity of Recology Hay Landfill, which has the smaller daily capacity (i.e., 2,400 tons per day) of the two landfills. The daily solid waste generated by the proposed project (0.2 tons per day) represents less than 0.003 percent of the combined daily capacity of the two landfills shown.

Solid waste generated from full operation of the proposed project would not exceed the available landfill capacity. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs, resulting in a *less-than-significant* impact and no mitigation measures would be required

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. The proposed project would have a significant impact if it would be out of compliance with federal, State, and local statutes and regulations related to solid waste.

As discussed above, the City's per capita disposal rates are below the target rates established by CalRecycle. The City also has established solid waste management and recycling requirements in its Municipal Code. The City of Vallejo Municipal Code, Title 7, Public Health, Safety and Welfare and Title 12, Buildings and Construction, include regulations relevant to solid waste resources in Vallejo, as discussed below.

- **Chapter 7.44 - Accumulation and Transportation.** This Chapter describes the responsibilities of every owner, proprietor, manager, or other person having charge or control of any commercial/industrial premises or residential premises within the city with respect to solid waste.
- **Chapter 7.48 - Collection.** This Chapter describes responsibilities of the franchisee for collecting all solid waste, recyclables and green waste placed in compliance with this chapter from each residential, and/or, commercial/industrial business premises in accordance with a schedule which has been approved by the public works director.
- **Chapter 7.53 - Construction and Demolition Debris Recycling Ordinance.** The purpose of Chapter 7.53 is to prescribe requirements designed to meet and further the goals of the California Integrated Waste Management Act of 1989, commonly referred to as AB 939 Chapter 7.06, Refuse and Garbage Collection Service Areas
- **Chapter 12.50 - Green Building Code.** Chapter 12.50 adopts and incorporates by reference the California Green Building Code as amended and appearing in the 2013 California Building Standards Code, and all its appendices, California Code of Regulations Title 24, Part 11, except such portions as are deleted, modified or amended; as the city green building code.

In addition to these local requirements, the proposed project would comply with the Countywide Integrated Waste Management Plan (CIWMP). The CIWMP is a state-mandated plan prepared by the Solano County Waste Management Authority.⁷³ The plan identifies solid waste facilities and "waste sheds" within Solano

⁷³ Solano County, Department of Resource Management, Division of Planning Services – Integrated Waste Management, https://www.solanocounty.com/depts/rm/planning/garbage_and_recycling/ciwmp_planning_documents.asp, accessed on April 14, 2016.

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County. It describes the countywide plan for reaching the state-mandated 50 percent recycling goal and the county-mandated 75 percent recycling goal. Waste reduction and disposal facilities in the county that require Solid Waste Facility Permits must conform with policies and siting criteria contained in the CIWMP.

Therefore, in accordance with the applicable regulations listed above, implementation of the proposed project would comply with applicable statutes and regulations related to solid waste. The proposed project would result in a *less-than-significant* impact and no mitigation measures would be required.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Less Than Significant Impact With Mitigation Incorporated. The proposed project would result in demolition of existing structures and construction of a TK-8 elementary school at 500 Oregon Street. The project site is located within a heavily urbanized area of the City of Vallejo and is surrounded by commercial, residential, and light industrial uses. Construction and operation of the proposed project would result in minimal environmental impacts. There are no anticipated significant biological or cultural resources located at the project site and mitigation measures have been added to avoid any potential disturbance to biological and cultural resources impacts. Implementation of Mitigation Measure BIO-1 and BIO-2, and CULT-1 through CULT-4, as described above, would ensure that potential environmental impacts be reduced to a less-than-significant level. Therefore, any changes to the environment would be considered to have *less-than-significant* impacts to the quality of the environment.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Less Than Significant Impact. Increases in air quality may occur as a result of construction activities, but would be temporary in nature and could be mitigated to a less-than-significant level. In addition, mitigation measures have been included to mitigate for the potential for biological, cultural resource, and geological impacts to occur on site. None of these impacts would be cumulatively considerable because they are either temporary in nature or of such a nature that they only have the potential to affect the direct environment. Therefore, the proposed project would result in a *less-than-significant* cumulative impact.

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- c) **Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

Less Than Significant Impact. As discussed previously, the proposed project would not result in a significant impact that could not be mitigated to a less-than-significant level, thus the proposed project's environmental effects would be *less than significant*.

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