

Head Royce School Planned Unit Development Permit (PUD) Project

Draft Environmental Impact Report

SCH #2019029032

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Lead Agency:
City of Oakland

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Introduction

This Draft Environmental Impact Report (Draft EIR) has been prepared by the City of Oakland in accordance with the California Environmental Quality Act (CEQA)[1] and associated CEQA Guidelines.[2] The purpose of this document is to describe the potential environmental consequences of the proposed Head-Royce School South Campus Project (Project). This Draft EIR is intended to serve as an informational document for use by public agency decision makers and the public in their consideration of the proposed Project.

Proposed Project

Project Location

Head-Royce school is an independent coeducational college preparatory day school for students in kindergarten through the 12th grade. The Head-Royce School (School) is located in Oakland, California on Lincoln Avenue, approximately 0.4 miles south of Highway 13, and 0.9 miles north of I-580. The existing approximately 14-acre Head-Royce School campus (referred to in this Draft EIR as the existing Campus) includes two properties: one at 4315 Lincoln Avenue that houses classrooms, administrative space and other school buildings; and an adjacent property at 4465 Lincoln Avenue that is the School's outdoor athletic fields and other outdoor activity space. The School has also acquired an additional approximately 8-acre property immediately across Lincoln Avenue at 4368 Lincoln Avenue, which is the former site of the Lincoln Child Center (referred to in this Draft EIR as the proposed South Campus, or the former Lincoln site). The Project seeks to redevelop, rehabilitate and integrate the proposed South Campus with the existing Campus as part of a unified 22-acre Head-Royce School campus.

Background

Existing Campus

The Head-Royce School was originally founded by Ms. Anna Head in 1887 as the Anna Head School for Girls, located in Berkeley. UC Berkeley acquired the original school property in Berkeley in 1955, and the school was relocated to a new campus constructed at its current location on the north side of Lincoln Avenue in 1964. In 1971, the Anna Head School established a separate but associated school for boys (the Royce School), leased from a portion of the Lincoln Child Center property located just across Lincoln Avenue. By 1979, the Anna Head School and the Royce School were merged into one co-educational school called Head-Royce. Head-Royce School is now the oldest Bay Area independent co-educational college preparatory day school for students in kindergarten through the 12th grade.

The existing 14-acre School Campus includes 12 buildings that house classrooms and administrative functions, a library, a gym and an auditorium, a café and a swimming pool, and the separate adjacent parcel

[1] The California Environmental Quality Act (CEQA) is codified in section 21000, et seq., of the California Public Resources Code

[2] The CEQA Guidelines are set forth in sections 15000 through 15387 of the California Code of Regulations, Title 14, Chapter 3

includes a multi-purpose sports field, outdoor tennis courts and various other outdoor play areas. The School currently operates pursuant to a 2016 Planned Unit Development (PUD) permit, which governs use of the existing Campus for school activities up to an enrollment of 906 students during the school year, and two sessions of up to 780 students each during the summer. Current enrollment at the existing Campus is approximately 881 students, with 100 teaching faculty members and approximately 65 professional and administrative staff.

Former Lincoln Site / Proposed South Campus

In 1895, Ms. Rebecca McWade opened her West Oakland home as the first integrated orphanage in Northern California. In 1925, her West Oakland home caught fire and was condemned. To continue operations, a new property was purchased in the Oakland Hills on the south side of Lincoln Avenue, and children moved into two newly completed cottages on this property in 1930. Between the 1940s and the 1970s, the orphanage changed its name to the Lincoln Child Center, the orphanage was reorganized as a foster care agency, and new residential facilities and classrooms were opened to offer tutoring workshops for youth in the Oakland public school system.

By 1997, the Lincoln residential group homes were closed and Lincoln began focusing on providing school-based mental health services, therapeutic behavioral services, family support programs, and early childhood mental health consultation and school engagement programs to respond to community needs. By 2010, the Lincoln Child Center decided to move to a new site in West Oakland, and sold the 8-acre former Lincoln site to Head-Royce School in 2013. In 2018, Lincoln celebrated its 135th year anniversary by launching a capital project for a new community-based Family Resource Center in West Oakland.

All of the existing buildings and improvements on the approximately 8-acre former Lincoln site are those previously constructed by the Lincoln Child Center or its predecessors. Currently permitted use of this property by the Head-Royce School is limited to parking.

Proposed Project

Head-Royce School now proposes to integrate the existing Campus with the former Lincoln site (the proposed South Campus) to create a unified, 22-acre K-12 school (the Project). The Project proposes to connect these two campuses via an underground tunnel below Lincoln Avenue and/or with an at-grade pedestrian crossing across Lincoln Avenue.

There are 12 existing buildings on the former Lincoln site. Generally, these existing buildings are in fair condition on the exterior, but in poorer conditions in the interior. The Project proposes to remove eight of the twelve existing buildings on the former Lincoln site, to rehabilitate three existing buildings identified as historic resources for use as school facilities, and to use one existing building for school-related or potentially short-term employee housing. The Project also includes a proposal to construct a new Performance Arts Center (for student curriculum relating to theater, music, dance and culture) and to construct two new small (1,500 square-foot) structures, one for maintenance and the other as a link to the proposed pedestrian tunnel, housing an elevator. The Project also proposes a one-way circulation loop driveway on the proposed South Campus to provide off-street drop-off and pick-up space, thereby eliminating pick-up and drop-off activities (other than for buses) from Lincoln Avenue, and reducing turn-around traffic in adjacent neighborhoods. The Project also proposes to gradually increase permitted student enrollment by 344 students over the currently allowed enrollment, to a maximum student population of 1,250 students. Please see Chapter 3: Project Description of this Draft EIR for greater detail about the Project.

Description of the EIR

Notice of Preparation

The City of Oakland determined that an Environmental Impact Report (EIR) is required for the proposed Project. The City circulated a Notice of Preparation (NOP) for this EIR on February 1, 2019 (see **Appendix 1A**). The public comment period on the scope of the EIR lasted through March 11, 2019. The NOP was sent to responsible agencies, neighboring cities, interested organizations and individuals, properties in the Project vicinity, and to the State Clearinghouse. Two public scoping sessions were noticed in the NOP, and those scoping sessions were held before the City of Oakland Planning Commission on February 20, 2019 and before the City of Oakland Landmarks Preservation Advisory Board on March 11, 2019.

The City of Oakland received comments from two public agencies (EBMUD and the Native American Heritage Commission), and numerous letters and e-mail correspondence from the general public in response to the NOP (see **Appendix 1B**). These comments addressed several issues related to the scope of environmental review for this EIR, including the following:

Disaster Preparedness and Fire Safety

Comments related to disaster preparedness and emergency evacuation included the following general themes

- By adding more students in the area, the Project may increase risks to students and parents, faculty and neighbors in the event of a disaster such as a wildfire or earthquake.
- Evaluate emergency plans in the event of a disaster and determine whether such plans adequately provide for the safe evacuation of students and residents. A thorough review of this topic should determine the amount of emergency vehicles and number of personnel available in Oakland to address a multiple area fire, and whether these resources are adequate to evacuate HRS and the surrounding residences and institutions, while also providing emergency services at other locations should fires erupt in more than one location.
- Assess the adequacy of Lincoln Avenue as the sole evacuation route for the entire surrounding area (which includes the Mormon Temple, the Greek Orthodox Cathedral and several public schools), as well as Head-Royce and its proposed additional students.
- The Project should provide a Fire Safety Phasing Plan and a Vegetation Management Plan as required pursuant to City of Oakland SCAs as part of its application materials, demonstrating all of the fire safety features incorporated into each phase of the project and the schedule for implementation of these features.

Traffic

Comments related to traffic, traffic congestion and circulation design hazards include the following:

- The EIR should evaluate whether the Project will cause HRS to exceed the VMT threshold, and whether mitigation measures/condition of approval may be necessary to lower this VMT (e.g., not allowing any student to arrive or leave the school except by bus, bicycle, or walking). The EIR preparer should obtain verifiable, independent evidence regarding where students and employees are coming from.
- The EIR should address the implications of an additional stoplight and relocated stoplight on Lincoln Avenue with reconfiguration of lanes on Lincoln Avenue to accommodate left turns.

- The EIR should assess whether the plans to alleviate traffic congestion on Lincoln caused by cars and buses picking up and dropping off students will be effective, or if these plans, coupled with increased enrollment, will result in additional traffic congestion.
- The EIR should assess whether the proposed new traffic signal on Lincoln Avenue would result in traffic now stopping in front of the downhill residents and their driveways, making it difficult to exit these driveways onto a steeply inclined Lincoln Avenue with obscured visibility.

Impacts of New Road

Comments related specifically to the Project's proposed new on-site Loop Road included the following general issues:

- The EIR should provide detailed analysis of vehicle emissions, noise, off-gas, lights, maintenance requirements and aesthetics issues associated with operation of the proposed Loop Road that is in close proximity to existing homes, considering thresholds that are applicable for people in sensitive categories (e.g., residents with chronic respiratory conditions).
- The EIR should address the potential for construction of the Loop Road to result in increased chances of landslides, increased drainage to off-site properties and flooding.

Impacts of the Pedestrian Tunnel

Comments related specifically to the Project's proposed new underground tunnel connecting the existing Campus and proposed South Campus sites included the following general concerns:

- The EIR should address safety concerns related to installation of a tunnel atop or in close proximity to the Hayward Fault, in the event of a major earthquake (i.e., might there be a tunnel collapse in the event of an earthquake?)
- The EIR should explain how soil and rock will be removed to create the tunnel, and whether blasting (i.e., dynamite) will be used
- Will the tunnel require closure of Lincoln Avenue during its construction, creating an inconvenience to the local community that relies on this road for freeway and citywide access?

Grading and Drainage

Comments related to the Project's proposed grading and resulting drainage issues included the following:

- Will the Project's grading alter drainage and water runoff in a manner that will weaken the hillside topography to the extent that it would increase erosion, mudslides and potential damage to surrounding residences and property?
- Will grading work interfere with existing natural underground drainage and streams? How will the development manage water on the property sufficiently to prevent negative impacts to neighboring property, especially property downhill?
- Given the steepness of the site, a detailed geotechnical study should be prepared to identify the need for retaining walls and other structural solutions to prevent hillside sliding.

Creeks and Habitat

Comments related to an adjacent (off-site) drainage channel and its associated potential wildlife habitat included the following:

- The EIR needs to consider impacts associated with the loss of a tributary drainage channel running from the existing drainage channel above the site and through the proposed South Campus. The EIR

should identify this tributary and study any plans to move or change the flow of this tributary for potential impacts to riparian habitat.

- The EIR should indicate whether the City Creek Ordinance applies to this tributary (potentially a feeder into the Laguna Branch of Peralta Creek) and if so, what preventative measures are required to maintain the creek and its biology/ hydrology functions.
- The EIR should address potential effects on wildlife in the area, particularly birds. Assess whether existing on-site trees provide nesting habitat for endangered raptors (many varieties of hawks and falcons have been reported in this area).

Infrastructure

Comments related to the Projects potential effects on public infrastructure were primarily provided by EMBUD, and include the following:

- To reduce inflow and infiltration into the City sewer system, the City (as lead agency) should require the project applicant to comply with EBMUD's Regional Private Sewer Lateral Ordinance, to require replacement or rehabilitation of older sanitary sewer collection systems, and to ensure any new wastewater collection systems are constructed to prevent I/I to the maximum extent feasible, meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or Satellite Agency ordinances.
- EBMUD requested the City condition any approvals of the Project on compliance with the Model Water Efficient Landscape Ordinance, and that all the applicable water-efficiency measures described in state regulations must be installed.
- The EIR should address whether the Project, including the proposed tunneling, will affect existing EBMUD right-of-way.

Noise

Comments related to the potential for increased noise due to the Project include the following:

- How much noise will be generated by construction of the tunnel, and will its construction include explosives?
- The EIR should analyze noise generated by placing new school uses on the site, and the effects of that noise of adjacent housing. Please provide a comparison of sound levels generated by schools with comparable levels of enrollments.
- In addition to daily regular school noise, the EIR should provide an analysis of noise generated by the Project's proposed "outdoor classrooms" (which are to be located close to housing on Laguna and Charleston), as well as use of an outdoor amphitheater. This analysis should consider the implications of using loudspeakers or amplifiers at the amphitheater during large events that are not part of the school's normal daytime operation, including quantifying how frequently such large events may occur.
- The EIR should also address the additional noise levels emanating from the Performing Arts Center, including evening and nighttime vehicle traffic, car doors opening and closing, people talking and laughing as they come into and leave the PAC.
- The EIR should assess whether the audible crosswalk signal at the new stoplight on Lincoln would add to the ambient noise level in the area.

Light and Glare

Comments related to increased light and glare include the following:

- The EIR should determine exactly where and how much night lighting will be needed for the Project, and whether this lighting will impact the neighbors' nighttime views.

Alternatives

Comments have suggested that several alternatives to the Project as proposed should be addressed. These alternatives include the following:

- Locate the drop-off and pick-up road in the center of the proposed South Campus to better serve all the buildings and classrooms and to minimize impacts to surrounding neighbors.
- Consider enlarging (widening) Lincoln Avenue along the proposed South Campus property to provide off-lane drop-off and pick-up locations, thereby avoiding construction of a new roadway along the perimeter of the proposed South Campus.
- Consider the potential merits of a pedestrian bridge over Lincoln Avenue rather that a tunnel as proposed.
- The option of making the Performing Art Center building available for non-school related community events should be specifically studied for its additional environmental effects (especially off-hour traffic and noise) over and above its use for school purposes only.

These comments generated revisions and additions to the scope of work, and were considered during the preparation of this EIR.

Scope and Structure of the EIR

Environmental Topics Addressed

Based on the written and oral comments received by the City on the NOP, as well as CEQA Guidelines Appendix G, the following environmental topics are addressed in this EIR:

- Chapter 4: Aesthetics
- Chapter 5: Air Quality
- Chapter 6: Biological Resources
- Chapter 7: Cultural and Historic Resources
- Chapter 8: Geology and Soils
- Chapter 9: Greenhouse Gas Emissions and Climate Change
- Chapter 10: Hazards and Hazardous Materials (including emergency evacuation and wildfire risk)
- Chapter 11: Hydrology and Water Quality
- Chapter 12: Land Use and Planning
- Chapter 13: Noise
- Chapter 14: Transportation and Circulation
- Chapter 15: Utilities and Service Systems
- Chapter 16: Wildfire

- Chapter 17: Effects Found Not to be Significant or Less Than Significant with Standard Conditions of Approval
- Chapter 18: Alternatives

Report Organization

The EIR is organized into the following chapters:

Chapter 1 – Introduction

Discusses the overall EIR purpose; provides a summary of the proposed Project; describes the EIR scope; and summarizes the organization of the EIR

Chapter 2 – Executive Summary

Provides a summary of the significant environmental impacts that would result from implementation of the Project and describes those City of Oakland Standard Conditions of Approval (SCAs, as regulatory requirements) and recommended mitigation measures that would avoid or reduce significant impacts

Chapter 3 - Project Description

Provides a description of the Project Area, Project objectives and assumptions, details of proposed physical changes to the environment, and a list of required approvals necessary to implement the Project

Chapter 4 through 16 - Setting, Impacts, and Mitigation Measures

Describes the following for each environmental topic: existing (or baseline) physical setting; applicable regulatory setting including relevant regulations applicable to the Project (including City of Oakland SCAs) that serve to reduce or avoid potential environmental impacts; thresholds of significance; potential environmental impacts; mitigation measures as applicable; and identification of the resulting level of significance following implementation of mitigation measures. Potential impacts are identified by level of significance, as follows:

- No Impact - No noticeable adverse effect on the environment would occur.
- Less than Significant (**LTS**) - The Project would cause an environmental effect, but that effect would not exceed the City's threshold of significance.
- Less than Significant with Standard Conditions of Approval (**LTS with SCAs**) – In the absence of applicable SCAs, the Project could cause an adverse environmental effect, but that impact would be reduced to a less than significant level with implementation of uniformly applied development standards and standard conditions of approval as identified in this EIR.
- Less than Significant with Mitigation Measures (**LTS with MM**) - The Project could cause an adverse environmental effect, but that impact can be reduced to a less than significant level with implementation of recommended mitigation measures as identified in this EIR.
- Significant and Unavoidable (**SU**) - The Project would cause an adverse impact that exceeds the threshold of significance and cannot be avoided or reduced through implementation of recommended mitigation measures, or recommended mitigation measures would have secondary adverse effects that cause the mitigation measure to be rejected.

Chapter 17 – Effects Found Not to be Significant

Provides a brief analysis of the topic areas found through the NOP scoping process and preliminary analysis to have no impacts or less than significant environmental impacts with implementation of the City of Oakland's SCAs. These topics include agriculture and forest resources; mineral resources; population, housing and employment; and public services and recreation)

Chapter 18 - Alternatives

Evaluates a reasonable range of alternatives to the Project and identifies an environmentally superior alternative

Chapter 19 - CEQA-Required Assessment Conclusions

Provides the required analysis of cumulative impacts, growth-inducing impacts, significant and irreversible changes, effects found not to be significant and significant unavoidable impacts

Chapter 20 - Report Preparation

Identifies preparers of the EIR, references used, and the persons and organizations contacted

Appendices

The appendices contain the NOP and written comments submitted on the NOP, as well as other technical studies and reports relied upon in the EIR.

Intended Uses of this EIR

Consideration of Project Approvals

Under CEQA, the City of Oakland is the Lead Agency for the proposed Project. As the Lead Agency, the City intends that this EIR serve as the CEQA-required environmental documentation for consideration of the Project by City decision-makers, the public, and other responsible agencies and trustee agencies. This EIR is intended to serve as a public information and disclosure document for use by governmental agencies and the public. Its purpose is to identify and evaluate potential environmental consequences of the proposed Project, to evaluate and recommend mitigation measures that would substantially lessen or eliminate adverse impacts, and to examine a range of feasible alternatives to the proposed Project. The information contained in this EIR is subject to review and consideration by the City of Oakland, prior to any decision to approve, reject or modify the Project. In accordance with CEQA Guidelines Section 15146, such impacts and mitigations are discussed in this EIR to the level of detail necessary to allow reasoned decisions about the Project.

The City must ultimately certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of CEQA before making any decision on the Project. This EIR identifies potentially significant environmental effects that would result from implementation of the Project. Pursuant to CEQA Guidelines Section 15091, the City cannot approve the Project unless it makes one or more of the following findings:

- Changes or alterations have been required in, or incorporated into the Project which avoid or substantially lessen significant environmental effects as identified in this EIR
- Changes or alterations are within the responsibility and jurisdiction of another public agency (not the City of Oakland), and such changes have been adopted by such other public agency, or can and should be adopted by such other agency
- Specified economic, legal, social, technological or other considerations make infeasible the mitigation measures or alternatives identified in the EIR

This EIR is intended to provide sufficient detail to enable the City to make informed decisions on individual components and/or phases of development proposed within the Project Area, and provides the City with the ability to consider mitigation measures and cumulative impacts resulting from eventual buildout of the Project. It is also intended to enable the City and Head-Royce School to carry out all or portions of the Project without having to prepare additional site-specific environmental documents. At such time as individual

elements or phases of the Project are proposed for implementation, the City will consider whether that element or phase of the Project was fully disclosed, analyzed and as needed, mitigated; or whether preparation of a subsequent or supplemental environmental document or an addendum may be warranted.

Public Review

All supporting technical documents and the reference documents are available for public review on the City of Oakland's website under the "*Current Environmental Review (CEQA/EIR) Documents (2011-2021)*" page, located at:

https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-2021

The Draft EIR is available for public review for the period identified in the Notice of Availability attached to the front of this document. During this time, written comments on the Draft EIR may be submitted to the City of Oakland Planning and Building Department at the address indicated on the Notice of Availability, and should reference the Project as Case File #PLN18532-ER01. Responses to all comments received on the environmental analysis in the Draft EIR during the specified review period will be included in the Response to Comments/Final EIR.

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Executive Summary

Project Overview

This Draft Environmental Impact Report (Draft EIR) has been prepared by the City of Oakland as lead agency, to describe the potential environmental consequences of the proposed Head-Royce School South Campus Project on Lincoln Avenue in the City of Oakland. Head-Royce School is an independent co-educational college preparatory day school for students in kindergarten through the 12th grade. The School currently consists of the existing approximately 14-acre Head-Royce School campus that includes two properties: the existing campus with classrooms, administrative space and other School buildings at 4315 Lincoln Avenue; and the adjacent outdoor athletic fields and other outdoor activity space at 4465 Lincoln Avenue. The School has also acquired an additional approximately 8-acre property immediately across Lincoln Avenue at 4368 Lincoln Avenue (referred to in this Draft EIR as the former Lincoln property or proposed South Campus). This property was former owned by the Lincoln Child Center, or Lincoln. Lincoln has relocated to a different location, and the former Lincoln buildings are now vacant. The former Lincoln property is now proposed to be redeveloped, rehabilitated and integrated with the existing Campus as part of a unified 22-acre Head-Royce School campus.

There are 12 existing buildings on the former Lincoln property. Generally, these existing buildings are in fair condition on the exterior, but in poorer conditions in the interior. The Project is a phased project that proposes to remove eight of these twelve existing buildings on the proposed new South Campus, to rehabilitate three existing buildings identified as historic resources for use as school facilities, and to use one existing building for school-related or potentially short-term employee housing. The Project also includes a proposal to construct a new Performance Arts Center for student curriculum relating to theater, music, dance and culture, to construct a new small 1,500 square-foot structures for maintenance/storage, and to connect the proposed South Campus to the existing Campus via an underground pedestrian tunnel below Lincoln Avenue. A small 1,500 square foot new building (the Link Pavilion) would provide an elevator connection to this tunnel entrance. The Project also proposes a one-way circulation loop driveway on the proposed South Campus to provide off-street drop-off and pick-up space, thereby eliminating pick-up and drop-off activities (other than for buses) from Lincoln Avenue, and reducing turn-around traffic in adjacent neighborhoods. The Project also proposes to gradually increase permitted student enrollment by 344 students over the currently allowed enrollment of 906 students, to a maximum student population of 1,250 students.

This Draft EIR is intended to serve as an informational document for use by public agency decision makers and the public in their consideration of the proposed Project.

Summary of Impacts and Mitigation Measures

The following **Table 2-2** provides a summary of potential environmental impacts, the regulatory requirements and Standard Conditions of Approval (SCAs) applicable to the Project, recommended mitigation measures (as necessary), and the resulting level of significance after implementation of all regulatory requirements, SCAs and mitigation measures. For a more complete discussion of potential

environmental impacts and mitigation measures, please refer to individual topic area chapters of this Draft EIR.

Significant and Unavoidable Impacts

Based on the analysis presented in this EIR, the Project would not result in any environmental impacts that would be considered significant and unavoidable.

Summary of Alternatives

The three alternatives analyzed in this EIR are listed below. These alternatives are intended to meet the CEQA requirements for the EIR to describe a No Project alternative, as well as a range of reasonable alternatives to the Project that would feasibly attain most of the basic objectives of the Project. These alternatives would not achieve all of the Project objectives, but may avoid certain effect and reduce the magnitude of other environmental effect as compared to full buildout of the Project.

Alternative #1: No Project

Under a No Project/No Change scenario, the former Lincoln property would remain as it is under current conditions. Use of the property by Head-Royce School would continue to be limited to parking, and maintenance activities of the property by the School would continue. Under this No Change scenario, there would be no increase over the currently permitted maximum School enrollment of 906 students, and no additional faculty or staff positions would be needed for this alternative. However, CEQA Guidelines Section 15126.6(e)(3)(B) provides that if the Project is not approved, and that non-approval would result in predictable actions of others (such as the proposal of some other project), this no project consequence should be discussed.

> Whereas the former Lincoln property has an existing General Plan land use designation of Institutional and is currently zoned Residential Detached (RD-1), and whereas disapproval of the project would not involve any efforts toward permanent preservation of the Project site as open space, the practical results on non-approval would likely lead to a proposal for some other institutional use of the site, or the development of detached single unit residences with the potential for a limited range of mixed commercial or institutional uses. The environmental effects associated with such other scenarios are too speculative to estimate.

Alternative 2: Minor Development Alternative

Under Alternative 2 there would be no increase in student enrollment at the School. Enrollment would remain capped at a maximum of 906 students. Physical changes at the proposed South Campus site pursuant to Alternative 2 would include:

- demolition of Buildings 3, 4, 5, 6, 7, 8, 10 and 11
- restoration and rehabilitation of Buildings 0, 1, 2
- Building 9 would be reused in its current condition for classroom and/or School administrative purposes
- improvements would be added for outdoor gathering spaces
- the existing playfield would be improved and reused for informal recreational activity, and
- tree removal would be conducted as necessary to implement these physical improvements

Alternative 2 would not include any other physical improvements on the proposed South Campus site. There would be no change to the current operations for School drop-offs and pick-

ups that currently occur along Lincoln Avenue, and the Project's underground pedestrian tunnel and Performing Arts Center building would not be constructed.

Alternative 3: Reduced Alternative

Alternative 3 would provide for a reduced incremental increase in student enrollment as compared to the Project, increasing from the current cap at a maximum of 906 students, with an increase of 144 student to a total student enrollment of 1,050 students. Physical improvements at the proposed South Campus pursuant to Alternative 3 would include all of the improvements identified for Alternative 2, plus the following:

- the new Loop Road would be constructed, including new off-street drop-off and pick-up locations within the South Campus, as well as new/relocated traffic signals along Lincoln Avenue
- pedestrian crossing of Lincoln Avenue between the existing North Campus and the South Campus would occur at two at-grade crossings of Lincoln
- Building 9 would be renovated to better accommodate classroom and/or School administrative purposes
- the number of parking spaces on the South Campus would be incrementally increased to accommodate the expected increased demand, and
- tree removal would be conducted as necessary to implement those Phase II physical improvements listed above

Under Alternative 3, the underground pedestrian tunnel and the Performing Arts Center building would not be constructed.

Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an EIR identify an environmentally superior alternative capable of reducing or avoiding, to the greatest extent, the environmental impacts associated with the proposed Project. Consideration of the environmentally superior alternative is based on the extent to which each of the CEQA alternatives reduces or avoids the significant impacts of the Project. The Project was not found to result in any significant and unavoidable impacts. All Project-related impacts are either less than significant, or can be reduced to less than significant with implementation of applicable SCAs and/or mitigation measures as identified in this EIR. Accordingly, differences between the proposed Project and the Alternatives are a matter of degree, rather than of reducing or avoiding any significant effect exceeding CEQA thresholds.

The environmental effects of the Minor Development Alternative (Alternative 2) would clearly be of a lesser extent than those of the Project, or of Alternative 3. Alternative 2 would not include any increase in student enrollment (whereas Alternative 3 would increase total student enrollment to 1,050 students), would not include grading, paving or use of the Loop Road (whereas Alternative 3 does include construction of the Loop Road), would not include the pedestrian tunnel, and would not include any new buildings (i.e., the Performing Arts Center building and the Link Pavilion would not be constructed).

Because Alternative 2 would result in impacts that are comparably less than those of the Project and all other Alternatives, Alternative 2 is identified as environmentally superior to the Project and all other alternatives considered in this EIR.

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Aesthetics		
Aesthetics-1: The Project would not have a substantial adverse effect on a public scenic vista or scenic view that is enjoyed by members of the public, generally.	None required	Less than Significant
Aesthetics-2: The Project would not substantially damage scenic resources (including, but not limited to, trees, rock outcroppings and historic buildings) that are located within a state or locally designated scenic highway, and would not substantially degrade the existing visual character or quality of the site and its surroundings.	**SCA Aesthetics-1: Landscape Plan** 1. Landscape Plan Required: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. 2. Landscape Installation. The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit or equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid. 3. Landscape Maintenance. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced. **SCA Aesthetics-3: Trash and Blight Removal**. The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users. **SCA Aesthetics-4: Graffiti Control**. 1. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: a. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	b. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. c. Use of paint with anti-graffiti coating. d. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). e. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. 2. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: a. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. b. Covering with new paint to match the color of the surrounding surface. c. Replacing with new surfacing (with City permits if required).	
Aesthetics-3: The Project will could potentially create new sources of substantial light or glare that may substantially and adversely affect day or nighttime views in the area.	**SCA Aesthetics-2: Lighting**. Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Less than Significant with SCAs
Aesthetics-4. The Project (including its new buildings and landscape) will not, now or in the future, cast substantial shadows that would substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, or that substantially impair the beneficial use of any public or quasi-public park, lawn, garden or open space. The Project would not cast shadow on an historic resource, such that the shadow would materially impair the resource's historic significance	None required	No Impact
Air Quality		
Air-1: The Project's construction activities would not result in average daily emissions of 54 pounds per day of ROG, NOx or PM2.5, or 82 pounds per day of PM10.	**SCA Air-1: Dust Controls – Construction Related**. The project applicant shall implement all of the following applicable dust control measures during construction of the project:	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	1. Water all exposed surfaces of active construction areas at least twice daily. 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 feasible. 2. 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). 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. Limit vehicle speeds on unpaved roads to 15 miles per hour. 5. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per house (mph). 6. All trucks and equipment, including tires, shall be washed off prior to leaving the site. 7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. **SCA Air-2: Criteria Air Pollutant Controls - Construction Related**. The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: 1. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. 2. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations (“California Air Resources Board Off- Road Diesel Regulations”). 3. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	4. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. 5. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. 6. All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.	
Air-2: During Project operations, the Project would not result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or $PM_{2.5}$ or 15 tons per year of PM_{10}.	None required	Less than Significant
Air-3: The Project's new sources of toxic air contaminants (both during constructions) could expose sensitive receptors to substantial levels of TACs resulting in an increase in cancer risk levels greater than 10 in one million to the nearest sensitive receptor, and could increase annual average $PM_{2.5}$ concentrations to greater than 0.3 micrograms per cubic meter at other nearby sensitive receptors	**SCA Air-3: Diesel Particulate Matter Controls-Construction Related**. The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods: 1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. -or- 2. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract. **SCA Air-5, Stationary Sources of Air Pollution (Toxic Air Contaminants)**. The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods: 1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. - or - 2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: a. Installation of non-diesel fueled generators, if feasible, or; b. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.	
Biological Resources		
Biology-1: The Project will not result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate,	None required	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service		
Biology-2: The Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or identified by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	None required	No Impact
Biology-3: The Project will not have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act.	**SCA Hydrology-1: State Construction General Permit** (see Hydrology section of this Table) **SCA Hydrology-2: NPDES C.3 Stormwater Requirements for Regulated Projects** (see Hydrology section of this Table)	Less than Significant with SCAs
Biology-4: The Project will not 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.	**SCA Biology-1: Tree Removal during Bird Breeding Season.** To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird-breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Less than Significant with SCAs
Biology-5: The Project's proposed removal of protected trees would not fundamentally conflict with the City of Oakland's Tree Protection Ordinance. Factors considered in determining a potentially significant conflict include the number, type, size, location and condition of protected trees to be removed and/or affected by construction, the number of protected trees to remain,	**SCA Biology-2: Tree Permit**: 1. Tree Permit Required: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
and the Project's proposed relocation and replacement of appropriate new tree species.	2. Tree Protection during Construction: Adequate protection shall be provided during the construction period for any trees that are to remain standing, including the following, plus any recommendations of an arborist: a. Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree, to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris that will avoid injury to any protected tree. b. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. c. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree. d. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. e. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. f. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations. 3. Tree Replacement Plantings: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria: a. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. b. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division. c. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. d. Minimum planting areas must be available on site as follows: for Sequoia sempervirens, three hundred fifteen (315) square feet per tree, for other species listed, seven hundred (700) square feet per tree e. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. f. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings that fail to become	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	established within one year of planting shall be replanted at the project applicant's expense.	
Biology-6: With implementation of SCAs, the Project will not conflict with any local policies or ordinances protecting biological resources, including the City's Creek Protection Ordinance.	**SCA Hydrology-3: Creek Protection Plan** (see Hydrology section of this Table)	Less than Significant with SCAs
Biology-7: The Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	None required	No Impact
Cultural Resources		
Cultural 1: Future development pursuant to the Project is not anticipated to cause a substantial adverse change in the significance of any known historical resources.	None needed. The following recommendation is provided in order to improve compliance with Rehabilitation Standards, but even if the recommendation is not followed, the Project as currently designed is in overall compliance with the Standards for Rehabilitation and would not cause a substantial adverse change in the significance of the resource as defined by CEQA. **Project Improvement Recommendation - Retain and Rehabilitate All Historic Steel Sash Windows**: The large historic steel sash windows at the north façade of Building 0, which are visible from the public right-of-way along Lincoln Avenue, are proposed to be retained and repaired as necessary. It is recommends that, except in demonstrated cases of severe deterioration beyond repair, all historic steel windows at Building 0 be retained and rehabilitated in order to fully comply with Rehabilitation Standard 6. Per Rehabilitation Standard 6, repair, rehabilitation, and thermal upgrading should be pursed as primary strategy before considering replacement with compatible, in-kind replacement windows (such as the Type 2 windows indicated in the Project). While double-glazed windows have increased thermal performance, there are other ways to improve thermal performance of existing historic steel sash windows. Furthermore, overall thermal performance of the building may be accomplished through improved insulation of wall and roof assemblies, while retaining all historic steel sash windows.	Less than Significant
Cultural 2: The Project's construction activity does have the potential to cause a substantial adverse change in the significance of a historical resource as a result of groundborne vibration associated with the proposed pedestrian tunnel excavation.	**SCA Cultural-4: Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities**. The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	located at adjacent historic resources within or near the project. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	
Cultural 3: The Project site contains no known cultural resources that might be disturbed or adversely affected by the Project. However, during ground disturbing activities associated within the Project, it is possible that currently unidentified historic-period archaeological or cultural resources could be discovered and disturbed.	**SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction** 1. Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. 2. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	3. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.	
Cultural 4: The Project site contains no known Tribal cultural resources, and the Project would not cause a substantial adverse change in the significance of a known tribal cultural resource. However, it is possible that, during ground disturbing activities associated within the Project, currently unidentified Tribal cultural resources could be discovered and disturbed.	**SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction** (see above) In the event that Native American Tribal cultural resources are discovered during ground disturbing activities, SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction will require that all work within 50 feet of the resource be halted, and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. A tribal representative shall be consulted to determine an appropriate mitigation plan (including monitoring and data recovery), with specific steps and timeframe to be stipulated. Work near the found tribal cultural resource may only resume upon completion of a mitigation plan and/or recovery of the tribal cultural resource.	Less than Significant with SCAs
Cultural 5: It is possible that, during ground disturbing activities associated within the Project, human skeletal remains may be uncovered.	**SCA Cultural-3: Human Remains – Discovery during Construction.** Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt, and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Geology and Soils		
Geology-1: The Project would not directly or indirectly cause potential substantial adverse effects (including the risk of loss, injury or death), involving the rupture of a known earthquake fault or seismic-related ground failure, including liquefaction or seismically induced settlement.	None required	Less than Significant
Geology-2: With implementation of all applicable regulatory requirements and SCAs, the Project would not, directly or indirectly, potential cause substantial adverse effects involving strong seismic ground shaking.	**SCA Geo-1: Construction-Related Permit(s).** The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. **SCA Geo-2: Soils Report**. The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction. The investigations conducted pursuant to SCA Geo-1 and Geo-2 will determine final design parameters for earthwork, foundations, foundation slabs and any surrounding related improvements (including utilities, parking lots, roadways and sidewalks). These regulatory requirements, which require structural designs that can accommodate ground accelerations expected from known active faults consistent with the CBC and local building code requirements, will would reduce the potential impacts associated with groundshaking during a major seismic event to less than significant. The proposed tunnel will need to be designed to withstand seismic shaking and temporary increases in lateral earth pressure (earthquake load). Development of seismic loading will be determined as part of the project final design evaluations.	Less than Significant with SCAs
Geology-3: Portions of the Project site include geologic units or soils that are unstable or that may become unstable because of the Project. With implementation of all applicable regulatory requirements and SCAs, the Project would not result in on- or off-site landslides, lateral spreading, subsidence or collapse.	**SCA Geology-2: Soils Report** (see above) **Recommendations Geo-3A: Stability of Slope below Building 9**. In furtherance of SCA Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the August 2020 Rockridge Geotechnical and Geological Evaluation, Stability of Slope Below Building 9 Report (Appendix 8F), as recommended pursuant to peer-review by the City's geotechnical engineering consultants, recommends that surface drainage at the rear of Building 9 be improved, and that the slope below Building 9 be partially reconstructed to	Less than Significant with SCA

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	mitigate the potential for future slope instability under static and seismic conditions. Detailed recommendations are presented as pertains to: 1. surface drainage improvements 2. slope reconstruction, and 3. retaining walls	
Geology-4: Surface settlement commonly occurs as a result of tunnel excavation, primarily due to migration of ground (ground loss) towards the tunnel opening. Ground loss during tunnel excavation and construction operations could result in settlement of overlying road and/or utilities. With implementation of all applicable regulatory requirements and SCAs, the Project would not, directly or indirectly create a substantial risk to life or property due to the surface settlement or ground loss.	**SCA Geo-1: Construction-Related Permit(s)** (see above) **SCA Geo-2: Soils Report** (see above). **SCA Standard-1: Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring**. The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with Engineering Services and/or the Bureau of Building, if directed by the Director of Public Works, Building Official, Director of City Planning, Director of Transportation, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis. **Recommendations Geo-4A: Concept Design and Constructability Recommendations for Pedestrian Tunnel**. In furtherance of SCAs Geo-1 and Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the following design and construction considerations are recommended in the 2019 Cahill and McMillen Jacobs Conceptual Design and Constructability Evaluation (as also peer-reviewed by the City's geotechnical engineering consultants, EnGeo): 1. The final alignment of the tunnel should be selected such that the length of the jacked box is minimized to reduce required jacking loads as much as possible. This can be accomplished by constructing the portals as close to the property lines as feasible. 2. The jacked box will require construction of a soldier pile wall to aid in mobilizing passive reaction forces for jacking. 3. Due to the size of the tunnel, design of a jacked box will have to assume a relatively simple geometry and an internal clear width not to exceed 18 feet (this clearance does not include any internal finishes, such as lighting, architectural finishes, waterproofing, etc.) 4. For stiff/dense soil and rock conditions, overcut may be needed ahead of the box to facilitate advancing the box. Steel sheeting on the box roof and bentonite slurry lubricant will be required to minimize friction and maintain jacking forces.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	5. Depending on rock strength and the presence of soil and mixed face ground within the tunnel profile, temporary face support measures may be required to prevent ground loss. Options for face support will likely consist of sloping of the face, and installation of fiberglass face bolts, face shotcrete, or breasting. 6. The jacked box construction of the tunnel will require pre-support of the ground prior to commencing excavation. Settlement of existing utilities overlying the tunnel can likely be addressed through exposing and providing structural strengthening, or by providing temporary bypass across the tunnel zone of influence. During final design, a detailed evaluation of overcutting, advance lengths, and settlement should be carried out once the construction approach is finalized. Specific measures anticipated for this project to address settlement include installation of pre-support measures such as a grouted pipe canopy or ground freezing prior to excavation, application of face support measures, and monitoring of overlying structures during construction to confirm no unanticipated ground movements develop as a result of tunnel excavation. 7. Vertically shored excavations will be required at the portal locations. The actual extent of shoring will be dependent on the presence of nearby utilities, structures, construction methods/sequencing, and final grading requirements. An anchored shotcrete wall is likely the most economical means of supporting vertical cuts for both temporary and permanent conditions. 8. If rock conditions are encountered, tieback lengths are anticipated to be approximately 25 to 35 feet in length. Tiebacks would be drilled in 3 to 4-inch holes, fully grouted, and staggered at a pattern spacing of about 6-foot vertical by 6-foot horizontal. For soil conditions, anchor lengths/loads will be larger with a tighter spacing. Shotcrete facing will also be required for temporary and permanent shoring. For permanent walls, anchors will need to be double corrosion protected (DCP) and designed for seismic conditions. 9 If encroachment limitations prevent the use of anchors for temporary walls, the system can be internally braced using steel struts and soldier piles. If the shored material consists of soil in this case, soldier piles may be required. 10. In all cases, shoring walls should be designed for drained conditions and incorporate weep holes, or strip/mat drains behind the facing. 11. To protect existing facilities from the effects of tunnel and portal construction, installation of monitoring instruments along Lincoln Avenue will be required to monitor ground/utility movements and surface settlement. Prior to commencing excavation, utility monitoring points and surface settlement arrays should be installed within the influence zone of the tunnel and portal excavations. Monitoring of these	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	points should be performed on a regular basis during construction (daily or more frequently). Baseline readings will need to be taken to establish elevations prior to construction. 12. Following completion of tunneling, monitoring should continue until readings stabilize or until such time that construction activities no longer warrant active monitoring. Actual monitoring locations will need to be determined after utility locations have been verified. 13. Settlement thresholds and corrective actions will need to be established as part of the final design and prior to starting construction.	
Geology-5: With implementation of all applicable regulatory requirements and SCAs, the Project would not create substantial direct or indirect risks to life or property due to the presence of expansive soil.	**SCA Geo-1: Construction-Related Permit(s)** (see above) **SCA Geo-2: Soils Report** (see above). **Recommendations Geo-5A: Grading Practices for Expansive Soils**. In furtherance of SCA Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the following grading practices are recommended in the 2012 Rockridge Geotechnical Report: 1. Positive surface drainage should be provided around all buildings to direct surface water away from foundations and below-grade walls. To reduce the potential for water ponding adjacent to buildings, the ground surface within a horizontal distance of five feet from the buildings should slope down away from the buildings with a surface gradient of at least two percent in unpaved areas, and one percent in paved areas. 2. Roof downspouts should be discharged into controlled drainage facilities to keep the water away from the foundations, below-grade walls, pavements, and concrete flatwork. 3. Water-intensive landscaping around the perimeter of buildings should be avoided to reduce the amount of water introduced to the expansive clay subgrade. 4. Aggregate base (AB) courses beneath any new pavements and pedestrian walkways located adjacent to landscape beds should be constructed with thickened concrete edges that extend though the AB and into the underlying clay subgrade. 5. Systems for storm water treatment (infiltration basins, rain gardens, bio-retention systems, vegetated swales, flow-through planters, etc.) should be provided with underdrains and impermeable liners, and not designed for filtration into the subgrade.	Less than Significant with SCAs
Geology-6: With implementation of all applicable regulatory requirements, future development pursuant	**SCA Geo-3: Erosion and Sedimentation Control Plan for Construction**	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
to the Project would not result in substantial soil erosion or the loss of topsoil.	1. Erosion and Sedimentation Control Plan Required. The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment. 2. Erosion and Sedimentation Control during Construction. The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.	
Geology-7: Future development pursuant to the Project would be served by the existing municipal sewer system. No septic tanks or alternate waste disposal systems are proposed for development.)	None required	No Impact
Greenhouse Gas Emissions		
GHG-1: The Project would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment	**SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist**: The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase. 1. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. 2. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction.	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	3 For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents.	
GHG-2: The Project's limited number of stationary sources of GHG emissions (those sources that require a BAAQMD permit to operate) would not produce total emissions of more than 10,000 metric tons of CO2e annually**.**	None needed	Less than Significant
Hazards and Hazardous Materials		
Hazards-1: The Project site is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result does not represent a significant hazard to the public or the environment.	**SCA Hazards-1: Hazardous Materials Related to Construction**. The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: 1. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction 2. Avoid overtopping construction equipment fuel gas tanks 3. During routine maintenance of construction equipment, properly contain and remove grease and oils 4. Properly dispose of discarded containers of fuels and other chemicals 5. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program), and 6. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City Fire Prevention Bureau, Alameda County Environmental Health, and other applicable regulatory agencies, and implementation of the actions described in these agencies' conditions of	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. **SCA Hazards-2, Hazardous Building Materials and Site Contamination** 1. Hazardous Building Materials Assessment: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. 2. Environmental Site Assessment Required: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. 3. Health and Safety Plan Required: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan. 4. Best Management Practices (BMPs) Required for Contaminated Sites: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: a) Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling, handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. b). Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.	
Hazards-2: Demolition of existing buildings on the South Campus will likely encounter existing hazardous building materials, and the Project's construction activities will likely utilize construction materials and fuels considered hazardous. Handling, spills or accidents with these materials or chemicals could result in a significant impact to the health of workers and the environment. Compliance with existing regulations and applicable Standard Conditions of Approval will ensure the Project will not create a significant hazard to the public or the environment through the handling and disposal of hazardous building material and use of hazardous construction-related materials	**SCA Hazards-1: Hazardous Materials Related to Construction** (see above) **SCA Hazards-2: Hazardous Building Materials and Site Contamination** (see above) **SCA Air-6, Asbestos in Structures.** The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.	Less than Significant with SCAs
Hazards-3: During School operations, the Project would not create a significant hazard to the public, to nearby sensitive receptors or to the School population as a result of storing, handling, emitting or a reasonably foreseeable accident involving the release of hazardous materials.	None Required	Less than Significant
Hazards-4: The Project site is not located in the vicinity of a public airport or private airstrip.	None Required	No Impact
Hydrology and Water Quality		
Hydrology -1: During construction activities, the Project does have the potential to violate water quality standards or waste discharge requirements, and result in	**SCA Hydro-1: Erosion and Sedimentation Control Plan for Construction** 1. Erosion and Sedimentation Control Plan Required: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
substantial erosion or siltation that could affect the quality of receiving waters or otherwise substantially degrade water quality. With implementation of applicable City of Oakland SCAs, the potential for these impacts to occur would be reduced to less than significant levels.	Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment. 2. Erosion and Sedimentation Control During Construction: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building. **SCA Hydro-2: State Construction General Permit**. The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.	
Hydrology-2: During operations (post-construction), the Project does have the potential to violate water quality standards or waste discharge requirements that could affect the quality of receiving waters or otherwise substantially degrade water quality.	**SCA Hydro-3: NPDES C.3 Stormwater Requirements for Regulated Projects** 1. Post-Construction Stormwater Management Plan Required: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: a. location and size of new and replaced impervious surface b. directional surface flow of stormwater runoff	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	c. location of proposed on-site storm drain lines d. site design measures to reduce the amount of impervious surface area e. source control measures to limit stormwater pollution f. stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. 2. Maintenance Agreement Required: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: a. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity, and b. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	
Hydrology-3: The Project will not create or contribute substantial runoff that would exceed the capacity of existing or planned stormwater drainage systems, and would not substantially alter existing drainage patterns of the site or area in a manner that would result in substantial erosion, siltation, or flooding, both, on- or off- site.	None required	Less than Significant
Hydrology-4. The Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	**SCA Hydro-2: State Construction General Permit** (see above) If dewatering is not permitted pursuant to the Construction General Permit, then a statewide low-threat discharge Waste Discharge Requirements (WDR) or a site-specific NPDES permit may be required.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Hydrology-5: The Project would not result in substantial on- or off-site flooding, would not place any structures within a 100-year flood hazard area that might impede or redirect flood flows, and would not expose people or structures to substantial risks associated with flooding or inundation.	None required.	No Impact
Hydrology-6: With implementation of all applicable regulatory requirements, the Project will not fundamentally conflict with the City of Oakland Creek Protection Ordinance, intended to protect hydrologic resources.	**SCA Hydro-5: Creek Protection Plan** 1. Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below. 2. Construction BMPs Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following: a. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. b. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. c. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. d. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be re-packed and native vegetation planted.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	e. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. f. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. g. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. h. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. i. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. j. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. k. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. l. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). m. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. 3. Post-Construction BMPs Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. 4. Creek Landscaping Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. 5. Creek Protection Plan Implementation Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, the project applicant shall regularly monitor all erosion, sedimentation, debris, and pollution control. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately. **SCA Hydro-6: Vegetation Management on Creekside Properties**. The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: 1. identify and leave “islands” of vegetation in order to prevent erosion and landslides and protect habitat 2. trim tree branches from the ground up (limb-up) and leave tree canopy intact 3. leave stumps and roots from cut down trees to prevent erosion 4. plant fire-appropriate, drought-tolerant, preferably native vegetation	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	5. provide erosion and sediment control protection if cutting vegetation on a steep slope 6. fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management 7. obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine) 8. do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat 9. do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development 10. do not trim/prune branches that are larger than 4 inches in diameter 11. do not remove tree canopy 12. do not dump cut vegetation in the creek 13. do not cut tall shrubbery to less than 3 feet high, and 14. do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.	
Land Use		
Land Use-1: The Project would not divide an established community.	None required	Less than Significant
Land Use-2: The Project would not result in a fundamental conflict between adjacent or nearby land uses.	None required	Less than Significant
Land Use-3: The Project would not 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 or zoning ordinance, adopted for the purpose of avoiding or mitigating an environmental effect.	None required specifically as related to land use, other than those measures identified in other respective chapters of this EIR.	Less than Significant
Land Use-4: The Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	None required	No impact

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Noise		
Noise-1: With implementation of Oakland's standard noise controls, and recognizing that noise generated by construction activities would occur over a temporary period, the temporary increase in ambient noise levels during construction would be less than significant.	**SCA Noise-1- Construction Days/Hours**. The project applicant shall comply with the following restrictions concerning construction days and hours: 1. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. 2. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. 3. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice. **SCA Noise-2, Construction Noise**. The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: 1. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible.	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	2. Except as provided herein, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. 3. Applicant shall use temporary power poles instead of generators where feasible 4. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. 5. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented. **SCA Noise-3, Extreme Construction Noise**. 1. Construction Noise Management Plan Required: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: a. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; b. Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; c. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	d. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and e. Monitor the effectiveness of noise attenuation measures by taking noise measurements. 2. Public Notification Required: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented. **SCA Noise-4, Project-Specific Construction Noise Reduction Measures**. The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on adjacent sensitive receptors or businesses. The project applicant shall implement the approved Plan during construction. **SCA Noise-5, Construction Noise Complaints**. The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: 1. Designation of an on-site construction complaint and enforcement manager for the project; 2. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; 3. Protocols for receiving, responding to, and tracking received complaints; and 4. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	
Noise-2: The majority of Project elements would not generate a substantial temporary or permanent increase	**SCA Noise-7, Operational Noise**. Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of	Less than Significant with Mitigation

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
in ambient noise levels in the vicinity of the Project in excess of standards established in the City of Oakland Noise Ordinance, and would not result in a significant permanent noise increase of 5 dBA Ldn or greater over ambient noise conditions. Only the proposed loading dock at the Performing Arts Center building is projected to result in a potentially significant operational noise impact.	chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City. **Recommendation Noise-2A, Audible Pedestrian Crosswalk Signals**. During installation the audible pedestrian crosswalk signal at the lower driveway of the Loop Road, the volume levels should be set according to the following guidance: 1. The WALK indication must be audible from the beginning of the associated crosswalk. 2. The pushbutton locator tones must be responsive to ambient sound levels and audible at a distance of 6 to 12 feet from the pushbutton, or to the building line, whichever is less. 3. The audible pedestrian crossing signal microphone should be mounted as close as possible to the position of the pedestrian who is waiting to cross the associated street. 4. Manufacturers typically set a default maximum and minimum output level on signal devices. The settings should be checked. 5. At no time should sound be more than 5 dB above ambient sound (except by special actuation for audible beaconing). 6. The sound level of the crosswalk signal speakers must be carefully set and evaluated at the time of installation, and then checked at a time with different traffic volumes to assure that settings are correct. It is better to install pedestrian signals with volumes that may be too low and adjust upwards as needed. If volumes are set too high initially, problems can arise with neighboring residents. 7. Audible pedestrian crosswalk signals that respond to ambient sound are available. However, pre-set automatic volume adjustment or automatic gain controls cannot assure that the volume meets the criterion above. With the selection of signals that respond to ambient sound, the above practices should be undertaken at several time during the daytime and nighttime period to ensure that the response is appropriate to meet the needs of the pedestrians, while not causing conflicts with adjacent neighbors.	
Noise-3: Noise levels during graduation and other large outdoor events held at the Commons and during nighttime informal outdoor gatherings after Performing Arts Center events could exceed City noise level standards. All other proposed school activities are anticipated to meet City noise standards	**Mitigation Measure Noise-3A, Sound System Design Parameters.** For those outdoor special events such as graduation ceremonies to be held at the Commons area of the proposed South Campus, Head-Royce School shall have an acoustic engineer design and install a speaker array system designed to lower the noise "spillover" from the system to no greater than between 52 and 53 dBA Leq at the southerly and easterly property lines. Examples of such a speaker array could include placing greater numbers of speakers at	Less than Significant with Mitigation

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	positions closer to the attendees (e.g., at the sides of the audience seating, rather than being elevated above the front stage), and elevating the speakers so that they are directed downward toward the attendees, rather than out across the entire Commons. **Mitigation Measure Noise-3B, Special Event Notifications and Restrictions**. The following requirements pertaining to School-sponsored Special Events at the Project site shall be implemented: 1. Ensure that all evening events at the Performing Arts Center are completed by 9:00 pm, with all post event gatherings, event traffic, and exterior clean-up activities completed by 10:00 pm. 2. Notify residences in the surrounding area of scheduled large outdoor events, including upper school graduation and lower and middle school promotion. Notification should be given at the time of the release of the annual school calendar and again within a few weeks of the event.	
Noise-4: Noise levels generated by traffic attributed to the Project would not substantially increase ambient traffic noise or ambient noise levels at nearby residences.	None required	Less than Significant
Noise 5: Construction-related vibration levels are not anticipated to exceed 0.3 in/sec PPV at off-site structures, but could exceed the historic building threshold of 0.25 in/sec at on-site historic buildings.	**SCA Noise-8: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities.** The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction **Mitigation Measure Noise-5, Vibration Reduction near Historic Structures**. Although impacts to on-site properties would not normally be considered an impact under CEQA, the following practices are recommended to minimize damage to on-site historic structures. 1. Avoid the use of vibratory rollers and other heavy construction equipment within 20 feet of on-site Buildings 0, 1, and 2. 2. Use smaller equipment to minimize vibration levels below the limits. 3. Select demolition methods not involving impact tools. 4. Avoid dropping heavy objects or materials near on-site Buildings 0, 1, and 2.	Less than Significant with SCAs and Mitigation

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Transportation		
Transp-1: The VMT per population generated by the Project would not exceed the VMT threshold as calculated for the Project.	**SCA Transportation-4; Transportation and Parking Demand Management.** The City's SCA requires a TDM Plan designed to achieve at least a 20 percent vehicle trip reduction rate. However, per the City's requirements for the 2016 Head-Royce School PUD Conditions of Approval, the School is required to achieve a 30 percent non-SOV mode share for students once the School exceeds 900 students.	Less than Significant
Transp-2: The Project would not conflict with plans, ordinances, or policies addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths (except for automobile level of service or other measures of vehicle delay – non CEQA impacts).	**SCA Transportation-2: Bicycle Parking**. The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements. **SCA Transportation-6: Plug-In Electric Vehicle (PEV) Charging Infrastructure** 1. PEV-Ready Parking Spaces: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces. 2. PEV-Capable Parking Spaces: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces. 3. ADA-Accessible Spaces: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).	Less than Significant
Transp-3: The Project would not induce additional automobile travel by increasing physical street capacity in congested areas.	**SCA Transportation-1: Construction Activity in the Public Right-of-Way** 1. Obstruction Permit Required: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops. 2. Traffic Control Plan Required: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction. 3. Repair of City Streets: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	
Utilities and Service Systems		
Utilities-1: Sufficient water supplies are available to serve the Project and other reasonably foreseeable future development during normal and multiple dry years.	**SCA Utilities-1, Water Efficient Landscape Ordinance**. The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. Prior to construction, the project applicant shall submit the Project Information (detailed below) and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance. Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, including the following: 1. Project information (date, applicant and property owner name, project address, total landscape area, project type (new, rehabilitated, cemetery, or home owner installed), water supply type and water purveyor, checklist of documents in the package, project contact information, and applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	2. Water Efficient Landscape Worksheet, including Hydro-zone Information Table and Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use 3. Soil Management Report 4. Landscape Design Plan 5. Irrigation Design Plan, and 6. Grading Plan Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion, and landscape and irrigation maintenance schedule, for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee. **SCA Utilities-2, Green Building Requirements** 1. Compliance with Green Building Requirements during Plan-Check: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code) 2. Compliance with Green Building Requirements during Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. 3. Compliance with Green Building Requirements after Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.	
Utilities-2: The Project would not result in a determination by the wastewater treatment provider (EBMUD) that it does not have adequate capacity to serve the Project's wastewater treatment demand, in addition to EBMUD's existing commitments.	None required	Less than Significant
Utilities-3: The Project will not result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.	**SCA Utilities-7, Storm Drain System**. The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
Utilities-4: The Project will require relocation or construction of new or expanded water distribution, wastewater collection, and electric power, natural gas and telecommunication facilities. The construction or relocation of these utility connections will not cause significant environmental effects.	**SCA Utilities-3, Sanitary Sewer System**. The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system. **SCA Utilities-4, Underground Utilities**. The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	Less than Significant with SCAs
Utilities-5: The Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The Project would comply with federal, State and local management and reduction statutes and regulations related to solid waste.	**SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling**. The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center. **SCA Utilities-6, Recycling Collection and Storage Space**. The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For non-residential	Less than Significant with SCAs

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.	
Utilities-6: The Project would not resulted in an environmental impact due to a wasteful, inefficient or unnecessary consumption of energy resources during project construction or operations, or conflicted with state or local plans for renewable energy or energy efficiency.	**SCA Utilities-2, Green Building Requirements** 1. Compliance with Green Building Requirements during Plan-Check: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code) 2. Compliance with Green Building Requirements during Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. 3. Compliance with Green Building Requirements after Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.	Less than Significant
Wildfire and Emergency Evacuation		
Fire-1: The Project would exacerbate current exposure of people and structures to a significant risk of loss, injury or death involving wildland fires by adding School buildings and increasing school enrollment at a school located within the City of Oakland's VHFHSZ. This risk will be substantially mitigated through implementation of a Project-specific Vegetation Management Plan designed to minimize the potential for ignitions, crown fires and extreme fire behavior by reducing and maintaining fuel loads and altering the structure, composition and spacing of on-site vegetation.	**SCA Fire-1, Designated Very High Fire Severity Zone – Vegetation Management** 1. Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures: a). Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically b) Removal of leaves and needles from roofs and rain gutters c) Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure d) Trimming back vegetation around windows e) Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on	Less than Significant with SCAs/Vegetation Management Plan

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20% f) All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk g) Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel h) Stacking woodpiles away from structures at least 20 feet from residential structures i) If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. 2. Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. 3. Fire Safety during Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition. 4. Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction, per Section 310.8 of the California Fire Code. **SCA Fire-2, Fire Safety Phasing Plan.** The project applicant shall submit a Fire Safety Phasing Plan for City review and approval, and shall implement the approved Plan. The Fire	

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	Safety Phasing Plan shall include all of the fire safety features incorporated into each phase of the project and the schedule for implementation of the features. **SCA Fire-3: Compliance with Other Requirements**. The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, Department of Transportation, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. **Recommendation Fire-1A: Vegetation Management Plan and Fire Safety Phasing Plan for the Defensible Space of the Head-Royce School**. A Vegetation Management Plan prepared specifically for the Project includes the following elements, to be implemented pursuant to SCA Fire-1: 1. A map depicting the fuel management area on an aerial-photo base-map which details the locations of the fuel management zones in a manner that illustrates the locations of different vegetation treatments required in the plan. Protected creek banks are also depicted on this map. 2. A list of treatment performance standards within each fuel management zone. 3. A list of recommendations for implementing treatments, including sufficient information to provide clear instructions to contractors performing the fuel management work. Details regarding spacing, pruning heights and volumes of litter/chips are provided. 4. Diagrams that document fuel types present on the lot and current vegetation condition, as well as images needed to support specific treatment recommendations (for example, depicting sensitive habitat to be retained). 5. In addition, it includes a recommendation to perform vegetative treatments on other properties owned by Head-Royce School when it lies within the Defensible Space Zone.	
Fire-2: The Project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**Recommendation Fire-2A: Evacuation Planning Recommendations for Head-Royce School**. A list of evacuation planning recommendations has been prepared for the Head-Royce School addressing the topics of infeasibility of shelter-in-place in most wildfire situations, the route and destination of an evacuation from Campus, the loss of power and communication with officials and parents, and the identification of egress points. The School's current Emergency Preparedness Plan and its Evacuation Plan define protective actions that the School would take in the event of an evacuation situation. The	Less than Significant

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
	recommended changes and additions to this Plan as recommended will serve to further increase student safety in the event of an extreme wildfire event.	
Other Less Than Significant Effects		
Agriculture 1: The Project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance Farmland, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)	None needed	No Impact
Agriculture 2: The Project would not conflict with existing zoning for agricultural use, or with a Williamson Act contract.	None needed	No Impact
Agriculture 3: The Project would not conflict with existing zoning for, or cause rezoning of forest land, and would not result in the loss of forest land or conversion of forest land to non-forest use.	None needed	No Impact
Agriculture 4: The Project would not involve any changes in the existing environment which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	None needed	No Impact
Minerals 1: The Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	None needed	No Impact
Minerals 2: The Project would not result in the loss of a locally-important mineral resource recovery site delineated on a general plan, specific plan, or other land use plan.	None needed	No Impact
Population 1: The Project will not induce substantial population growth in a manner not contemplated in the General Plan, either directly or indirectly.	None needed	No Impact
Population 2: The Project would not displace existing housing or people, necessitating the construction of	None needed	No Impact

Table 2-2: Summary of Project Impacts and Mitigation Measures

Potentially Significant Impacts	Regulatory Requirements / Mitigation Measures	Resulting Level of Significance
replacement housing elsewhere in excess of that contained in the City's Housing Element.		
Public Services 1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities in order to maintain acceptable service ratios, response times or other fire protection service performance objectives.	None needed	Less than Significant
Public Services-2: The Project would not result in an increase in calls for police protection services or result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities or the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other Police Department performance objectives.	None needed	Less than Significant
Public Service-3: The Project would not result in new students attending local public schools, and would not require new or physically altered public school facilities to maintain acceptable performance objectives**.**	None needed	No Impact
Public Services-4: The Project would not increase the use of an existing neighborhood or regional public park or other public recreational facility such that substantial physical deterioration of such facilities would occur or be accelerated.	None needed	No Impact

3

Project Description

Introduction

Head-Royce school, an independent coeducational college preparatory day school for students in kindergarten through the 12th grade, proposes to expand its existing Campus to the former Lincoln site (or proposed South Campus) to create a larger, 22-acre K-12 school with increased enrollment (i.e., the Project). The Project proposes to connect these two sites via an underground tunnel below Lincoln Avenue and/or with at-grade pedestrian crossings across Lincoln Avenue, and to redevelop the former Lincoln site to support its proposed increased enrollment.

In accordance with Section 15124 of the CEQA Guidelines, the following chapter of this EIR:

- defines the location, involved properties and existing characteristics of the Project Area
- identifies the objectives sought by proposed Project
- describes the details of proposed physical improvements anticipated as part of the Project (including development assumptions and timeframes), and
- explains the intended uses of this EIR, including those City approvals necessary to approve and implement the Project

Project Location, Project Area and Existing Conditions

Project Location

The Head-Royce School is located in Oakland, California on Lincoln Avenue, approximately 0.4 miles south of Highway 13 and 0.9 miles north of I-580, as shown in **Figure 3-1**. It is generally below the Ascension Greek Orthodox Cathedral in the Lincoln Highlands/Oakmore/Dimond neighborhood. The school's address is Head-Royce School at 4315 Lincoln Avenue, Oakland.

Project Area Properties

The Project Area includes four separate properties, three of which are owned by Head-Royce School and a fourth under separate lease agreement with a third party (see **Figure 3-2**):

- The proposed South Campus is the former Lincoln site at 4368 Lincoln Avenue (Assessor's Parcel #29-1009-6). The former Lincoln site is the primary property involved as part of the Project, to be redeveloped, rehabilitated and integrated with the current Head Royce School Campus.
- The existing Head-Royce School campus includes two properties, one at 4315 Lincoln Avenue (Assessor's Parcel #29A-1367-4-4) and an immediately adjacent property at 4465 Lincoln Avenue (Assessor's Parcel #29A-1367-1-14). The property at 4315 Lincoln Avenue provides classroom, administrative and other School buildings, and the property at 4465 Lincoln Avenue contains the School's outdoor athletic fields and other outdoor activity space.

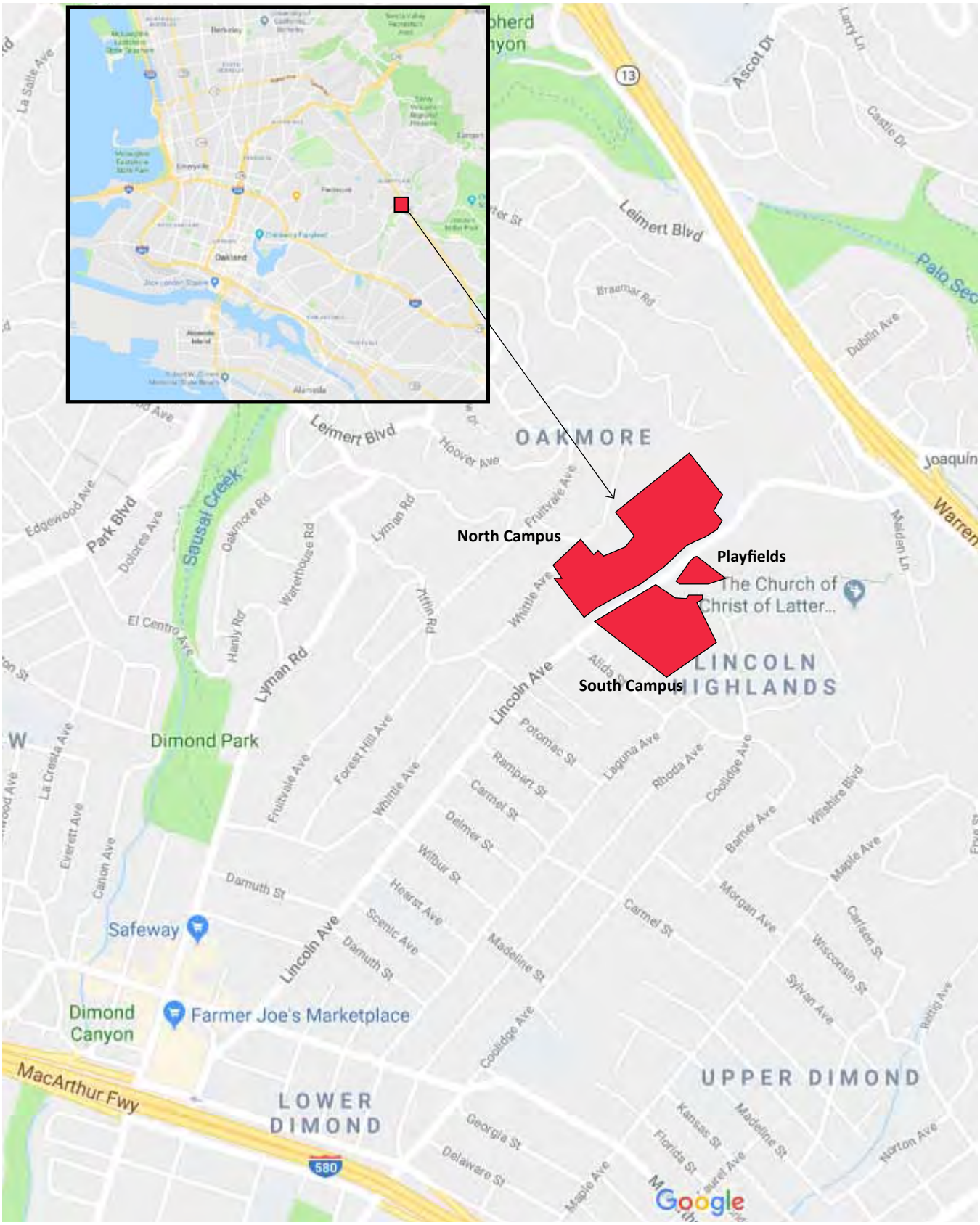


Figure 3-1
Project Location

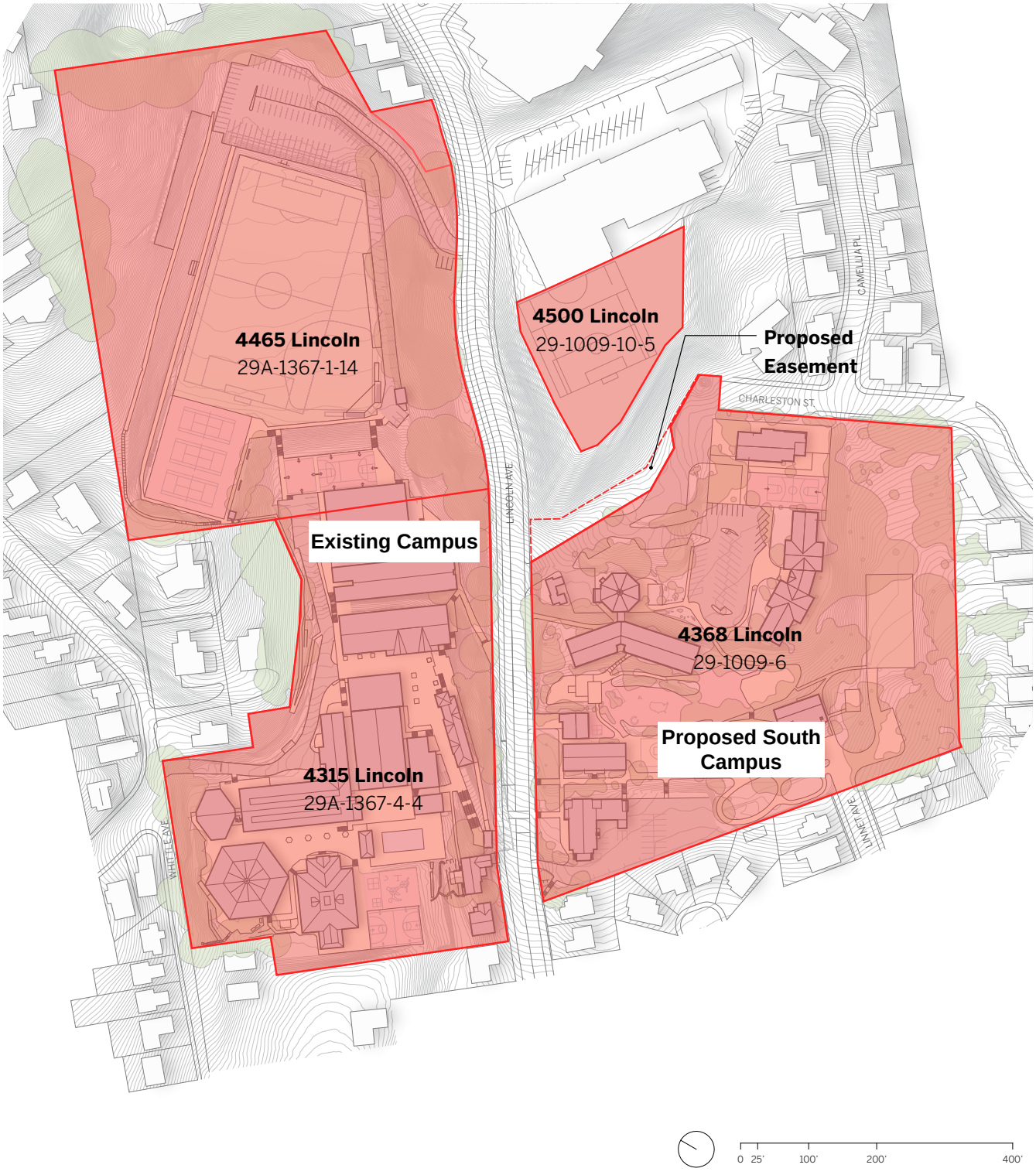


Figure 3-2
Project Site

Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - December 2018

- The fourth property included as part of the Project is the property at 4500 Lincoln Avenue (Assessor's Parcel # 29-1009-10-5), which is used under a lease agreement with Ability Now Bay Area (the property owner), for non-exclusive use of an existing playfield. The 4500 Lincoln Avenue property is only a part of the Project Area in that it's use is partially associated with the Head-Royce School, but the Project proposes no changes for the ownership or use of this adjacent property, and current use of this property is subject to prior conditions of approval pursuant to a 2018 amendment to the Head-Royce PUD permit (see further discussion of these conditions under "Applicable Land Use Regulations", below). The application includes a proposed easement for a strip of land on the Ability Now property to be used for parking along the eastern boundary of the proposed South Campus.

Head-Royce School also owns several other properties located at 4200, 4220, and 4180 and 4286 Whittle Avenue and 4233 Lincoln Avenue that are used as residences for faculty and staff. Existing permit provisions require these houses to be used as residences only, and prohibit the School from merging these lots without obtaining an amendment to the PUD as a Major Change. The School is required to maintain the residential character and uses of these houses, and ensure that the houses maintain their structural integrity. These properties shall not be used for additional School parking, School staging of materials or equipment, School storage (including storage of maintenance equipment) or school deliveries or student pick-up or drop-off. The gate at the fence between 4200 and 4220 Whittle and the School property must be posted with a No Trespassing sign and locked (with keys provided only to residents of these properties), except a push bar or similar unlatching system may be installed on the School side of the gate only to allow for exit in an emergency.[1] No change in use for these residences is proposed, and they are not considered as part of the Project.

Project Area Existing Conditions

The 22-acre Project Area is bisected by Lincoln Avenue, which follows a southwest/northeast alignment from I-580 to Highway 13. For ease of terminology and directions, this document refers to "north" as being northwest of Lincoln Avenue, "south" as being southeast of Lincoln Avenue, and Lincoln Avenue as running east/west. For example, the existing Campus is actually perpendicularly northwest of the Lincoln Avenue alignment, and the proposed South Campus is actually perpendicularly southeast of the Lincoln Avenue alignment.

Existing Head Royce School Campus

The School has been on its current 14-acre site on the north side of Lincoln Avenue (the existing Campus, at 4315 and 4465 Lincoln Avenue) since 1964. The existing Campus includes 12 buildings that house classrooms and administrative functions, a library, a gym and an auditorium, a café and a swimming pool (see **Figure 3-3**). Attached to the existing Campus on a separate parcel is a multi-purpose sports field, outdoor tennis courts and various other outdoor play areas. A prior PUD permit as amended in 2016 governs use of the Head Royce School for school activities up to an enrollment of 906 students during the school year, and two sessions of up to 780 students each during the summer. Current enrollment is approximately 881 students, with 100 teaching faculty members and approximately 65 professional and administrative staff.

[1] City of Oakland, *Final Head Royce Conditions of Approval*, Case File: REV13-003, June 2016

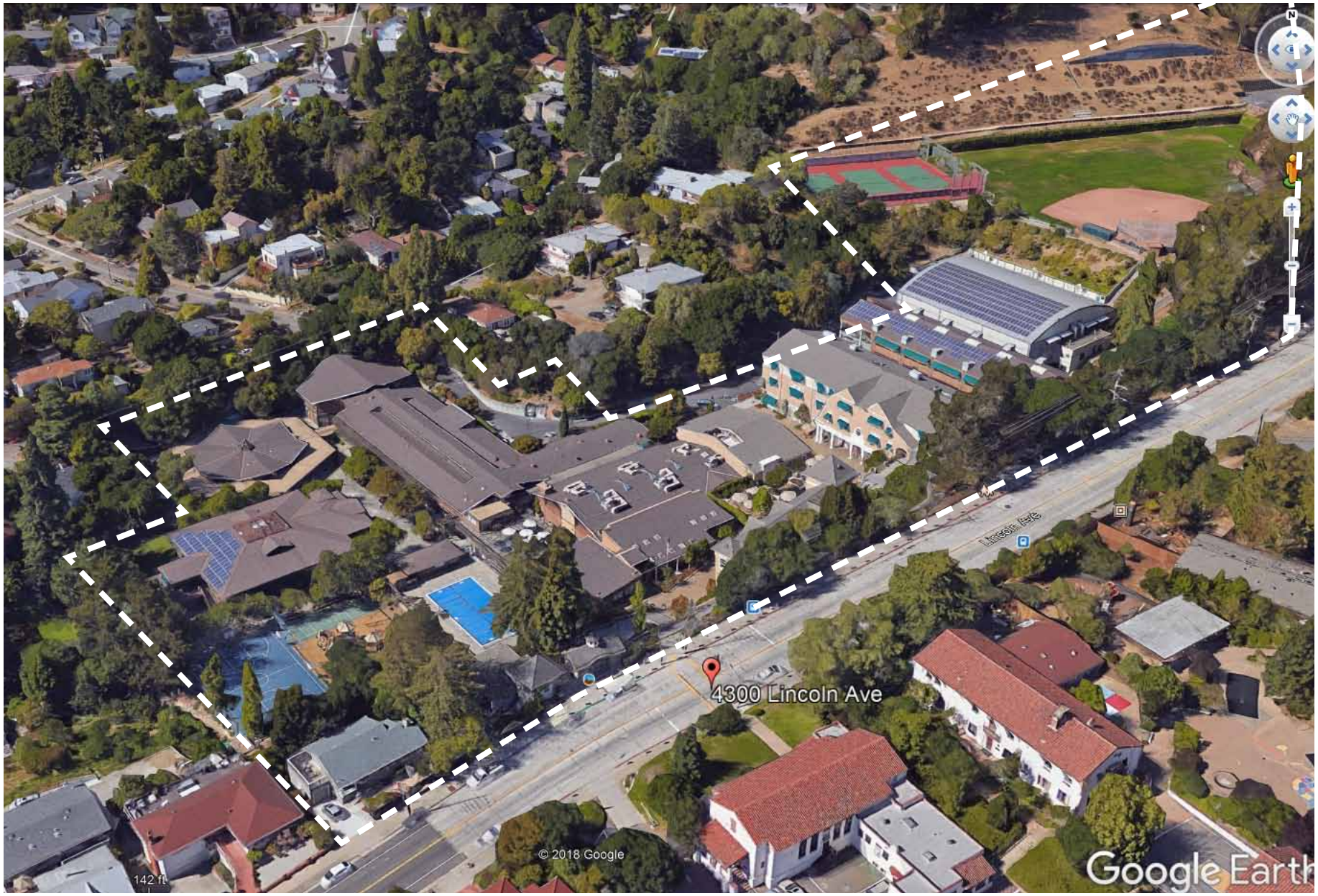


Figure 3-3
Existing Conditions - Existing Head-Royce School Campus

The existing Campus is divided into three distinct areas that coincide with the three educational/age divisions of the school (elementary, middle and high school).

- The Lower School is in the lowest (westerly) portion of the Campus and has two primary buildings: the Rotunda (which contains the kindergarten and first grade classrooms and art room) and the Lower School Building (which contains the classrooms for 2nd through 5th grade). The Lower School is also the location of after school programs, the lower school library and computer lab. The lower school also has a vegetable garden, a courtyard, a large play structure and a basketball court.
- The Middle School Building is farther uphill on the Campus. The main gathering area for the middle school is a large patio, which is just below the administrative offices and overlooks the swimming pool. The main floor of the Middle School Building houses 7th and 8th grade classrooms, a community room, the Mary E. Wilson Auditorium (which hosts assemblies, performances and special events), and a kitchen that serves as a cafe for breakfast and lunch. The 6th grade classrooms are located on the lower level of the Middle School Building along with both vocal and instrumental music rooms. This level shares a courtyard with the Lower School.
- The Upper School is a combination of several building located in the upper elevations of the Campus nearest Lincoln Avenue. These buildings include the World Language Building (a two level building dedicated to the middle and upper school language classes), the Read Library and the Main Upper School Building (a three level building with a café, faculty room, student-faculty lounge, computer lab, and upper school offices on the lower floor, and classrooms above). Each of these three building was constructed around a main courtyard of the Upper School as part of a prior, 2008 Master Plan. The Upper School also includes a separate fine arts studio and computer lab building and an additional classroom building connected to the Paul Chapman Pavilion (the gymnasium).
- Further east of the gym (towards Highway 13) is the outdoor basketball court, the tennis courts, the athletics field, and a parking lot.

Proposed South Campus

The 8-acre proposed South Campus was acquired by Head-Royce School in 2013, after the Lincoln Child Center decided to relocate to West Oakland in 2010. All of the existing buildings and improvements on the proposed South Campus are those previously constructed by the Lincoln Child Center or its predecessors. Currently permitted use of this property by the Head-Royce School is limited to parking. The proposed South Campus includes gently hilly terrain that generally slopes up from the south to north toward Lincoln Avenue, with an overall grade change of approximately 56 feet across the site.

Existing Buildings

There are 11 existing buildings on the proposed South Campus (see **Figure 3-4**), totaling approximately 43,856 square feet of building space (see **Table 3-1**). Generally, the existing buildings are in fair condition on the exterior, but in poorer conditions in the interior. Many of these buildings have been altered on both the interior and exterior since they were originally constructed. Each of these buildings is further described below.[2]

[2] From Page & Turnbull, Historic Resource Evaluation, Head-Royce School South Campus, April 2019

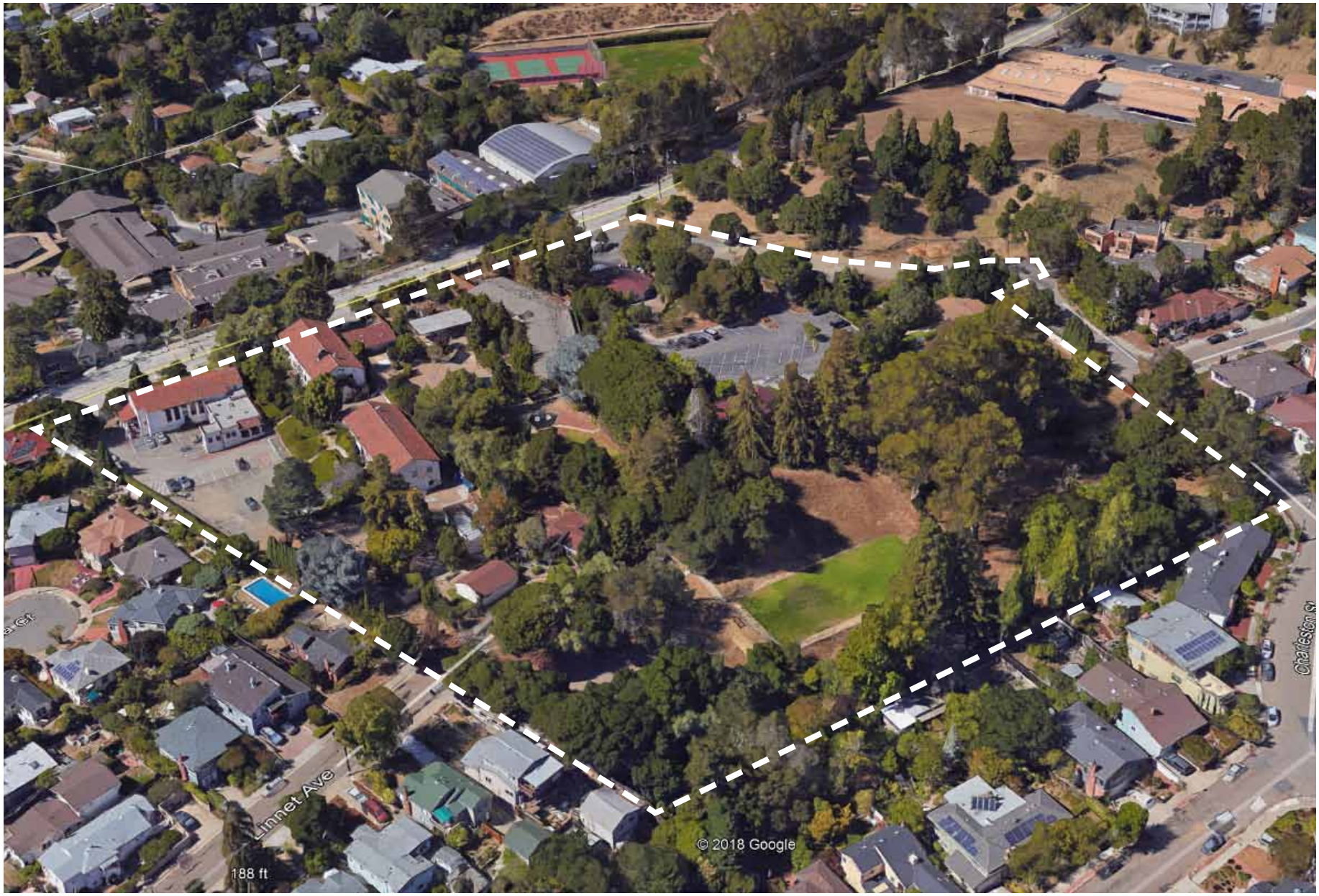


Figure 3-4
Existing Conditions, Former Lincoln Site / Proposed South Campus

- Building 0 (the Junior Alliance Hall) is a wood frame building designed in the Spanish Colonial Revival style. It was designed by W.G. Corlett and constructed in 1935 for the Lincoln Child Center as an auditorium and gymnasium with administrative offices. Building 0 has an L-shaped plan that features a double-height wing with a front-gable roof with terra cotta tiles, and a one-story wing with a flat roof and parapet. The gabled roof has overhanging eaves and decorative, carved rafter tails at the northwest and southeast façades. Terra cotta tiles line the coping of the parapet at the flat roof portions of the building. The primary (southwest) façade features paired, divided-lite wood casement windows above a single-height covered entry porch covered by a shed roof clad with terra cotta tiles. The primary entrance to Building 0 is recessed through an arched opening, supported by pilasters, at the center of the entry porch. The entire building is clad with stucco and has primarily steel-sash windows and flush wood doors. Constructed to house an auditorium and stage, two bedrooms, a kitchen, an office, and several related ancillary rooms, the building was converted to classrooms in 1971. The interior of Building 0 has been significantly altered since original construction due to fire damage and its conversion from an auditorium to classroom space.
- Building 1 (the Mary A. Crocker Cottage) is a wood frame building also designed in the Spanish Colonial Revival style. This building was designed by Reed & Corlett and constructed in 1929 as a dormitory for children. It is rectangular in plan, 2 stories in height, with 6,450 square feet of building space and a 700 square-foot partial basement. The building features textured stucco siding and a side-gable roof with terra cotta tile roofing. The primary (southwest) façade of Building 1 faces the rear of Building 0. The primary entrance, a non-original wood slab door with one lite, is located at center of the façade within a slightly recessed archway framed by pilasters with simple molded capitals. Adjacent to the primary entrance is a metal plaque that reads “Mary A Crocker Cottage 1929.” Two additional archways flank the entry, each with a typical window. Most of the windows are non-original aluminum sash with a wood frames. The interior of Building 1 has been remodeled several times, resulting in the removal and replacement of many of the original finishes, and reconfiguration of several rooms to convert the building from dormitory use to administrative and classroom use.
- Building 2 (the Grace L. Trevor Cottage) is a wood frame building designed in the Spanish Colonial Revival style, and almost identical to Building 1, and was constructed as a girls’ dormitory. Built in 1929 and designed by architectural firm Reed & Corlett, the building was one of the first two purpose-built buildings on the site. Building 2 is a two-story, Spanish Colonial Revival style, wood frame building with a basement and concrete foundation. The rectangle-plan building features textured stucco siding and a side-gable roof with terra cotta tile roofing. It contains 6,500 square feet of building space and a 700 square-foot partial basement. Typical windows are non-original aluminum-sash paired casement windows, set in a wood frame. The primary (southwest) façade of Building 2 faces the lower parking lot. The primary entrance (a non-original wood slab door) is located at the center of the façade, recessed within a projecting frame with an original wall-mounted light fixture. Above the primary entrance is a balconette with a metal railing and typical recessed window with a cement asbestos spandrel. The interior of Building 2 has been remodeled to convert the building from a dormitory to classrooms, resulting in the removal and replacement of many of the original finishes and significant reconfiguration the rooms and circulation.
- Building 3 is a 1,420 square-foot portable classroom building built in 1990.
- Building 4 (the Linnet/Ethel Moore Cottage) is a small, 2,068 square-foot administrative building. This building was constructed at an unknown date between 1938 and 1946 to house the director of Lincoln Child Center. No builder or architect has been identified. As originally constructed, the building had an irregular-shaped plan, and a projecting wing was constructed on the southeast façade in 1954, and an irregular-shaped addition was constructed in 1971. The one-story, wood frame building is vernacular in style and is set on a post and pier foundation. The original portion of

the building has a cross-gabled roof clad in asphalt shingles and stucco siding. The addition is clad in vertical wood siding, and is capped by a flat roof covered with rolled asphalt. The original volume of the Building 4 residence contains the original entry, kitchen, family room, two bathrooms and a bedroom that was used as the counselor's bedroom when the building was converted to a boy's group home in 1971. Most of the original interior finishes were removed during the 1971 remodel.

- Building 5 (the maintenance building) is a small, 1,225 square-foot wood frame building designed by Robert Goetz Associates and constructed in 1967. Building 5 is a vernacular, utilitarian building which was designed with several modest Spanish Colonial Revival style elements including stucco cladding and Spanish clay tile roofing (which has since been replaced). A driveway leads from Lincoln Avenue to this garage-like building. The building has a small storage mezzanine, a stucco exterior, and a tar and gravel roof. This structure has two roll-up garage doors and a laundry sink.
- Building 6 (the Bushell Cottage) was designed by Gerald M. McCue and constructed in 1958 to serve as residential dormitory for boys and girls. Building 6 is physically and functionally connected to Building 7 to the east, also built in 1958 by McCue. It is a one-story, 5,769 square-foot wood frame building designed in a Midcentury Modern style, and features simple materials including wood board and batten and cement asbestos siding, plain wood fascia, tar and gravel roofing, and cement asbestos sheathing at the eaves. The rafters of the roof are exposed throughout the interior of Building 6, with cement asbestos roof sheathing also exposed.
- Building 7 (aka Bushell Kitchen and Dining Hall) was designed by Gerald M. McCue and constructed in 1958 to serve as the kitchen and dining hall for Building 6. Building 7 is physically and functionally connected to Building 6 to the west. It is an octagonal, one-story, wood frame building of approximately 1,475 square feet, with wood board and batten siding and asphalt shingle roofing, set on a concrete slab foundation. The primary entrance is along the southeast-facing wall, accessed via a circular rough-aggregate concrete patio with square pavers with wood dividers. The primary, second and eighth wall of Building 7 are non-original, constructed during a 2000 alteration to Building 7 which enclosed the formerly open, covered patio. The interior of Building 7 has an open central area with brick flooring and board and batten interior walls. The wood frame of the roof is exposed, and wood posts are located within the main open dining area. Around the north and west perimeter are storage, bathrooms and offices, as well as the kitchen. The kitchen has vinyl flooring, commercial stainless steel kitchen appliances and a walk-in refrigerator.
- Building 8 (the Charleston House or Holmgren) is a 3,024 square-foot, rectangular one-story wood frame building. It was constructed in 1957 for the East Bay Activities Center (EBAC, now known as East Bay Agency for Children), which leased a portion of the subject property from Lincoln Child Center. The building was designed by architect Robert Ratcliff in a modest Midcentury Modern style, featuring wood board and batten siding, a rectangular plan, and a covered patio. The interior of Building 8 typically features plaster walls and carpeting. The central volume has an open pitched roof with an exposed ridge beam, while the ends of the building have drop ceilings. A series of smaller rooms which were likely originally used as classrooms by EBAC appear to have later been used as offices by Lincoln Child Center. The wood slab doors and carpeting do not appear to be original and the floor plan of Building 8 has been altered several times with at least three additions.
- Building 9 (the Champlin House) is a 6,850 square-foot, one-story wood frame building. It was designed group home by David Wade Byrens of Byrens Associates and completed in 2000. The structure has a slab foundation, stucco exterior and a composition shingle roof.
- Building 10 (the garage) is an 825 square-foot detached, one-story, wood frame building constructed in 1945, designed by Paull Hammarberg and built by contractor H. K. Jensen, as a "workshop" garage. The one-story building is rectangular in plan, set on a concrete slab foundation, and was built in a vernacular style with a gable roof clad in asphalt shingles and stucco-clad walls.

- Building 11 is a series of four combined prefabricated storage sheds that was installed between 2005 and 2009, comprising a total of 700 square feet of storage space.

Table 3-1: Existing Buildings, Proposed South Campus

Building:	Approx. Date of Original Construction	Size (SF)
Building 0	1935	6,150
Building 1	1929-1930	7.150
Building 2	1929-1930	7,200
Building 3	1990	1,420
Building 4	1938-1946	2,068
Building 5	1967	1,225
Building 6	1958	5,769
Building 7	1958	1,475
Building 8	1957	3,024
Building 9	2000	6,850
Building 10	1945s	825
Building 11	2005-2009	700
Total Building Area, Proposed South Campus		**43,856 SF**

As more fully described in the Cultural Resources chapter of this EIR, Buildings 0, 1 and 2 are described in Oakland's historic building rating system as Potentially Designated Historic Properties (PDHPs) with a rating of C3, meaning they are of "secondary importance" and not located in an historic district. As part of this environmental review, the City has conducted an assessment to confirm the historic resource designation of these three buildings, to determine whether any other existing buildings on the proposed South Campus are now considered historic resources, and to determine whether the proposed South Campus, or a portion thereof, is now eligible as an historic district pursuant to the provisions of the Historic Preservation Element of the Oakland General Plan and City CEQA definitions. The conclusions of that assessment (see more detailed discussion in the Cultural Resources chapter of this EIR) indicate the following:

- Three buildings (Building 0 - Junior Alliance Hall, Building 1 - Mary A. Crocker Cottage, and Building 2 - Grace L. Trevor Cottage) are individually eligible for listing in the California Register and as City of Oakland Designated Historic Properties and qualify as historical resources under CEQA.
- The other nine buildings on the site (Building 3 through Building 11) are not individually eligible for listing in the California Register and do not qualify City of Oakland Potential Designated Historic Property, and/or a less than 45 years old, and/or do not possess a level of significance that would qualify it for listing as historic resources under CEQA at this time.
- The proposed South Campus as a whole is not eligible for listing in the California Register or as a City of Oakland Designated Historic District, and does not qualify as a historical district under CEQA.

Existing Vehicle Access

The proposed South Campus site is accessed by vehicles from three points along Lincoln Avenue:

- a driveway at the upper east corner of the site for access to the upper parking lot
- a curb-cut at mid-block for access to a shallow loading dock and service yard, and
- a driveway at the lower west corner for access to the lower parking lot

An additional emergency access to the site is available through Linnet Drive, but no through traffic is allowed at this emergency access point.

Existing Landscape and Planting

The proposed South Campus and the area where the pedestrian tunnel will daylight on the existing Campus contain approximately 344 trees that include Coast Live Oaks, Redwoods, Eucalyptus, Pines, Cyprus, Pear and Olive trees. These existing trees are of varying health, age and size. Of these 344 total trees, approximately 221 are defined as "protected" trees in accordance with the City's Tree Protection ordinance. Approximately 65% of the protected trees are native species.

A small grass play field measuring approximately 68 feet by 138 feet exists on the lower (southerly) portion of the proposed South Campus' property line. Formal landscape improvement exist along the Lincoln Avenue frontage setback adjacent to Building 0 and Building 1 with trees, low shrubs and other greenery at the front edge of the lot, and a small areas of lawn in front of the buildings. An asphalt playground area is located between Buildings 1 and 2, and a larger playground area paved with asphalt and surrounded by trees and other vegetation lies on the east side of these buildings.

Existing Traffic Circulation

Most access points to both the existing Campus and proposed South Campus are via Lincoln Avenue. Traffic on Lincoln Avenue is managed by two existing City of Oakland traffic signals. One traffic signal is located at the entrance to the existing Campus' east parking lot (adjacent to the athletic fields), and the second traffic signal manages the pedestrian crossing located near the Head-Royce Gatehouse. The School is served by two regular AC Transit bus lines (Lines 39 and 339), five school-only AC Transit lines serving public schools in the area (Lines 604, 605, 606, 643 and 653), and private bus service sponsored by the School.

Currently, Head-Royce students are dropped off and picked up along Lincoln Avenue, and enter the existing Campus on foot through the School's Gatehouse. Student drop-offs occur on both sides of Lincoln Avenue, but pick-ups (except for buses) are required to take place on the north side of Lincoln. A crossing guard assists pedestrians across Lincoln Avenue at a signalized crosswalk. Drop-off and pick-up periods occur primarily during the School's morning peak period (8:00-8:30 AM) and afternoon peak period (3:15-3:45 PM). Westbound (downhill) drivers desiring to turn around on Lincoln Avenue after drop-off are directed by the School to use the "Loop," which consists of a left-turn on Alida, a right-turn on Laguna, a right-turn on Potomac, and then another right-turn on Lincoln Avenue.

Service vehicles and a limited number of staff with parking passes, may access the existing Campus from Whittle Avenue (a neighborhood street that parallels Lincoln Avenue, but use of this access is restricted as defined in the School's current (2016) PUD permit.

Existing Parking

The existing Campus has 154 off-street parking spaces, and uses 129 off-street parking spaces on former Lincoln site, as indicated in **Table 3-2**. The parking spaces at the former Lincoln site are those parking areas previously used by Lincoln at the time Lincoln occupied the site. The prior 2016 PUD permit required that the School provide a total of 157 off-street parking spaces to meet parking requirements, and that these parking spaces could be provided either at 4315 (existing Campus) or 4368 Lincoln Avenue (the former Lincoln site),

provided that the spaces used at 4368 Lincoln Avenue were not already allocated to the existing use permit governing uses at that site. Now that Lincoln has vacated the site, none of these parking spaces are allocated, needed or used by Lincoln.

Table 3-2: Existing Parking Summary

Existing Campus	**Cars**
Lot E	20
Lot F	134
Subtotal Existing Campus	154
Former Lincoln Site (Proposed South Campus)	
Lot A	12
Lot B	10
Lot C	46
Lot D	62
Subtotal, Proposed South Campus	129
Total Existing Parking:	**283**

Off-site Drainage Channel

There is a drainage channel along the southern boundary of the former Lincoln site that consists of a series of culverted and surface conveyance channels. A significant portion of the drainage from the former Lincoln site drains via a piped system to the upper portions of this drainage course, and is discharged into its culverted portions. The portion of the channel adjacent to the most southwest corner of the site shows indication of a more naturalized channel, and likely meets the definition of "creek" per the City's Creek Protection ordinance (see Hydrology chapter of this EIR). No portion of this drainage channel is located on the former Lincoln (proposed South Campus) site.

Applicable Land Use Regulations

General Plan Land Use Designations

The former Lincoln site has a General Plan land use designation of Institutional (see **Figure 3-5**). The Institutional land use classification is intended to create, maintain and enhance areas appropriate for educational facilities, cultural and institutional uses, health services and medical uses, as well as other uses of similar character. The maximum FAR for this classification is 8.0.

The existing Head Royce School Campus has a General Plan land use designation of Hillside Residential on the majority of the site, with a small area to the west designated as Detached Unit Residential. The Hillside Residential designation is intended for low-density residential neighborhood uses. The Detached Unit Residential designation is intended for residential areas with single-family homes, with allowances for schools and other small-scale civic institutions.

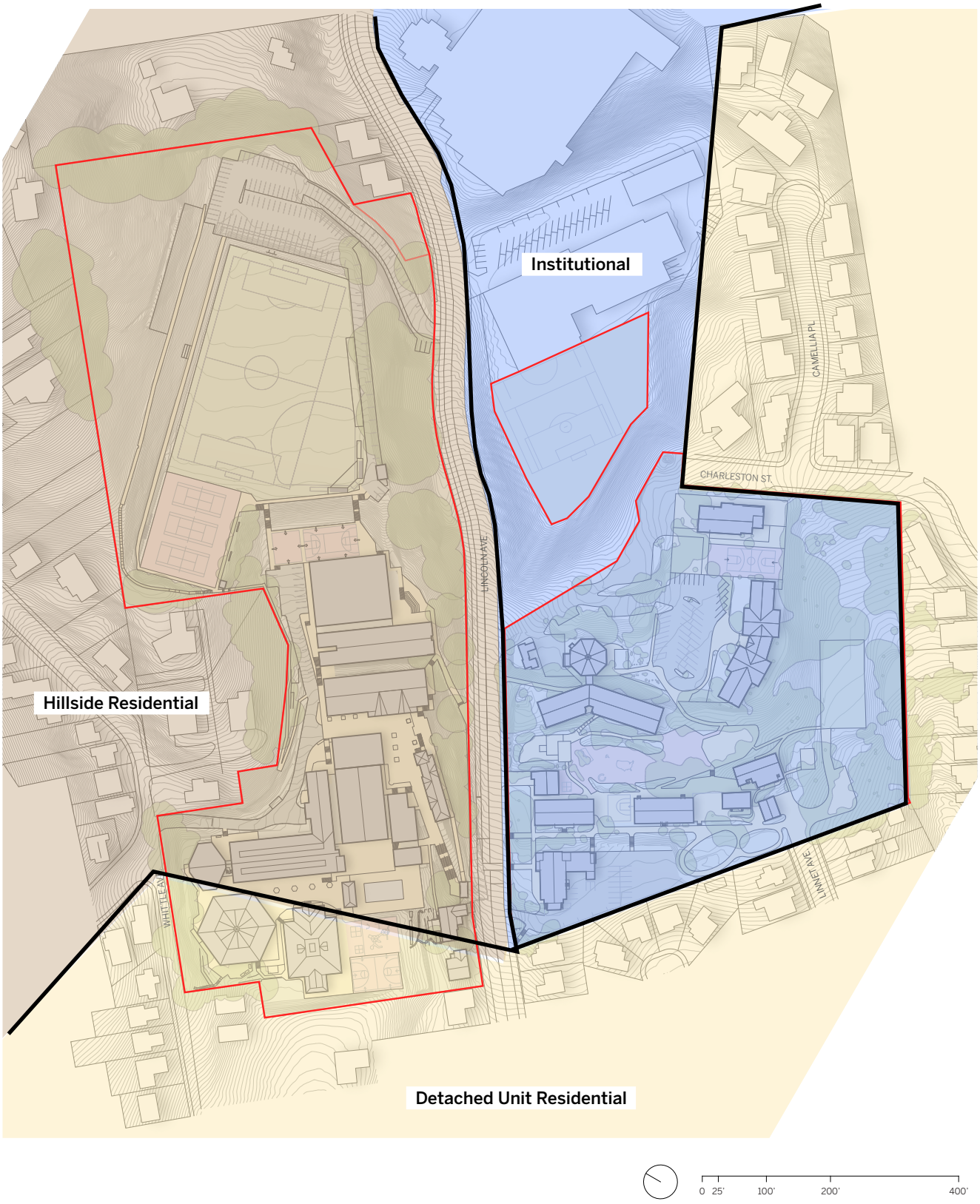


Figure 3-5
Oakland Genenral Plan Land Use Designations

Source: City of Oakland General Plan Diagram

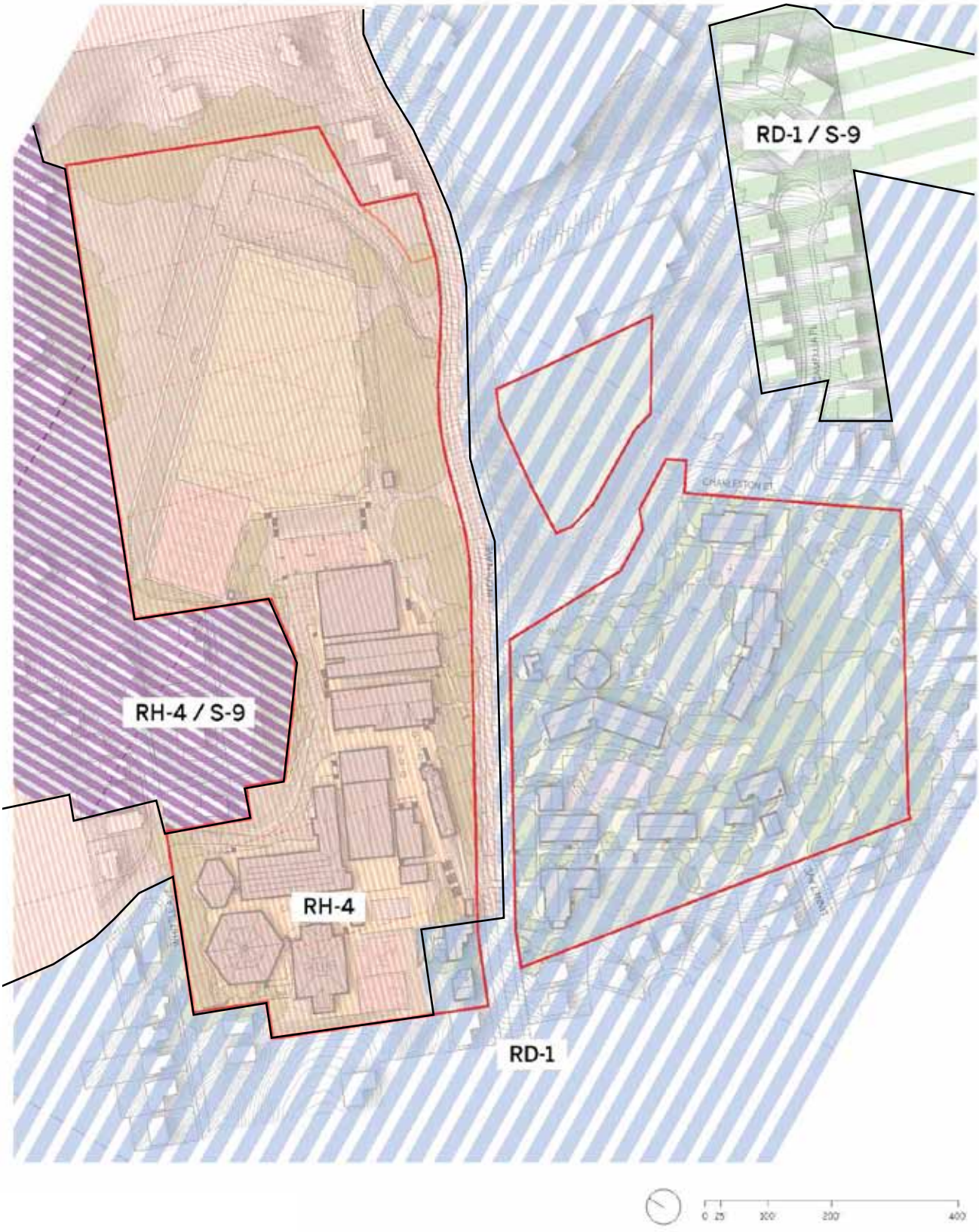


Figure 3-6
Oakland Zoning Districts

Source: City of Oakland Zoning Map

Existing Zoning

The former Lincoln site is zoned Residential Detached-1 (RD-1) (see **Figure 3-6**). Under the City's Planning Code, the RD-1 zoning district is intended to accommodate detached, single unit structures and a limited range of commercial uses.

The existing Head-Royce School Campus is zoned Residential Hillside-4 (RH-4). The RH-4 district is intended to create, maintain, and enhance areas for single-family dwellings on minimum lot sizes of 6,500 to 8,000 square feet and a limited range of civic uses, and is typically appropriate in already developed areas of the Oakland Hills. An existing Planned Unit Development Permit governs the allowed land uses on the existing Campus, permitting the existing institutional uses.

Existing PUD Provisions

In 2006, the City approved a Planned Unit Development (PUD) permit for the development and operation of the School. The Master Plan for this 2006 PUD enabled development of much of the newer buildings and facilities in the Upper Level of the existing Campus, including the World Language Building, the Read Library, the Main Upper School Building and the gatehouse on Lincoln Avenue.

In 2016, the City of Oakland amended the School's PUD permit. The 2016 Amended PUD permit authorized construction and operation at the Head-Royce School Master Plan as previously defined in the Preliminary PUD Plans approved January 2006, the Final PUD Plans approved October 2007, the approved plans of July 2009, and plans submitted September 2014. This 2016 PUD approval included a number of amendments to the 2006 PUD, including but not limited to clarifications and new Conditions of Approval (COAs) as summarized below:[3]

School Grades/Student Enrollment/Verification (Condition of Approval #12)

a) Head Royce School is permitted to operate a K-12 Community Education Facility. As of 2016, the maximum school enrollment at the 4315 Lincoln Avenue (existing) Campus was 860 students. This was the maximum enrollment number then permitted, with an allowed 3% margin for fluctuations due to the admissions process. An enrollment increase was permitted, to occur in 3 phases of 15 students each.

b) The School was permitted to increase its enrollment to 875 students with the 2016 approval, and to increase by up to 15 students each year thereafter (e.g., up to 890 students at the start of the 2016-2017 school year, and up to 906 students at the start of the 2017-2018 school year) provided the School meet and maintained required auto trip reductions.

c) The maximum school enrollment at Head Royce School is now 906 students.

d) No enrollment fluctuation resulting in enrollment above 906 students is allowed.

Hours of Operation (Condition of Approval #14)

Head Royce School's hours of operation, which include academic, childcare and afterschool programs, are from 7:00 a.m. to 6:30 p.m. Monday through Friday. Athletic practices, including outdoor practices may commence at 6:30 a.m. on weekdays. Outdoor athletic practices and games must end by 7:30 p.m. or sundown whichever is earlier. Indoor activities involving only School students, faculty, staff and members of the board of trustees (such as play rehearsals, standardized testing, band practices, and meetings of student organizations, faculty committees and meetings of the board of trustees) are not considered

[3] City of Oakland, *Final Revised Conditions of Approval - Head Royce School*, (REV13-003), June 7, 2016 (Revised July 7, 2016)

Special Events. These indoor activities may occur after 6:30 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on weekends. No field-wide lighting may be installed on the athletic field.

Summer Program Enrollment/Operations (Condition of Approval #15)

a) Summer Program hours are from 7:30 AM to 6:00 PM over the summer, from Monday through Friday only.

b) The Summer Program includes two, three (3) week sessions spanning six weeks, generally beginning the third week in June through the last week in July.

c) The Summer Program may have evening or weekend Special Events. However, those Special Events are included in the maximum number of school-wide Special Events.

d) The maximum Summer Program enrollment is 780 children per session.

e) The playing fields or pool shall not be used prior to 9:00 AM.

f) The School must operate the Summer Program and shall not lease, partner or loan the Summer Program to another operator or organization.

g) Unless otherwise noted, all Conditions of Approval that apply to School operations apply to the Summer Program.

Number of Special Events (Condition of Approval #16)

The School and the Summer Program is permitted to hold Special Events at the Head Royce School campus subject to the following:

a) A "Special Event" is defined as a gathering in which visitors (including parents) are invited to the campus in conjunction with a School or Summer Program-sponsored event or activity such as a Back to School night, a performance (play or musical), athletic event, dance, walk-a-thon, guest speaker, school fair, Admissions Open House, promotion or graduation ceremony, associated and carried out by the school (not hosted by an outside group or organization) and for which 50 or more visitor vehicles are expected. If more than one Special Event occurs on a single day, each Special Event shall count as a separate event. Parking rules for Special Events are outlined in Condition 23. A Special Event does NOT include indoor activities involving only School students, faculty, staff and members of the board of trustees such as play rehearsals, standardized testing, band practices, and meetings of student organizations, faculty committees and meetings of the board of trustees. In addition, neighborhood meetings required or requested to be held on campus as a condition of this permit or otherwise by the City are not considered to be Special Events.

b) The school shall post an annual calendar on its website and provide the website link to the Neighborhood Committee described in Condition 24 at the beginning of the School year listing all Special Events and the anticipated number of visitor vehicles that will be generated for each event. The School is permitted an additional ten (10) total weekday evening events that are not on identified on the annual calendar, provided that the Neighborhood Committee is provided a 30-day notice of such addition and those events shall not take place during weekends or the summer.

c) During school academic, childcare and afterschool program hours of operation, Mondays through Fridays, the School is permitted an unlimited number of Special Events. However, those events for which 50 or more visitor vehicles are expected must follow Condition 23 procedures for Special Events.

d) The school is permitted a maximum of 85 evening Special Events per school year during the hours of 7:00 PM to 9:30 PM. All Special Event participants shall have left the campus and the lot locked by 10:00 PM. School dances shall end by 10:30 PM with all participants leaving by 11:00 PM.

e) The school is permitted a maximum of 55 Saturday daytime Special Events per school year during the hours of 9:00 AM to 6:00 PM, and 10 Saturday evening Special Events per school year during the hours of 6:00 PM to 9:30 PM. The school is permitted a maximum of eight (8) Sunday Special Events per school year during the hours of 9:00 AM to 6:00 PM. The school shall be permitted a maximum of ten (10) single day summer Special Events during the hours of 9:00 AM to 6:00 PM. One summer Special Event may take place on Saturday. There shall be no Sunday summer Special Events.

f) No events may be held that have not been published on the school calendar 30 days in advance, or emailed to immediate neighbors one month in advance. The school is not permitted to rent or loan out any of its facilities.

g) All special events shall be monitored by the School per the Condition of Approval.

Master Plan May Be Required for Student Enrollment Increase or "Future Construction" (Condition of Approval #18)

The Project Applicant shall apply for a new or amended Planned Unit Development Permit for any student enrollment increase over 906 students on the Head Royce campus site, including but not limited to any physical expansion of Head Royce School's operations at 4315 Lincoln Avenue or any other "Future Construction" associated with increasing Head Royce School's operations. The City may require preparation of a campus-wide Master Plan for any such expansion. Future Construction is defined for purposes of this condition as: new, wholly reconstructed, or relocated school buildings, any expansion of floor area (as defined by Planning Code), new enclosed buildings or portions of buildings (i.e., storage shed, garage, attic on an existing building). For purposes of this condition, future construction does not include features such as unenclosed decks/balconies, stairs, walkways, patios, courtyards, fences, walls and retaining walls, trellises or other landscape features, interior remodeling of an existing building, or repair of existing building features. Any future Master Plan shall address, at a minimum, an adequate on-site pick-up and drop-off area, how the school will accommodate additional student growth, a comprehensive development plan for the entire School, including addressing all on-site parking, events, sports fields (if applicable) and traffic-related and vehicle access issues. The last enrollment and staffing form submitted to the California Department of Education shall be required as part of the application documents.

Parking Requirement and Shared Parking (Condition of Approval #20)

At maximum enrollment (906 students), the School must provide a minimum of 157 off-street parking spaces and in all cases shall, at a minimum, maintain sufficient off-street parking to meet Oakland Planning Code section 17.116.070(C). These spaces may be provided either at 4315 Lincoln Avenue (the existing Campus) or 4368 Lincoln Avenue (the former Lincoln site), provided the spaces used at 4368 Lincoln Avenue are not already allocated to an existing use permit governing uses at that site. The School may use surplus parking at other off-site locations, provided that use of these facilities for parking is not intended to fulfil the School's obligation to provide 157 off-street parking spaces (at maximum enrollment), and are not required or needed for the uses governing those sites.

Transportation Demand Management (Condition of Approval #23)

The applicant shall maintain a TDM plan during both the regular school year and during the Summer Program. Among other things, the TDM implements Conditions 23 a-g as set forth below. The Conditions are the governing and enforceable conditions of approval

a) Traffic Circulation and Management: The School shall continue to implement policies to ensure that 1) the drop-off and pick-up process is managed effectively and efficiently; 2) to minimize traffic on neighborhood streets; and 3) to encourage safe driving behaviors.

b) Parking Management Strategies: The School shall implement parking management strategies to

ensure that 1) the School minimizes parking in the neighborhood; 2) that school-related parking does not disrupt traffic; and that provides incentives to reduce single occupancy vehicles.

c) Auto Trip Reduction Program: The School shall discourage single-student and single parent/student driving in the Transportation Policy Guide and implement policies with a goal of reducing single occupant vehicles arriving or departing the School. The Auto Trip Reduction Program shall be included in the TDM Plan and address all four modes of transportation (pedestrian, bicycle, carpooling/vanpooling, and transit), including:

- *The project applicant shall continue to sponsor and provide private buses (or an equivalent service and capacity as existing conditions).*
- *The project applicant shall continue to subsidize an AC Transit bus pass to students and faculty as long as AC Transit bus service is available. The project applicant shall assign a transportation coordinator who will provide carpooling and ride matching services to parents who are interested in carpooling.*
- *The School shall commit to maintain an average of 27% of its school-year student enrollment traveling to school by modes other than single occupancy vehicles (e.g., driving or being driven alone) as long as AC Transit maintains the bus routes that serve the School. However, once the School achieves a maximum student enrollment of 906 students, the School shall commit to maintain an average of 30% of its school-year student enrollment traveling by modes other than single occupancy vehicles. A survey of alternative travel modes shall occur during each of the two independent monitoring periods carried out during the school year pursuant to Condition 23(g) and the counts shall be averaged over the two (2) monitoring periods. However, the School may elect to conduct additional third party monitoring and the counts shall be averaged overall additional academic year monitoring periods. Alternative travel modes shall include walking, biking, carpooling or taking a bus. If AC Transit chooses to discontinue one or more of the routes that service the School, the average required by this condition will be lowered by the percent of students who used the discontinued transit line. The School and the City will then work together to determine transportation alternatives and a new, appropriate percentage of students that should be traveling to school by means other than single-occupancy vehicles*

d) Special Events: The project applicant shall establish transportation procedures for Special Events to 1) ensure that Special Events are managed efficiently and effectively; and 2) minimize traffic and parking in the neighborhood. The School shall anticipate the attendance of Special Events and note this on the school's calendar. At least two weeks prior to a Special Event, the School shall confirm the anticipated number of vehicles and distribute the appropriate parking locations and restrictions to the attendees and Neighborhood Liaison Committee. For all Special Events, the School shall direct visitors not to park on neighborhood streets and instead encourage them to park in off-street lots or on either side of Lincoln Avenue above the gatehouse.

e) Communication: The School shall establish communication protocols to 1) institutionalize and encourage good neighbor parking and driving behavior; 2) ensure that the School community drives in a safe manner, and 3) ensure the rules are clearly communicated.

f) Enforcement of Traffic Safety Rules and Event Traffic and Parking: The School shall implement and maintain a system to identify and track persons who violate the School's Traffic Safety Rules as set forth in the TDM Plan. Good Neighbor rules as set forth in the TDM Plan shall not be considered Traffic Safety Rules subject to enforcement by the Bureau of Planning. Violations of the Vehicle Code are enforced by the Oakland Police Department. During the pick-up and drop-off periods, the School shall assign four (4) traffic monitors to implement and monitor the Traffic

Safety Rules. The monitors shall be placed at Whittle Gate, and three traffic monitors for Lincoln Avenue between the main entrance and upper driveway.

g) Compliance Reporting:

i. The School shall hire a qualified traffic consultant, (based on at least three recommendations from the Bureau of Planning), approved by the Director of Planning or designee, to monitor compliance with the traffic-related conditions in the Conditions of Approval and the approved TDM Plan. Specifically, the independent monitors shall verify compliance by:

- *Counting the number of traffic assistants and monitors present during drop-off and pick-up periods.*
- *Observing the drop-off and pick-up traffic flow and recommending measures to ensure smooth operations to the City.*
- *Reviewing the length of the queue and check if it extends above the upper driveway.*
- *Collecting the number of violations that have been reported from Head Royce's database and recommending measures to reduce violations. Recording parking occupancy in all Head Royce parking lots.*
- *Monitoring Whittle Avenue and Alida for School–related parking.*
- *Auto Trip Reduction Program and related documents as determined satisfactory by the Director of Planning, to meet the alternative transportation mode percentage.*

ii. The independent monitor (which shall be chosen by the School based on at least three recommendations from the Bureau of Planning), shall monitor the school's compliance with the traffic-related conditions of approval as implemented by the TDM four times per year: once each semester, once during the Summer Program and once during a Special Event involving over 100 cars. The independent traffic consultant shall submit a written report within two weeks of the monitoring summarizing the results of the monitoring session. The reports shall include recommendations to remedy potential infractions of the traffic-related conditions of approval, if appropriate to the Bureau of Planning. Such measures proposed by the independent traffic consultant must be approved by the City of Oakland prior to implementation. The City of Oakland shall have one week to review and approve the submitted measures. Upon City of Oakland approval of enhanced or additional TDM measures, the project applicant shall be given four weeks after the approval to implement the recommended measures.

iii. The School shall have one semester to cure any traffic-related violations of the conditions of approval. If after invoking enhanced or additional TDM measures the School still does not meet its traffic-related conditions of approval based on the independent monitors reports submitted to the City of Oakland, the Bureau of Planning may refer the matter to the City of Oakland Planning Commission for scheduling of a compliance hearing to determine whether the School's approvals should be revoked, altered, or additional conditions of approval imposed. This could include a permanent reduction in enrollment. The City of Oakland can also impose penalties on a per infraction fee pursuant to the City's Master Fee Schedule based on the observations of city officials, the Oakland Police Department, or the independent monitors. In determining whether reduced enrollment or other remedies are appropriate, the City of Oakland shall consider if the School has demonstrated a good faith effort to comply with the traffic-related conditions of approval. It will be up to the School to provide evidence to the City of Oakland of good faith efforts for review.

Neighborhood Liaison Committee/Point of Contact/Complaints (Condition of Approval #24)

The School shall invite interested representatives from the surrounding neighborhood streets, including but not limited to, Upper Lincoln, Lower Lincoln, Alida Court and Whittle Avenue neighborhood (Neighborhood Committee) to meet with a representative from the School administration, the Director of Neighborhood Relations (or his or her designee) and a member of the Board of Trustees, to resolve conflicts and maintain communications between the school and the surrounding neighborhoods. The School shall convene the Neighborhood Committee at least twice a year, with one meeting held at the end of the school year and one prior to the start of the Summer Program. The date/time/location shall be mutually agreed to by the Neighborhood Committee and the School. Invitations to the meeting with a written agenda shall be mailed at least 10 days prior to the scheduled meeting to the Neighborhood Committee, the City Council's office for District 4, the Planning Director or designee, and all residents immediately abutting and adjacent to the School. The School shall increase the number of meetings if determined to be necessary by City Bureau of Planning staff. School shall provide notice of these meetings to City staff who may attend.

2018 PUD Amendment

In 2018, the City of Oakland amended the 2016 PUD permit to allow Head-Royce athletic teams to use the existing playfield located at 4500 Lincoln Avenue (the Ability Now Bay Area property) for practices. Conditions of Approval pertaining to use of the Ability Now field included: [4]

Head Royce shall ensure compliance with the following terms of the field use through their lease with Ability Now.

a) The field must remain available to Ability Now clients as the primary user of the project site.

b) The daytime weekday field use for Head Royce School is from 2:30 PM-7 PM or sundown if earlier than 7PM.

c) The field will be available on Saturdays only (no Sundays or holidays) for a two-hour period between 9:00 AM- 1:00 PM.

d) The field will be used for sports practices only and shall not be used for Head Royce School Physical Education (PE) classes, scrimmages or games.

e) The field shall be used either by two teams at a time or up to 50 people, whichever is greater, on weekdays, or by one team at a time or up to 25 people, which is ever is greater, on Saturdays. During weekends, coaches will ensure that the active field use is generally located closer to Lincoln than neighbors.

f) No summer use or summer-school use of the field is permitted. Use for practices may commence up to two weeks before the start of the fall athletic competition season as established by the North Coast Section of the California Interscholastic Federation or mid-August (approximately August 15th), whichever is later.

g) Field whistle use must be pea whistles and conform to the recommendations in the Noise Analysis. No amplified or bullhorn noise is permitted.

h) No visitors such as parents, spectators or other persons that will result in cheering section which would increase noise are permitted on the field sidelines. Coaches are the exception.

[4] City of Oakland, Case File No. REV13-0003-R01; 4513 Lincoln Ave; 029A-1367-004-03; 029-A1367-005-02 & 029-A1367-006-01, Attachment B: Conditions Of Approval, January 22, 2018

i) Head Royce students will walk to Ability Now and coaches shall encourage parents to pick-up or drop-off students up in the Ability Now parking lot as opposed to the street. Head Royce School and Ability Now shall actively evaluate the parking situation and manage the parking lot at Ability Now to ensure that enough parking spaces are available for Head Royce students. If there is not enough parking at Ability Now or the lot is occupied by Ability Now clients, Head-Royce students shall walk to Ability Now.

j) If necessary, the City may require that a noise consultant be retained to monitor the practice noise. If a violation is found of the noise ordinance, the consultant shall recommend measures to reduce the noise and Head Royce School shall implement the recommendations.

Detailed Project Description

The Project proposes reuse of the former Lincoln site to extend academic programming, support additional enrollment, add faculty and staff, and create a new South Campus of the Head Royce School.

Project Objectives

Project Objectives

The Project applicant envisions several integrated Project Objectives as listed below: [5]

1. Expand the School's educational facilities to the proposed South Campus by rehabilitating three existing buildings (Buildings 0, 1 and 2) that are identified under current City records as historic resources; utilize one additional existing building (Building 9) for school-related or potentially short-term employee housing; build new facilities that address current and future educational needs; and improve vehicular and pedestrian circulation, parking and grounds.
2. Use of existing outdoor space for outdoor classrooms.
3. Construct a new Performance Arts Center for student curriculum relating to theater, music, dance and culture.
4. Gradually increase permitted Schoolwide enrollment by 344 students over currently allowed enrollment, to a maximum student population of 1,250 students (at an anticipated enrollment increase rate of approximately 1 percent to 2 percent per year for a 20-year period).
5. Remove on-street drop of and pick up from Lincoln Avenue and remove parent use of Alida Loop by developing an internal, one-way circulation loop driveway on the proposed South Campus. The driveway will provide off-street drop-off and pick-up space, eliminate pick up and drop off activities (other than for buses) from Lincoln Avenue, and create a new vehicle circulation pattern that reduces turn-around traffic in adjacent neighborhoods.
6. Integrate the existing Campus and the proposed South Campus for pedestrians with an underground pedestrian tunnel below Lincoln Avenue, to reduce at-grade crossings.
7. Reconfigure and increase the number of off-street parking spaces on the proposed South Campus (and/or the existing Campus as may be necessary), to meet parking demands at buildout and to minimize neighborhood parking and disruption.
8. Use new buildings placed on the proposed South Campus to create a central commons for student interactions and to provide for noise attenuation.

[5] Derived from Applicant's Draft Preliminary Development Plan, submitted December 2018

9. Achieve LEED Gold standards on the renovation of existing buildings and on the new construction of the Performing Arts Center and Link Pavilion.
10. Improve drainage through better stormwater management.
11. Allow neighbor access to outdoor facilities including a network of trails and pathways on proposed South Campus through key card access.

Details of Proposed Physical Improvements

Demolition of Existing Buildings

The Project proposes to remove eight of the twelve existing buildings on the proposed South Campus (see **Figure 3-7**). Of these eight buildings to be demolished, four were originally constructed in the 1950s and 1960s and have not been identified as historic resources, including Building 4 (the Ethel Moore Cottage), Building 5 (a maintenance shed), and Buildings 6 and 7 (the Bushell Cottage and Dining Hall). Two of these buildings to be demolished were constructed in the 1990s and do not qualify as historic resources, including (Building 3 (a portable classroom) and Building 8 (Holmgren House). The two remaining buildings to be demolished are accessory structures not considered historic resources, including Building 10 (a 1945-era garage) and a shed (circa 2005).

Demolition of these buildings (a total of approximately 16,500 square feet of building space) is proposed in order to accommodate construction of new buildings and the new Loop Road, and to clear space for parking and Campus open space.

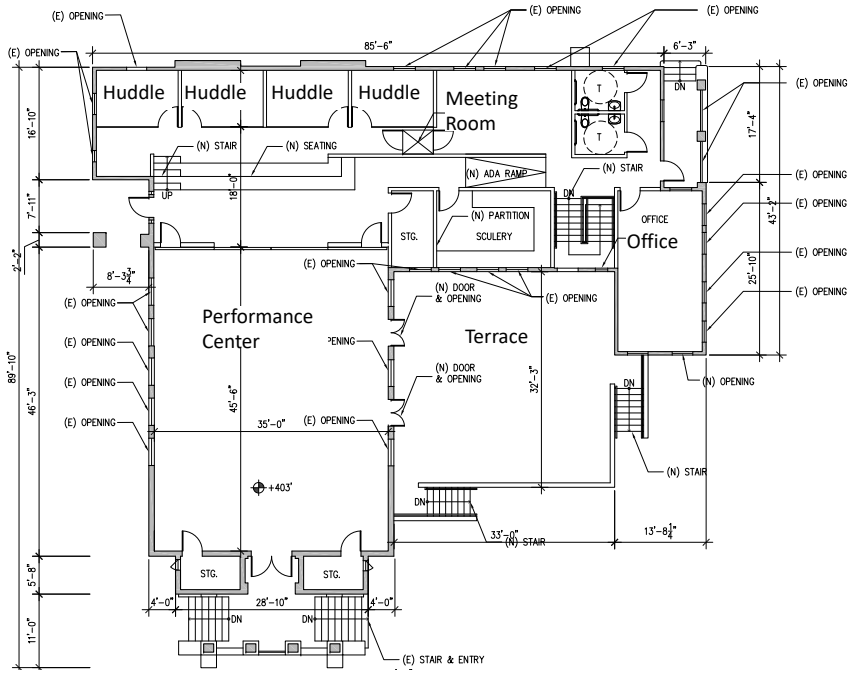
Reuse and Renovation of Existing Structures

Three of the existing buildings on the proposed South Campus are to be rehabilitated and reused for on-going School purposes. These buildings will not be accessible to the general public. These three buildings are the 1929 to 1935-era buildings designed and constructed by W.G. Corlett and Reed & Corlett. They include Building 0 (the Junior Alliance Hall, originally constructed in 1935 as an auditorium and gymnasium with administrative offices), Building 1 (the Mary A. Crocker Cottage originally constructed in 1929-1930 as a dormitory for children), and Building 2 (the Grace L. Trevor Cottage, also originally constructed in 1929-1930 as a dormitory for children).

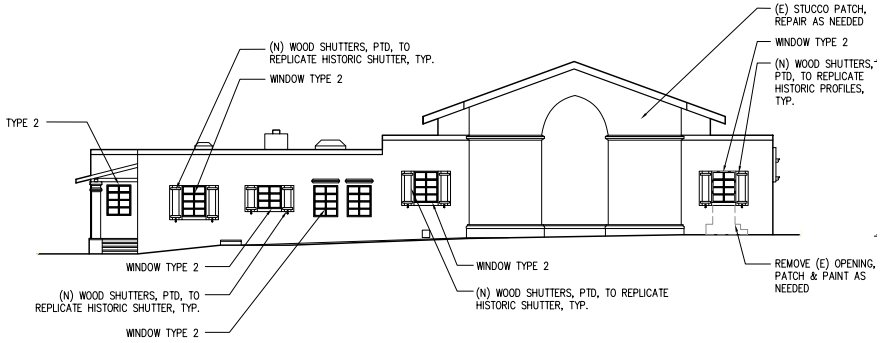
- Building 0 is to be used for collaborative meeting space for small groups, as well as larger assembly space for between 55 to 125 people. Office space for administrative use will also be provided. A small kitchen may be included for catering and food service.
- Buildings 1 and 2 would be used for classroom and administrative functions.
- Rehabilitation efforts would chiefly involve interior upgrades and renovations, but will also involve installing new exterior features and modifying others (such as new doors, windows or external stairways) to meet modern life/safety requirements and/or the School's programmatic needs and design preferences. Elevations depicting the proposed exterior renovations of Buildings 0, 1 and 2 are shown on **Figure 3-8, 3-9 and 3-10**, and are evaluated for consistency with Secretary of Interior Standards for historic buildings in the Cultural Resources chapter of this EIR.

Figure 3-7
Proposed Status of Buildings at Former Lincoln Site

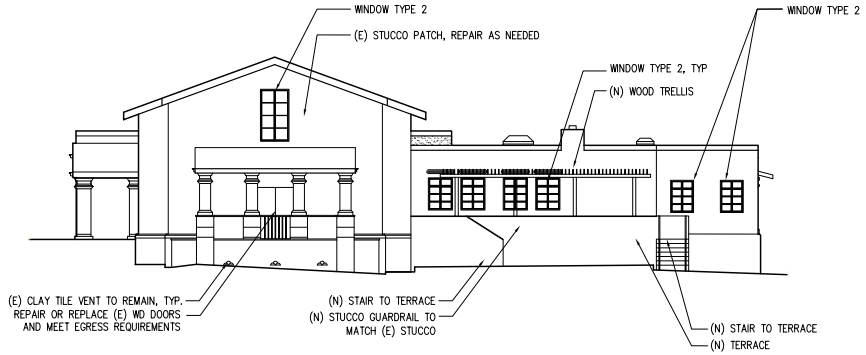
Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - March 2019



First Floor, Proposed Plan



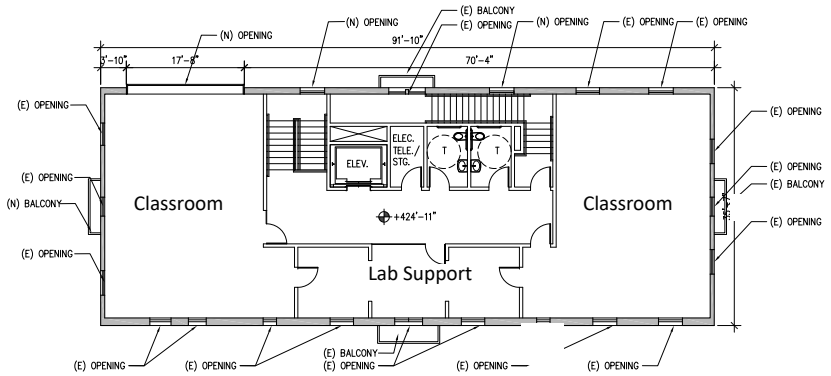
East Elevation, Proposed



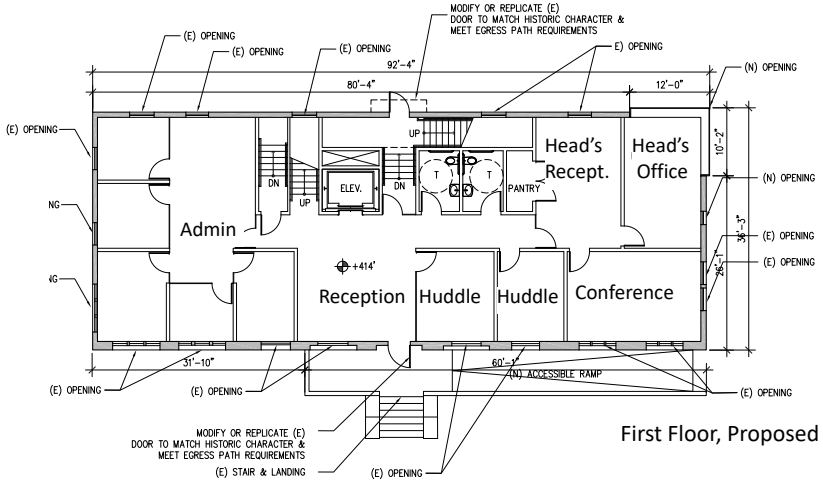
West Elevation, Proposed

Figure 3-8
Proposed Building O Reuse and Rehabilitation

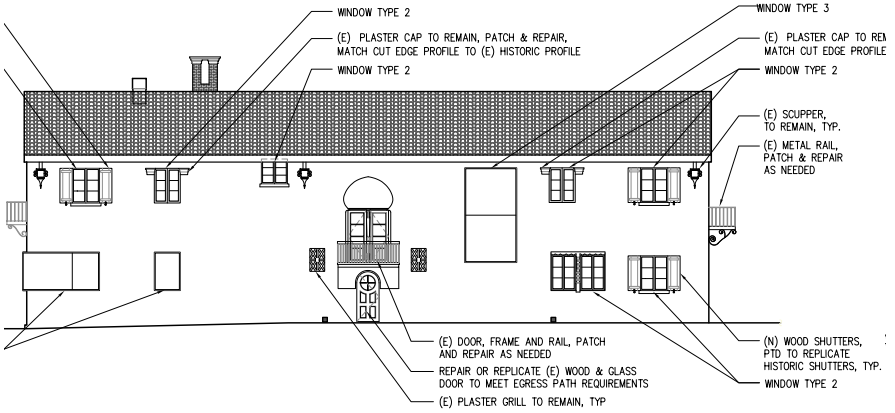
Source: Skidmore, Owings & Merill LLC, April 2020



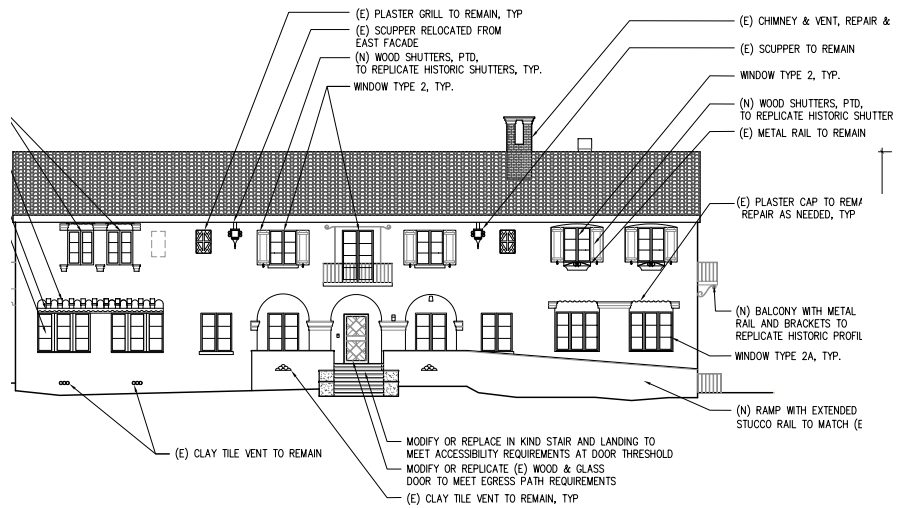
Second Floor, Proposed Plan



First Floor, Proposed Plan



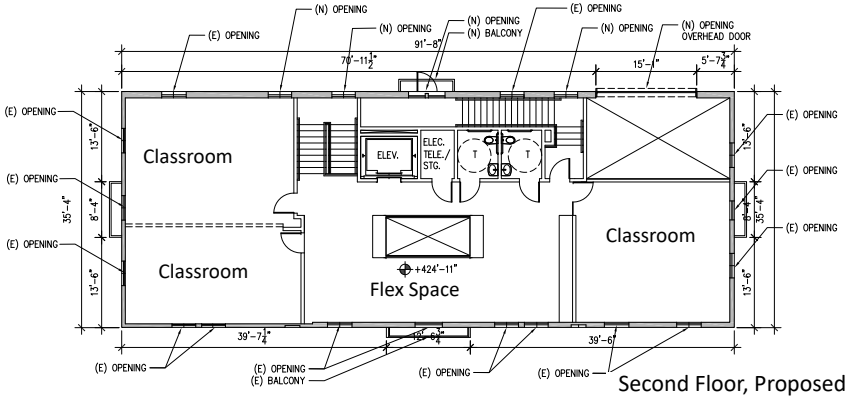
East Elevation, Proposed



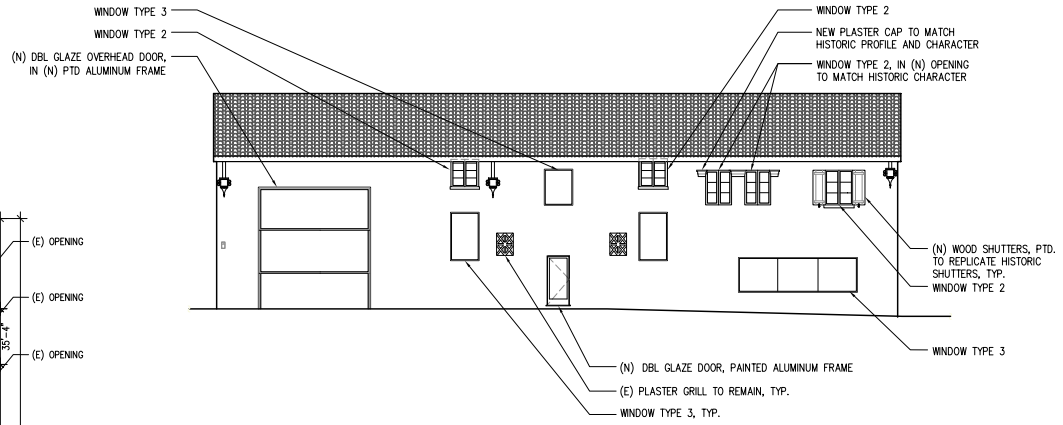
West Elevation, Proposed

Figure 3-9
Proposed Building 1 Reuse and Rehabilitation

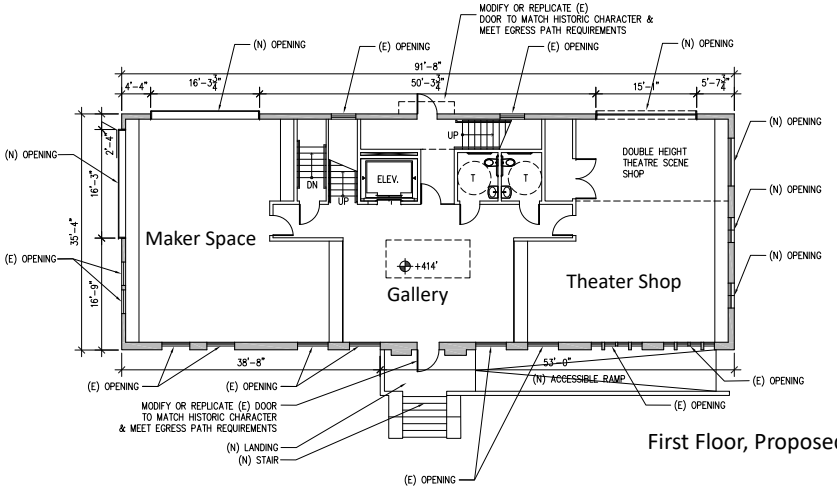
Source: Skidmore, Owings & Merill LLC, April 2020



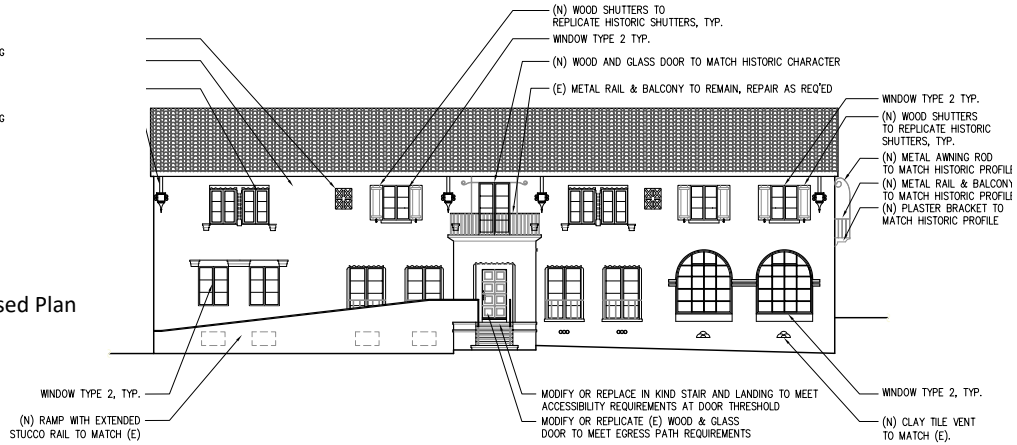
Second Floor, Proposed Plan



East Elevation, Proposed



First Floor, Proposed Plan



West Elevation, Proposed

Figure 3-10
Proposed Building 2 Reuse and Rehabilitation

Source: Skidmore, Owings & Merill LLC, April 2020

Building 0

Building 0 would be remodeled to provide space primarily for the performing art and music programs at the School. The original auditorium and gym space would be repurposed again as a stage and performance center with seating for between 55 to 125 people. Small "huddle" rooms to the back of the performance center would provide space for collaboration, practices and preparations. An office space for administrative use would be provided, and a small kitchen may be included for catering and food service. A new outdoor terrace is proposed to be constructed adjoining the performance center.

Building 1

Buildings 1 would be used for classroom and administrative functions. The first floor of Building 1 is expected to contain new office space for the Head of School, Admissions and other administrative functions, as well as a reception area and small conference rooms. The second floor is anticipated to include 2 large classrooms and adjoining lab space. A new elevator would provide additional access to the second floor, in addition to the existing staircase.

Building 2

The first floor of Building 2 would be opened up into larger spaces by removing certain interior walls. The new spaces are proposed as a gallery, a theater scene shop and maker space. The second floor is proposed to include 3 new classrooms and an interior "flexible" space that could accommodate a variety of school purposes.

Building 9

The Project also proposes renovation and reuse of Building 9 (built in 1999 and originally used as a dormitory). Building 9 would be retained, rehabilitated and re-purposed for classroom and administrative use with no significant changes to the exterior. As an option under this Project Description, the School may seek to convert the interior of Building 9 into up to 5 apartment units. These apartment units would provide temporary housing for newly hired faculty or staff while they seek permanent residences in the area. Anticipated stays in such units would range from one to two years. Such temporary housing is considered an accessory use pursuant to Oakland Planning Code (Section 17.10.010 (C) (1). Short-term housing for faculty and/or staff would be accessory to the School's institutional purpose because the limited and short-term residential occupancy would support the School's institutional mission to recruit employees.

<u>New Buildings</u>

The Project proposes three new buildings to be constructed on the proposed South Campus (see **Figure 3-11**). These three buildings include:

Performing Arts Center

The Performing Arts Center would provide the School's theater, dance and music groups with practice, performance and classroom space, and will be a place for the School to hold assemblies, concerts, meetings and host speakers. The building is designed to accommodate up to 450 seats for the audience, and anticipated to be up to 32 feet in height and 16,000 square feet in size (see **Figure 3-12**), showing a preliminary elevation of this structure). The Performing Arts Center would be located near the westerly edge of the proposed South Campus (opposite the terminus of Linnet Avenue in the adjacent residential neighborhood), at the current locations of Buildings 3, 4 and 10. It would be taller than the existing buildings to be demolished due to the unique height requirements of the theater space, and set back from the property boundary by 55 feet. A loading dock is proposed to be located on the west side of the building. It is anticipated that deliveries could occur approximately one time per day, in trucks of approximately 26 feet in length.

Link Pavilion

The Link Pavilion will be a 1,500 square-foot, 16-foot tall, a one-story structure that will be a multi-use meeting room and gallery space. It would be located near the center of the proposed South Campus (east-to-west) and near the Lincoln Avenue right-of-way, and would provide an elevator access from the Pavilion to the pedestrian tunnel entrance, below (see further discussion, below).

Storage Building

The third new building on the proposed South Campus would be an approximately 1,500 square-foot, 14-foot tall building to be used for storage. The storage building would be located on the easterly (uphill) side of Building 9.

Net Change in Building Space

As indicated in **Table 3-3**, with demolition of existing buildings as proposed, retention and renovation of Buildings 0, 1, 2 and 9, and construction of the new Performing Arts Center, Link Pavilion and Storage Building, there would be a total of approximately 46,750 square feet of building space on the proposed South Campus at buildout. This represents approximately 1,900 square feet of net new building space as compared to existing conditions.

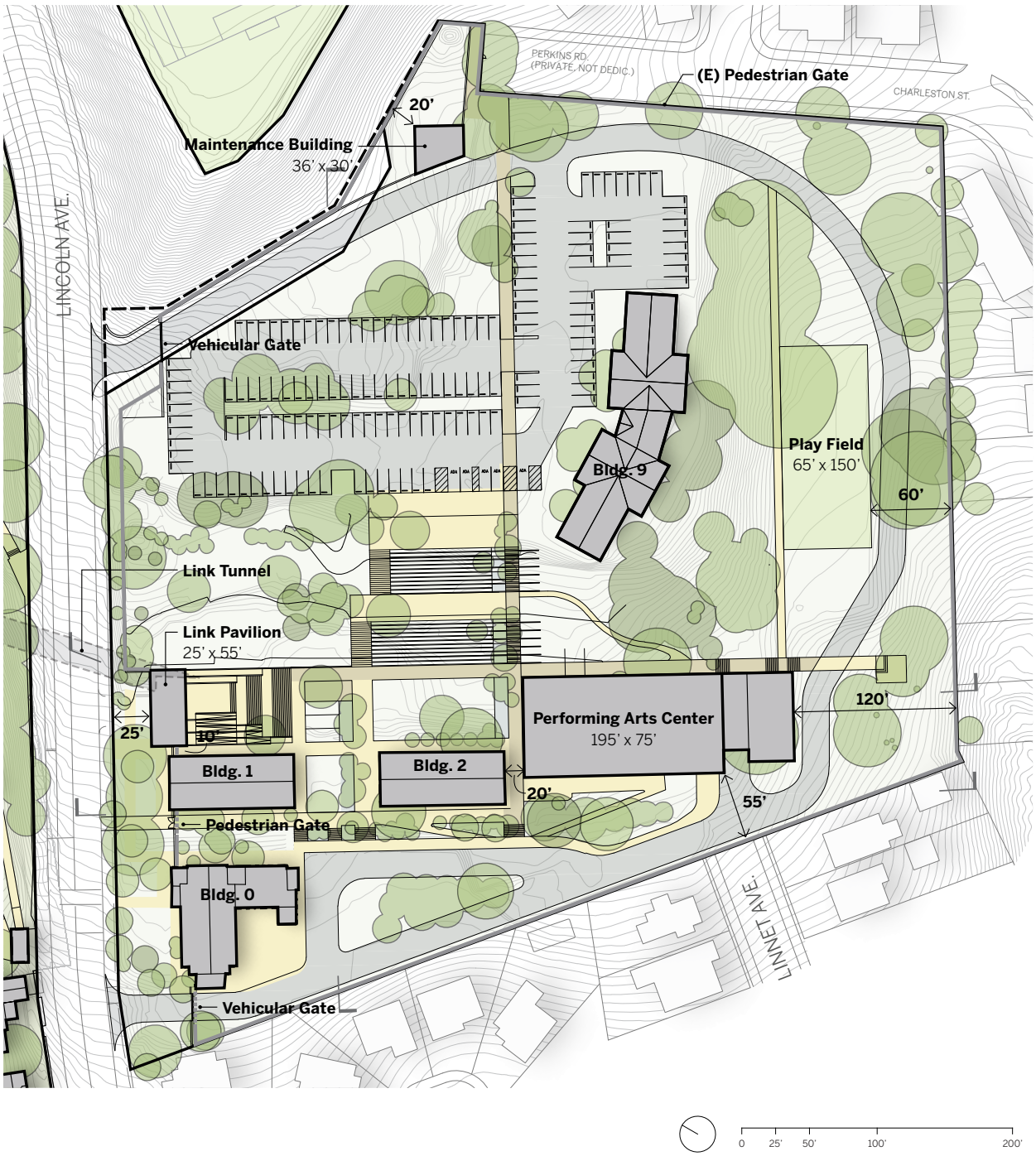


Figure 3-11
Proposed South Campus Master Plan

Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - March 2019

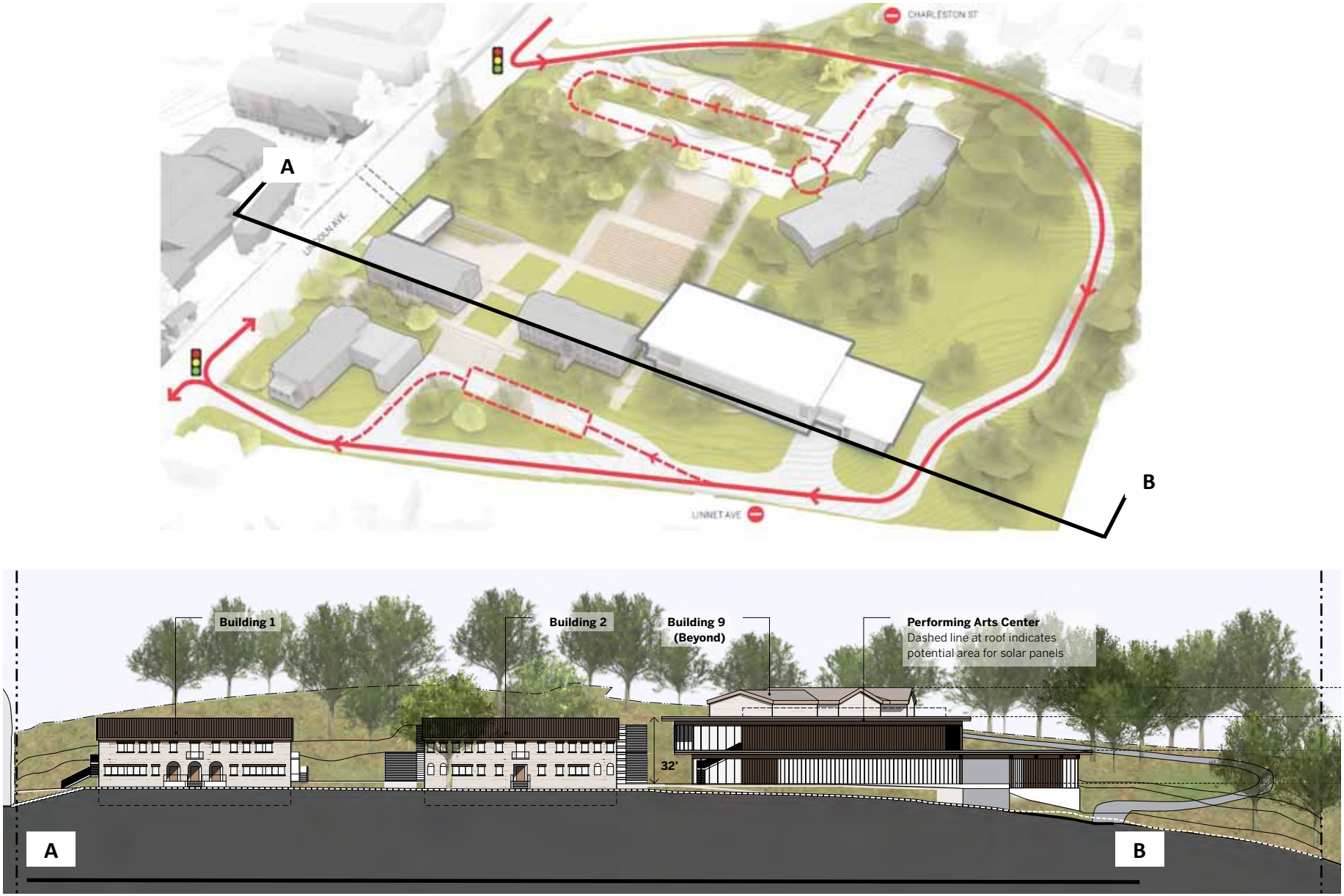


Figure 3-12
Performing Arts Building, Section and Elevation

Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - March 2019

Table 3-3: Proposed South Campus, Building Area Summary (SF)

Buildings	Existing	Demolished	Retained and Renovated	New Construction	Total (at Buildout)
Building 0	6,150		6,150		6,150
Building 1	7,150		7,150		7,150
Building 2	7,200		7,200		7,200
Building 3	1,420	1,420			
Building 4	2,068	2,068			
Building 5	1,225	1,225			
Building 6	5,769	5,769			
Building 7	1,475	1,475			
Building 8	3,024	3,024			
Building 9	6,850		6,850		6,850
Building 10	825	825			
Building 11	700	700			
Performing Arts Center				15,900	15,900
Link Pavilion				1,500	1,500
Storage Building				1,000	1,000
Total:	**43,856**	**16,506**	**27,350**	**18,400**	**45,750**
Net Increase:					1,894

Vehicular Access and Circulation

Vehicular access to the proposed South Campus will be from Lincoln Avenue only - no vehicular access to the site will be allowed from Charleston Street or Linnet Avenue (except for emergency access). A new internal, one-way Loop Road would ring the internal perimeter of the proposed South Campus. The entrance to this Loop Road would be at or near the existing curb cut and driveway off Lincoln Avenue at the easterly (upper) end of the proposed South Campus, and the exit would be at a similar existing curb cut and driveway off Lincoln at the westerly (lower) end of the proposed South Campus. The new Loop Road would be approximately 1,450 linear feet in length, providing on-Campus, off-street queuing space for vehicles. Two distinct drop-off and pick-up points (one for the Upper School, and one for the Lower and Middle Schools) would provide a required alternative to the current drop-off and pick-up location along Lincoln Avenue (see **Figure 3-13**). Other than for public and private bus loading and unloading (which would continue at Lincoln Avenue), all vehicle picking-up and dropping-off activity at the School would occur along this Loop Road, rather than as currently occurs along Lincoln Avenue. The loading zones for AC Transit and private buses would be maintained on Lincoln Avenue, as the width of the Loop road is too narrow to accommodate these vehicles, but the Loop Road is sized to accommodate emergency vehicles.

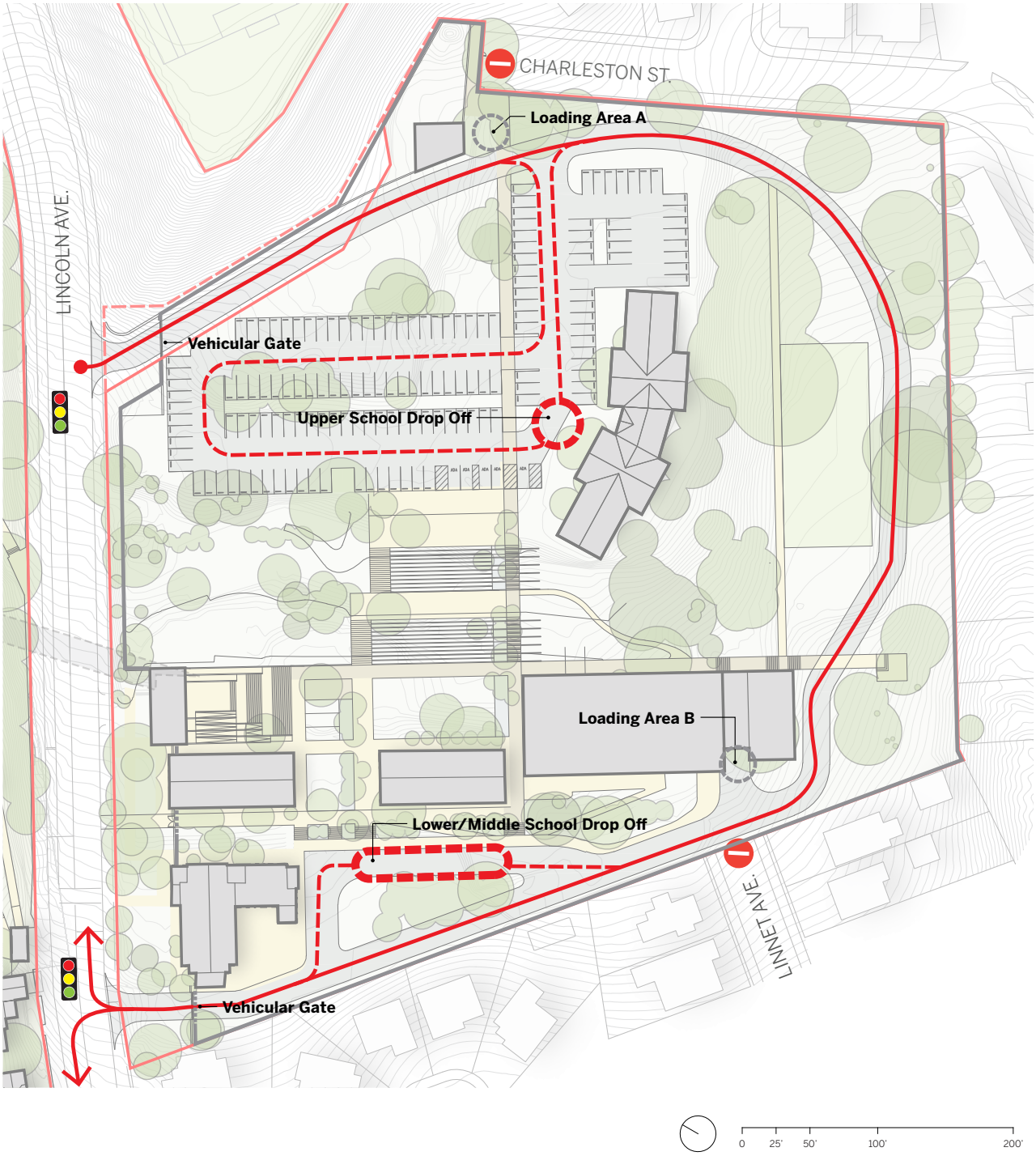


Figure 3-13
Proposed South Campus Circulation Plan

Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - March 2019

The School proposes to restrict vehicular access to a smaller internal loop—the "mini-loop" – during off-peak pick up and drop off hours. The mini-loop is located in the proposed South Campus's northeastern-most corner, away from the school's closest residential neighbors to the south and west. This measure will enhance Campus security and also minimize the number of vehicles circulating the Loop Road at off hours. To prevent any parents from short-circuiting the perimeter Loop Road during peak hours, retractable barriers will be erected to limit vehicles to using only the perimeter Loop Road or the mini-loop as appropriate.

Access to the new Loop Road in the proposed South Campus will be controlled at signalized intersections. The Project proposes to reconfigure the existing Lincoln Avenue right-of-way to accommodate a downhill left-turn pocket and an uphill right-turn pocket into the one-way, signalized entrance to the Loop Road at the uphill access point. Parallel parking spaces along the south side of Lincoln Avenue (in front of the proposed South Campus) will be removed to accommodate this modification. A new signalized intersection on Lincoln Avenue is proposed at the egress point of the Loop Road at the westerly (downhill) corner of the proposed South Campus. This traffic signal will include a crosswalk sequence for pedestrians crossing Lincoln Avenue, replacing the current traffic signal that controls the existing pedestrian crosswalk at the Head-Royce Gatehouse. The furthest uphill existing traffic signal that is located at the entrance to the Head-Royce athletic field parking lot and the Ability Now Bay Area parcel will be retained and upgraded to coordinate with the two downhill traffic signals.

The new internal Loop Road would replace and eliminate the circuitous turn-around routes identified in the School's Transportation Policy Guide and TDM program. The current Transportation Policy Guide and TDM program requests parents to follow a specific route called "the Loop" through public streets in the adjacent, downhill neighborhood to change direction on Lincoln Avenue, and to use the Mormon Temple parking lot near Highway 13 as a staging area for afternoon pick-up.

Parking

The Project proposes to add 25 new on-site parking spaces, and to retain and redesign the 129 paved parking spaces that currently exist, for a net of 154 total parking spaces on the proposed South Campus. In addition, the existing Campus also has 154 parking spaces that are not proposed to change pursuant to the Project. School-wide, with the Project, there would be 308 total off-street parking spaces on the overall Campus.

Based on the School's own parking demand study in support of the Project, the School expects that 344 off-street parking spaces would be required to meet the anticipated demand.[6] To accommodate the anticipated demand for 344 total off-street parking spaces at full enrollment, the School proposes to either:

- add 36 stacked parking spaces at the existing Campus to achieve a total of 344 parking spaces Campus-wide, or
- reduce parking demand by prohibiting some or all students from driving to school (currently, approximately 90 students [juniors and seniors] have permits to drive to and park at the Campus)

Perimeter Fencing

The School proposes perimeter fencing around the proposed South Campus to promote security and privacy. On the southern and western property boundaries, the School proposes a solid wood (or similar material) fence of six feet tall, built without gaps between planks.

[6] The Nelson Nygaard parking demand study was prepared for the School as part of the School's Project application materials. Whereas parking is not a CEQA topic and is not addressed as a CEQA topic in this EIR, the parking demand study was not peer-reviewed by the City's EIR consultants.

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Pedestrian Circulation

Pedestrian pathways would be constructed throughout the proposed South Campus, connecting existing and proposed new buildings and associated open spaces.

Lincoln Avenue Crossing

The Project proposes two options for providing a pedestrian connection between the existing and proposed South Campus:

- The first option is to construct a pedestrian tunnel under Lincoln Avenue to connect the existing Campus to the proposed South Campus (see **Figure 3-14**). The pedestrian tunnel is expected to be an 18-foot-wide, approximately 12-foot tall tunnel constructed under the Lincoln Avenue right-of-way at the approximate mid-point of the proposed South Campus along Lincoln Avenue, aligning with the Upper Level courtyard in the existing Campus. The tunnel would provide students, faculty and staff with direct access to the existing Campus from parking and drop-off/pick-up locations in the proposed South Campus and allow for passage between the campuses during the school day. Access to the tunnel would be restricted to School use only, and would only be accessible from the School's private property and not accessible to the public. Preliminary designs for the tunnel show an invert elevation increasing at an approximately 4.8% slope from south to north, terminating approximately 15 feet below existing grade in the proposed South Campus, with a minimum anticipated cover below Lincoln Avenue of approximately 7 feet. Additionally, secondary at-grade pedestrian crossings across Lincoln Avenue would be provided at the uphill and downhill traffic signals controlling the proposed South Campus' Loop Road vehicular ingress and egress access points.
- The second option is to use only the two at-grade crossings of Lincoln Avenue for all pedestrian connections between the existing and proposed South Campuses. The tunnel would not be constructed under this option.

Even if the pedestrian tunnel crossing below Lincoln is approved, the Project does not propose to construct this tunnel until Phase 3 of construction, and no timeframe for Phase 2 or Phase 3 construction is specified. The two at-grade crossings will be permanent, but the extent to which these at-grade crossings are used will be substantially lessened with construction of the pedestrian tunnel.

Feasibility and safety of the tunnel construction and use is addressed elsewhere in this EIR (see Geology, Utilities and Public Services chapters), including an assessment of its effects on existing utilities underlying and crossing Lincoln Avenue, which include an EBMUD water main, a City of Oakland storm drain, and gas, water, electric (overhead and underground) and telecommunications services.

Proposed Landscape and Outdoor Spaces

The landscape design for the Project proposes a central Commons, three outdoor wood deck classrooms, a "walking labyrinth", outdoor farming in raised planters, and a series of ADA-accessible paths that provide access to buildings within the proposed South Campus, plus secondary paths with stairs. The Commons would be the central gathering place within the proposed South Campus, composed of terraces integrated with perennial planting and a stepped water feature connecting to rain gardens, and would be used daily for students to congregate and eat lunch. It may also be used intermittently for larger events such as graduation. Irrigated lawn area will be consolidated to only the Commons and areas immediately surrounding buildings. School gatherings could also take place outside the Performing Arts Center or on the deck of Building 0.[7]

[7] Informal gatherings of up to 400 people may occur outside the Performing Arts Center entrance for up to 1 hour following special events, as performers and attendees socialize and discuss the event. The School also proposes to use the outdoor terrace on the west side of Building 0 for certain social gatherings (e.g., School open house events) of 50 to 100 people.

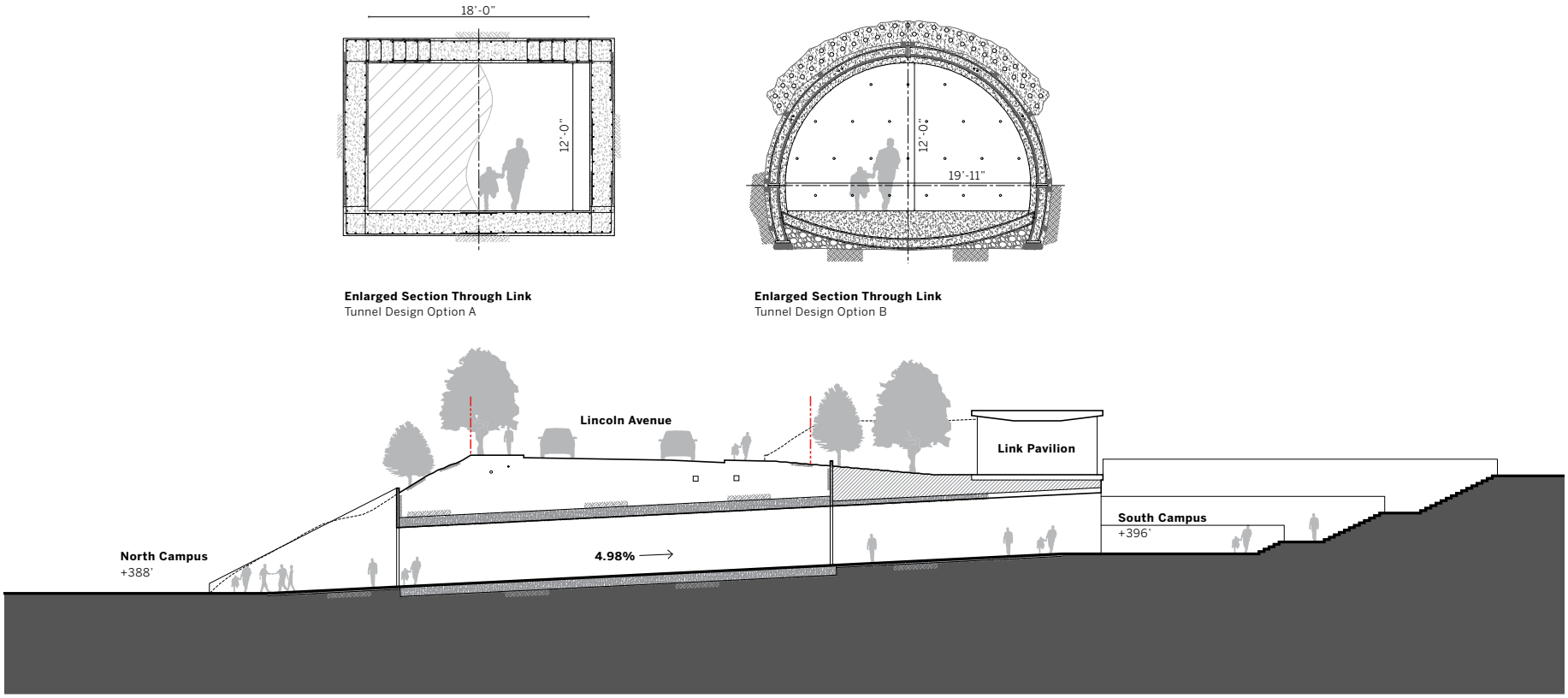

Figure 3-14
Proposed Pedestrain Tunnel Under Lincoln Avenue

Source: McMillen Jacobs, Head-Royce School Pedestrian Undercrossing, April 2019

Existing shrubs will be removed, and any groundcover or bare ground will be replaced with drought-tolerant perennials and grasses. Native plantings will be used wherever feasible. Like the existing Campus, the outdoor spaces of the proposed South Campus will be available to neighbors through key-card access.

The existing play field at the base of the proposed South Campus would be re-graded and repositioned to continue to be used for recreational purposes including athletic practices, recess and informal play.

Tree Inventory

The proposed South Campus and the area within the existing Campus where the pedestrian tunnel would daylight, contain approximately 480 existing trees of varying health, age and size, of which (approximately 321 trees) are classified as protected trees (both native and non-native) per the City of Oakland Oakland's Tree Protection Ordinance. The Project's proposed plan for the existing protected trees is as follows:

- Preserve in place approximately 169 protected trees, including 119 trees of native species (Coast live oak and Coast redwood) and 50 non-native trees (mostly cedar and holly oak)
- Relocate (transplant) 31 protected native trees to new locations within the Project site
- Remove a total of 121 protected trees, including 30 protected native trees (5 of which are in poor condition) and as many as 86 protected non-native trees

A tree replacement plan will be prepared in accordance with the City of Oakland tree removal policies. The tree replacement plan will be prepared pursuant to each subsequent phase (or Final Development Plan) for the Project. Pursuant to OMC Section 12.36.060 and the City of Oakland's Standard Conditions of Approval, the 30 native protected trees that are proposed to be removed (not including transplanted trees) are required to be replaced by 30 new trees of at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, or three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

Grading and Earthwork

Site grading activities will be executed to accommodate new building pads, loop road, access driveways, parking lot, plazas and walkways. Preliminary earthwork calculations were completed using proposed road grading and building plans (not including tunneling operations). The resulting cut and fill values indicate that an estimated net export of approximately 5,700 cubic yards of soil for surface grading, plus an additional 1,300 cubic yards of tunneled material to be removed and hauled. Earthwork calculations and grading are presented in Chapter 8 of this EIR (see Substantial Soil Erosion or Loss of Topsoil), and will be refined during subsequent design phases with the goal of better balancing cut and fill across the Project site.

Buildings 0, 1, 2, and 9 (the buildings proposed to be retained) will have minimal grading around their perimeters. The proposed new Performing Arts Center is set in elevation to allow pedestrian access between that building and existing Building 2. The annex portion of the Performing Arts Building steps down from the main structure to respond to the natural topography of the site. The extent of road grading is driven by Fire Department requirements, the protection of existing trees and the intent to minimize retaining walls. Grading and earthwork shall be performed in conformance with the project geotechnical report and specifications. The contractor shall take care to avoid disturbing native soil beyond what is required to complete the designed improvements.

Tunnel Design

Conceptual designs for the proposed pedestrian tunnel indicate a tunnel length of approximately 115 feet from the north to south portal locations. The inside tunnel width is assumed to be between 14 and 20 feet square, based on limitations of the tunnel construction method (see below). The tunnel invert at the north portal is at an elevation of approximately 388 feet, and the invert elevation at the south portal is at approximately about 396 feet, resulting in an 8-foot change in elevation across 115 feet, or a tunnel slope of

approximately 4.8%. The elevation at the south portal (in the proposed South Campus) is approximately 15 to 20 feet below final grade, such that a relatively deep excavation (at a maximum depth of excavation of between 20 and 27 feet) will be required for the portal construction. A staircase and an elevator will provide access from surface grade to the tunnel portal's invert (or base) elevation.

To construct the tunnel, a method known as "jacked box" will be used, which involves advancing a precast/cast-on-site concrete box along the proposed tunnel alignment by "pushing" it into the ground with hydraulic jacks. The box structure is open-faced, with a beveled steel cutting shield at the front end. As the box is advanced into the ground, excavated material is removed from inside the box. If large blocks or boulders are encountered, overcutting ahead of the box would be conducted to remove potential obstructions and aid in reducing jacking loads. The box jacking method will require a temporary area for storage and construction operations. Due to limited space around the north portal, the jacking operations be carried out from the south end of the tunnel alignment.

In addition to the site grading and earthwork, the additional quantity of tunneled material to be removed and hauled off-site is estimated to be approximately 1,300 cubic yards. This quantity conservatively assumes a tunnel dimension of 100 feet long, by 22 feet wide, by 16 feet high. Actual quantities of tunneled material will depend on the final tunnel alignment and excavation dimensions.

Utilities

The Project will require new electrical, gas, communication, sewer, water, fire and irrigation utility systems.

- Water connections for domestic and fire would be supplied from an existing East Bay Municipal Utility District trunk line located within Lincoln Avenue or along the west side of the property. The service lateral may require a special connection.
- Wastewater would be collected and conveyed into a City Sewer line in Lincoln Avenue at the westerly corner of the site, and potentially to one of the adjoining roads to the west. A small portion of the grey water flow may be diverted and treated for reuse as irrigation and toilet flushing.
- New utility meters would be required for energy, water supply and on-site reclaimed water use. Water used for fire suppression and irrigation services will come from the EBMUS trunk line, and may require separate piping, valves and backflow devices.
- Electrical, gas and communication services will be routed from various points of connections along the property edge, with all required valves, switches and equipment.

Stormwater Management

With removal of existing buildings and surface parking areas, and construction of new roads and buildings, the Project will result in a net decrease in impervious surface (see **Table 3-4**). This decrease in impervious surface with result in a similar proportional decrease in stormwater runoff from the Project site, requiring preparation of a Stormwater Management Plan that is designed to provide for appropriate water quality treatment and management of stormwater flow volumes.

Table 3-4: Impervious/Pervious Land Cover, Existing and with Project

	Existing	To Remain	New/Replaced	Total, Project	Change
Building Rooftops	43,249	24,300	15,028	39,328	
Pavement	109,851	8,176	90,133	98,309	
Total Impervious	***153,100***	***32,476***	***105,133***	***137,637***	***-15,463***
Open Space/Pervious	177,956			193,419	+15,463
Total, Project Site	**331,056**			**331,056**	

Source: City of Oakland, Supplemental Stormwater Form for Head-Royce School, dated April 9, 2019

A preliminary Stormwater Water Management Plan (SWMP) has been prepared for the Project. The elements selected to achieve the SWMP will be integrated into site landscaping building design. The SWMP site-based systems include surface management strategies that promote infiltration and attenuation of runoff. The SWMP will be required to comply with the City of Oakland's C.3 Stormwater Technical Guidance Handbook, which requires implementation of various Low Impact Development (LID) treatment measures. Stormwater will be treated and managed on-site to the maximum extent practicable, meeting local stormwater mitigation requirements. Drainage will be day-lighted wherever possible in a non-piped stormwater management approach. Stormwater will be managed to mimic natural patterns of flow within the watershed, avoid pipes and armored conveyances, encourage infiltration of stormwater, and utilize ecological methods to create a diversity of vegetation types and landscape functions. A capture-for-reuse system would within the building footprints. Rainwater runoff from the Performing Arts Center and Link Pavilion Building may be captured and stored for reuse (with above ground cisterns and below ground tanks or storage systems), and potentially integrated with a grey water treatment system. In addition to reducing storm water runoff from the grounds, rainwater would become a water supply for landscaping as well as toilet flushing.

Stormwater that is not used by the Project will be infiltrated within the Project area, or will drain off the site to existing piping in Lincoln Avenue to the north, and to an existing drainage way to the south. The Project will achieve a net decrease in peak period stormwater run-off due to its reduced impervious surface as compared to existing conditions (see further analysis in the Hydrology chapter of this EIR).

There is an existing, partially culverted drainage channel on the neighboring properties to the south of the proposed South Campus. Certain Project-related improvements, include portions of the Loop Road, retaining walls, graded fill and drainage improvements are within 100 feet of this drainage channel. Construction of these features near the drainage channel are proposed to be managed to avoid erosion and sedimentation of the channel, including constructing a silt fence near the property line and placing straw wattles on contours spaced appropriately on the slope between the improvements and the construction fence. Channelized drainage and surface run-off under on-going operations of the School will be managed with on-site check dams and sediment basins.

Sustainable Building Design

The Project intends to pursue LEED Gold certification for the renovation of existing Buildings 0, 1 and 2, and to meet LEED Gold certification or equivalent for new construction of the Performing Arts Center and Link Pavilion. Strategies to meet these goals may include natural daylighting, use of renewable energy, thermal energy storage and rainwater harvesting.

Existing Campus Building Reprogramming

Only limited new construction is proposed in the existing Campus, including the following:

- With the addition of new proposed South Campus building space, the Project proposes to relocate certain administrative functions from the existing Campus, such as the Head Office and the Admissions Office. These vacated spaces on the existing Campus are proposed to be renovated to meet modern life/safety requirements (if needed) and reused for administrative or classroom purposes. Renovations may involve interior partition modifications.
- Construction of the new Performing Arts Center will enable the existing Mary E. Wilson Auditorium on the existing Campus to return to its original use as a gymnasium, only.
- The existing Campus will need to accommodate the northern entrance of the underground pedestrian tunnel, opening into the existing Upper Level courtyard.

Enrollment, Faculty and Staff

The Project proposes to increase permitted enrollment up to 1,250 students, representing an increase of 344 additional students over the currently allowed enrollment of 906. Enrollment increases are proposed to occur in increments of no more than 20 additional students each year, up to the maximum permitted enrollment over an approximate 17 to 20-year period. The School expects that the majority of increased student enrollment will occur in the high school grades, where demand is the greatest.

The distribution of students between the existing Campus and the proposed South Campus will change regularly throughout the day, depending on class schedules and class locations. The proposed South Campus is expected to accommodate an increase in STEM classes, maker's space, and performance arts classes (band, orchestra, choir, drama, etc.) for all grade levels. Based on School projections, the number of students attending class at the proposed South Campus will vary by class schedule, but will represent between 10 percent to perhaps 30 percent of all students at any one time. On an average, the proposed South Campus may have approximately 240 students at any given time during the day. The difference of approximately 104 students (i.e., 344 total new students, with 240 at the proposed South Campus = 104 other students) would be accommodated at the existing Campus. This would increase student population at the existing Campus from a maximum of 906 student (under current PUD requirements) to 1,010 students at any given time. Based on Head-Royce School's projections of classroom space needs, these additional 104 students can be accommodated by more efficient use of existing building space on the existing Campus, and no new construction on the existing Campus is proposed or expected to be necessary. [8]

To support increased enrollment, the School projects an increase of 17 additional faculty and staff (approximately 12 additional faculty and staff at the new South Campus and 5 at the existing Campus), to a total of 189 employees.

Project Phasing and Construction Schedule

Phasing

The Project applicant proposes to submit three or more Final Development Plans (FDPs), with the first FDP to be considered simultaneously with consideration of the Preliminary Development Plan (PDP – i.e., the Project). Subject to meeting fundraising goals, the physical improvements contemplated pursuant to the Project would be constructed in phases generally assumed to be as follows.

[8] The approximately 163,400 square feet of current building space on the existing Campus has capacity to accommodate the anticipated 1,010 students at any given time (a 104-student increase over the currently permitted 906 student enrollment cap) as would result from the Project. Although private schools do not have a classroom size limit, the current building space on the existing Campus can accommodate this increase in students at a student/classroom ratio that is lower than public school requirements.

Phase I

Phase I of the Project does not include any increase in student enrollment. Enrollment will remain capped at a maximum of 906 students. Physical improvements at the proposed South Campus pursuant to Phase I would include:

- Demolition of Buildings 3, 4, 5, 6, 7, 8, 10 and 11
- Restoration and rehabilitation of Buildings 0, 1, 2 (those buildings identified as historic resources) and reuse of these three buildings for classroom and/or School administrative purposes
- Reuse of Building 9 (in its current condition) for classroom and/or School administrative purposes
- Improvements for outdoor gathering space, including improvement of the planned Commons area, plus improvement of walking paths and two outdoor classrooms
- Reuse of the existing playfield at the proposed South Campus for informal outdoor recreation
- Tree removal and landscaping as necessary to implement those physical improvements listed above

Phase I would not include any other physical improvement on the proposed South Campus. There would be no change to the current operations for School drop-offs and pick-ups that occur along Lincoln Avenue, and the underground pedestrian tunnel would not be constructed.

Phase II

Phase II of the Project includes an incremental increase in student enrollment from the current cap at a maximum of 906 students, with an increase of 144 students, to an increased student enrollment cap of 1,050 students. Physical improvements at the proposed South Campus pursuant to Phase II would include:

- Construction of the proposed new Loop Road, including new off-street drop-off and pick-up locations within the proposed South Campus, as well as new/relocated traffic signals along Lincoln Avenue
- Pedestrian crossing of Lincoln Avenue between the existing Campus and the proposed South Campus would occur at an at-grade crossing of Lincoln at the relocated traffic signal
- Building 9 would be renovated to better accommodate classroom and/or School administrative purposes
- The number of parking spaces on the proposed South Campus would be incrementally increased to meet the increased demand
- Tree removal and landscaping as necessary to implement those Phase II physical improvements listed above

Phase III

Phase III of the Project includes an additional increase in student enrollment from the Phase II cap at a 1,050 students, with an increase of 200 additional students, to the Project's maximum proposed student enrollment cap of 1,250 students. Additional physical improvements at the proposed South Campus pursuant to Phase III would include:

- Construction of the proposed pedestrian tunnel under Lincoln Avenue, including construction of the associated Link Pavilion
- Construction of the proposed Performing Art Center Building
- Increasing number of parking spaces on the proposed South Campus to a total of 154 parking spaces

Phase IV

There is also a Phase IV of the Project, which would include further remodeling of Building 9 to provide up to five units of temporary housing for new faculty, and adding "stacked" or structured parking on either the existing Campus or proposed South Campus for additional parking, if needed.

Construction Period

It is anticipated that construction of Project will occur in separate phases separated by fundraising campaigns.

- Phase I of the Project may take approximately 9 months to a year. Demolition, tree removal and surface re-grading will require approximately two months, restoration and rehabilitation of Buildings 0, 1, 2 will require perhaps 6 to 8 months, and outdoor landscaping may take an additional 1 or 2 months.
- The separate Phase II improvements would likely take less than 1 year to implement, including additional site preparation, tree removal and grading, as well as paving of the new Loop Road and associated parking improvements.
- The Phase III improvements are expected to take perhaps 12 to 18 months of construction, inclusive of tunneling below Lincoln Avenue for the pedestrian tunnel, and anticipated simultaneous construction of the Link Pavilion and Performing Arts Center, as well as site preparation and paving for additional parking improvements.

With the exception of the tunnel opening, any re-programming efforts of existing Campus facilities would occur after construction of improvements in the proposed South Campus.

To the extent that existing buildings to be demolished are constructed of concrete, the Project proposes to crush the existing building materials and re-use the recycled materials as part of needed fill for building pads and open space areas. An earthwork analysis will be conducted pursuant to the Final Development Plan for Phase II (when substantive earthwork for the Loop Road would be conducted), and efforts will be made to better balance cut and fill across the Project site.

Approvals and Agency Coordination

City of Oakland

The Project is expected to require the following discretionary approvals from the City of Oakland, following certification of this EIR:

- Preliminary Development Plan (Master Plan) pursuant to a Conditional Use Permit, or a revision to the currently applicable Planned Unit Development permit
- Design Review approval of Final Development Plans (as subsequently proposed by the applicant, presumably including at least 1 FDP for each of the 3 or 4 Project phases)
- Tentative Tract or Parcel Map, if required
- Tree Removal Permit
- Creek Protection Permit (if required)
- Grant of easement and P-Job Permit for construction and maintenance of the underground pedestrian tunnel

Other Agency Approval Required

Alameda County Department of Environmental Health

- Only if soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities, the applicant/contractor shall notify the City Fire Prevention Bureau, Alameda County Environmental Health and other applicable regulatory agencies.

BAAQMD

- The Project is assumed to include two 150-kW emergency diesel generators with an approximately 201 HP engine. These diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM), and will require permits from the BAAQMD.
- Prior to approval of demolition, grading or building permits, the Project applicant is to prepare and submit a comprehensive assessment documenting the presence or lack thereof of ACMs, lead-based paint, PCBs and any other building materials or stored materials classified as hazardous. If any of these hazardous materials are present, the Project applicant is required to submit specifications for the stabilization and/or removal of these hazardous materials in accordance with all applicable laws and regulations, including California Code of Regulations Title 8, California Business and Professions Code Division 3, California Health and Safety Code Sections 25915-25919.7, and BAAQMD Regulation 11 Rule 2.

California Department of Fish and Wildlife

- If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. If the survey indicates the potential presence of nesting raptors or other birds, the biologist (in consultation with the CDFW) shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged.

State Water Resources Control Board / San Francisco Bay Regional Water Quality Control Board

- All construction projects in California that result in land disturbances equal to 1 acre or greater must comply with State requirements to control the discharge of stormwater pollutants, pursuant to the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order #2009-0009-DWQ). A Notice of Intent must be filed with the State Water Board prior to the start of any Project-related construction or demolition, and the Project applicant must submit a Stormwater Pollution Prevention Plan (SWPPP) and other required permit registration documents to SWRCB.
- Different regulatory requirements may apply to the Project's proposed tunnel and its potential de-watering requirements, depending on the volume and pollutant loads of non-stormwater discharges associated with dewatering. As indicated above, the Project applicant will be required to comply with all regulations and requirements of a Construction General Permit issued by the SWRCB, and de-watering may be discharged to the stormdrain system pursuant to a Construction General Permit, provided that a permit from the City (as the local sewer agency) is obtained prior to such discharge. If dewatering is not permitted pursuant to the Construction General Permit, then a statewide low-threat discharge Waste Discharge Requirements (WDR) or a site-specific NPDES permit may be required. Best Management Practices (BMPs) will be required and incorporated into individual

SWPPPs and other permits prior to approval of grading permits, providing an acceptable level of water quality protection.

- The Project must comply with the RWQCB San Francisco Bay Region's Municipal Regional Stormwater NPDES permit (Water Board Order #R2-2015-0049).The Project must also implement BMPs and incorporate Low Impact Development practices into the Project's design to prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from the site after construction has been completed.

Utility Providers

- The Project applicant will be required to underground all new utilities serving the Project (including all new gas, electric, cable, and telephone facilities, fire alarm conduits, streetlight wiring, and other wiring, conduits, and similar facilities). Utilities under the control of other agencies (such as PG&E and/or EBMUD) shall be placed underground if feasible, and all utilities shall be installed in accordance with standard specifications of the serving utilities.

4

Aesthetics

This chapter of the EIR evaluates the potential impacts of the Project on aesthetic resources, including scenic vistas, scenic resources, visual character, and light and glare. This chapter provides background information on aesthetic conditions within the Project area and the relevant regulatory settings applicable to the site, identifies potential impacts that could result from implementation of the Project, and identifies regulatory requirements and/or mitigation measures (where applicable) that would avoid or minimize such potential impacts.

Existing Setting

Public Views

Distant and Mid-Range Views of the Site

The Project site is not highly visible from surrounding distant public vantage points or vistas. The site is not located on a ridgeline or prominent hilltop. The site is situated on sloping terrain between the base and the top of the East Bay/Oakland Hills, generally rising from the southwest to the northeast, with a 56-foot change in elevation across the site.

Immediate Views

The Project site is fenced on three of its four sides, and public views into the site from adjacent roadways are limited by these fences, neighboring homes, and trees and vegetation along the property lines (see **Figure 4-1**).

The most prominent public views of the Project site are visible from along Lincoln Avenue. Building 0 and Building 1 are set back and elevated above the Lincoln Avenue frontage, with trees, low shrubs and other landscaping at the front edge of the site. A parking lot is located to the west of Building 0, with steps that ascend a small landscaped rise to Buildings 1 and 2.

Internal to the site and less visible from Lincoln Avenue is an asphalt playground area located between Buildings 1 and 2, and a larger paved playground area surrounded by trees and other vegetation on the northeast side of these buildings. An existing informal grass playfield is located along the south property line.

Aside from the more prominent historic buildings near Lincoln Avenue, the site is visually characterized by approximately 480 trees (including Coast Live oaks, Holly oaks, Coast redwoods, eucalyptus, pines, Cyprus, pear and olive trees). These trees present both a visual barrier to most views into the site, and create a park-like campus setting.

Because the currently permitted use of the Project site is limited to parking purposes for Head-Royce School, the overall visual sense of the site is as an underutilized, mostly vacant property.

View toward proposed South Campus (behind homes) from Laguna Avenue at Charleston Street

View toward proposed South Campus (behind fence and tree line) near terminus of Charleston Street

Figure 4-1
Public Views Toward Proposed South Campus from Adjacent Roadways

Scenic Highways

The City of Oakland General Plan Scenic Highways Element defines scenic routes as, "distinctively attractive roadways that traverse the City, and the visual corridors which surround them." Scenic routes include officially designated State scenic highways, municipally designated City roadways, or informally recognized local scenic byways.[1]

Interstate 580 (I-580) extends 12 miles through Oakland from the San Leandro city limits to the San Francisco-Oakland Bay Bridge. The segment of I-580 from the San Leandro city limits to State Route 24 is an officially designated State Scenic Highway. The entire length of I-580 within Oakland is identified as a designated scenic route in the City of Oakland General Plan. State Route 24 (SR 24) is eligible for, but not officially recognized as part of the State Scenic Highway System. Caltrans has only designated it as a Scenic Highway between the eastern end of the Caldecott Tunnel and I-680 in Contra Costa County. Highway 13, from SR 24 to I-580) is also eligible for, but not officially recognized as part of the State Scenic Highway System.[2]

The Project site is not readily visible or distinguishable from I-580, nor is it readily visible or distinguishable from SR 24. The Project site is not readily visible or distinguishable from Highway 13, as it sits well below the foreground and distant views from this highway.

The City's other designated Scenic Route is the Skyline Boulevard/ Grizzly Peak Boulevard/Tunnel Road route through the Oakland Hills. Because of the Project's site's sloping topographic setting, it is not readily visible or distinguishable from this Scenic Route, and views and vistas look out well over the top of the site.

Light and Glare

The current limited use of the Project site for parking by Head-Royce School does not require substantial night lighting. There are existing light standards within the parking areas for evening safety and security until the parking lot is vacated, but there are few other lighting fixtures that generate light or glare.

Regulatory Setting

State Regulations

California Scenic Highway Program

The California Scenic Highway Program protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to identified scenic highways. "Officially Designated State Scenic Highways" must have a scenic corridor protection program, or its equivalent adopted by the local jurisdiction, to preserve the scenic quality of the corridor and address land use, development density, earthmoving, landscaping, building design, and outdoor advertising, including billboards, within the corridor. Within Oakland, I-580 from the San Leandro city limit to State Route 24 (post miles 34.5 to 45.1) is an officially designated State scenic highway. There are not any officially designated or eligible State scenic highways within or immediately adjacent to the Project site.

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[1] City of Oakland, City of Oakland General Plan Scenic Highways Element, September 1974, p. 1.

[2] California Department of Transportation, Officially Designated State Scenic Highways and Historic Parkways, accessed April 1, 2020 at https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

California Solar Shade Control Act

Under the California Solar Shade Control Act, no property owner shall allow a tree or shrub to be placed or to grow so as to cast a shadow greater than 10 percent at any one time between the hours of 10 a.m. and 2 p.m. over an existing solar collector on an adjacent property, used for water heating, space heating or cooling, or power generation. These limitations apply to the placement of new trees or shrubs, and do not apply to trees and shrubs that already cast a shadow upon that solar collector. The location of a new solar collector is required to comply with local building and setback regulations, but must be setback not less than five feet from the property line, and must be no less than 10 feet above the ground.

Local

General Plan

Land Use and Transportation Element

The following City of Oakland General Plan Land Use and Transportation Element policies are relevant to the aesthetics impacts of the proposed Project:

- *Policy W3.4: Preserving Views and Vistas*. Buildings and facilities should respect scenic viewsheds and enhance opportunities for visual access of the waterfront and its activities.
- *Policy T6.5: Protecting Scenic Routes*. The City should protect and encourage enhancement of the distinctive character of scenic routes within the City, through prohibition of billboards, design review, and other means.
- *Policy N9.5: Marking Significant Sites*. Identify locations of interest and historic significance by markers, signs, public art, landscape, installations, or by other means.

Open Space, Conservation and Recreation Element

The Open Space, Conservation and Recreation Element (OSCAR) promotes the preservation and good design of open space (both public and private), and the protection of natural resources to preserve and improve aesthetic qualities in Oakland. The following OSCAR policies are relevant to the aesthetics, shadow and wind impacts of the proposed Project:

- *Objective OS-10: Scenic Resources*. Protect scenic views and improve visual quality.
- *Policy OS-10.1: View Protection*. Protect the character of existing scenic views in Oakland, paying particular attention to: (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
- *Policy OS-10.2: Minimizing Adverse Visual Impacts*. Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.
- *Objective OS-12: Street Trees*. "Green" Oakland's residential neighborhoods and commercial areas with street trees.
- *Policy OS-12.1: Street Tree Selection*. Incorporate a broad and varied range of tree species which is reflected on a city-maintained list of approved trees. Street tree selection should respond to the general environmental conditions at the planting site, including climate and micro-climate, soil types, topography, existing tree planting, maintenance of adequate distance between street trees and other features, the character of existing development, and the size and context of the tree planting area.

- *Policy CO-7.4*: Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.

Oakland Municipal Code

The following provisions of the Oakland Municipal Code are relevant to the aesthetics impacts of the Project:

Title 12: Streets, Sidewalks and Public Places

- *Chapter 12.36: Protected Trees*. It is the interest of the City of Oakland and the community to protect and preserve trees by regulating their removal; to prevent unnecessary tree loss and minimize environmental damage from improper tree removal; to encourage appropriate tree replacement plantings; to effectively enforce tree preservation regulations; and to promote the appreciation and understanding of trees.

Title 17: Planning

Under the Planning Code, the Project is subject to the City's design review process. Design Review provisions of the Planning Code that are specifically relevant to the Project include:

- *Chapter 17.124: Landscaping and Screening Standards*. This chapter prescribes standards for development and maintenance of planting, fences, and walls; for the conservation and protection of property; and through improvements of the appearance of individual properties, neighborhoods, and the City.
- *Chapter 17.136: Design Review Procedure*. In accordance with Chapter 17.136 of the Oakland Planning Code, the Project is subject to Design review. Design review considers the visible features of a project and the project's relationship to its physical surroundings, including historic resources, and is focused on ensuring quality design, and on avoiding potentially adverse aesthetic effects. Projects are evaluated based on site, landscaping, height, bulk, arrangement, texture, materials, colors, appurtenances, potential shadowing effects on adjacent properties, and other characteristics.

Standard Conditions of Approval

The City's Standard Conditions of Approval relevant to aesthetics, shadow and wind are listed below. These Standard Conditions of Approval would be adopted as mandatory requirements of the Project if it is approved by the City, and would reduce or avoid potentially significant aesthetic impacts.

SCA Aesthetics-1: Landscape Plan

Applies to: *All projects requiring a landscape plan, specifically as pertains to the Project, the establishment of new non-residential facilities, or non-residential additions over 1,000 square feet of floor area*

1. Landscape Plan Required: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code.

   When Required: Prior to approval of construction-related permit

   Initial Approval: Bureau of Planning

   Monitoring/Inspection: N/A

2. Landscape Installation. The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit or equivalent instrument acceptable to the Director of City Planning, is provided.

The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.

When Required: Prior to building permit final

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

3. Landscape Maintenance. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Aesthetics-2: Lighting

***Applies to**: All project containing new exterior lighting*

Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Aesthetics-3: Trash and Blight Removal

***Applies to**: All projects*

The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Aesthetics-4: Graffiti Control

***Applies to:** All projects*

1. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
   a. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
   b. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
   c. Use of paint with anti-graffiti coating.

d. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention through Environmental Design (CPTED).

e. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.

2. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:

   a. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.

   b. Covering with new paint to match the color of the surrounding surface.

   c. Replacing with new surfacing (with City permits if required).

   When Required: Ongoing

   Initial Approval: N/A

   Monitoring/Inspection: Bureau of Building

SCA Biology- : Tree Permit

***Applies to**: All projects that involve removal of a tree (either protected or unprotected tree)*

1. Tree Permit Required. Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.

2. Tree Protection during Construction. Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

3. Tree Replacement Plantings. Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade.

   See additional details in the Biology chapter of this EIR

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential aesthetic impacts that could result from implementation of the Project. It presents the thresholds of significance and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

The proposed Project would have a significant impact on the environment if it would:

1. Have a substantial adverse effect on a public scenic vista[3]
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway
3. Substantially degrade the existing visual character or quality of the site and its surroundings
4. Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area

[3] Only impacts to scenic views enjoyed by members of the public generally, but not private views, are considered to be potentially significant

5. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code sections 25980-25986)
6. Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, or cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden or open space
7. Cast shadow on an historic resource, as defined by CEQA Guidelines section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5
8. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses
9. Create winds that exceed 36 mph for more than one hour during daylight hours during the year

The Project does not require an exception to any policies or regulations of the General Plan, Planning Code, or Uniform Building Code, or fundamentally conflict with any such policies and regulations addressing the provision of adequate light. Threshold 8 is not applicable. The Project does not propose any structures 100 feet or greater in height and is not located adjacent to a substantial water body or within the Downtown. Threshold 9 is not applicable.

Views and Vistas

Aesthetics-1: The Project would not have a substantial adverse effect on a public scenic vista or scenic view that is enjoyed by members of the public, generally. (**Less than Significant**)

The Project site is not highly visible from surrounding distant public vantage points or vistas. The site is not located on a ridgeline or prominent hilltop, but is situated on generally continuous sloping terrain between the base and the top of the East Bay/Oakland Hills. This sloping terrain limits the extent to which the site, or buildings on the site, are viewed from most off-site distant scenic vistas.

Although CEQA is concerned with impacts to scenic views enjoyed by members of the public generally, and does not consider private views to be a CEQA threshold issue, many of the private views from nearby neighboring properties are also enjoyed by the public from the public streets. In proximity to the Project site, prominent views from properties to the west, downhill from the site (e.g., from Linnet Avenue) are towards the Bay to the west, in the opposite direction of the site (see **Figure 4-2**). Prominent views from properties to the east, uphill of the site (e.g., from Camelia Place) are also towards the Bay to the west, but look over the top of the Project site (see also Figure 4-2). The limited extent of new development on the Project site will not adversely affect these scenic vistas or views.

View from top of Linnett Ave., looking southwest away from Proposed South Campus

View from top of Camelia Place, looking southwest over the Proposed South Campus

Figure 4-2
Public Views in the Vicinity

The most prominent new building proposed pursuant to the Project is the Performing Arts Center building. This approximately 14,600 square-foot, 2-story, 32-foot tall building is proposed to be located at 55 feet from the westerly property line and 120 feet from the southerly property line (see **Figure 4-3**). It will be approximately the same height as the adjacent historic Building 2, which is proposed to remain (see also Figure 4-3). At this location, the Performing Arts Center will be in line with uphill views from Linnet Avenue. These uphill views from the Linnet Avenue neighborhood are currently already obstructed by existing vegetation (see **Figure 4-4**), but the Performing Art Center building will be prominently visible from this neighborhood, as also demonstrated in Figure 4-4. The new Performing Arts Center will not be taller than allowed pursuant to zoning standards, will be set back by 55 feet from the property line, will be the same general height as other existing on-site buildings, and will not adversely affect public scenic views or vistas.

Mitigation Measures

None needed

Scenic Resources and Visual Character

Aesthetics-2: The Project would not substantially damage scenic resources (including, but not limited to, trees, rock outcroppings and historic buildings) that are located within a state or locally designated scenic highway, and would not substantially degrade the existing visual character or quality of the site and its surroundings. (**Less than Significant**)

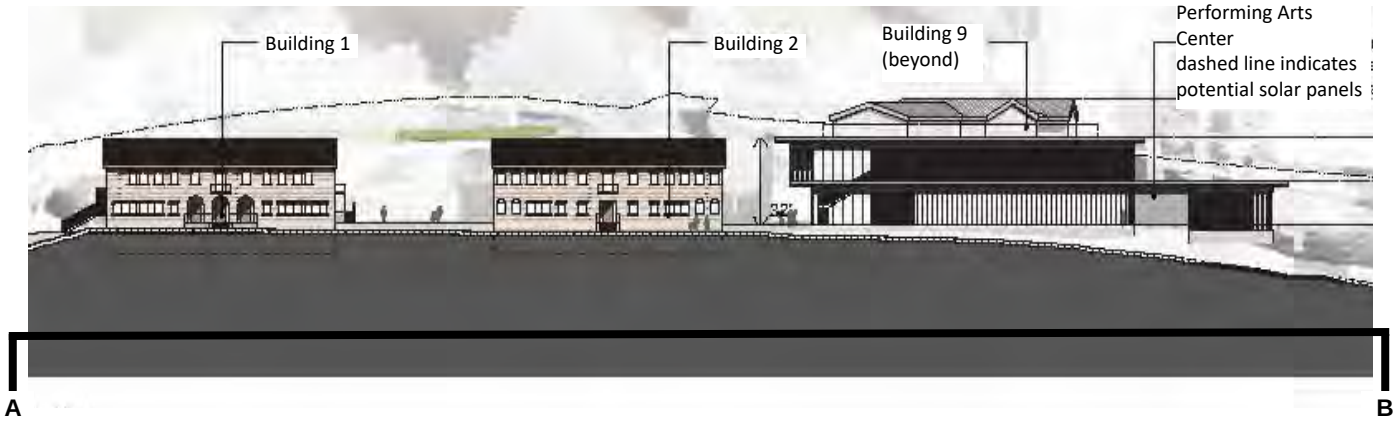
The Project site is not located adjacent to or near a state or locally designated scenic highway, and would not damage any trees, prominent rock outcropping or historic buildings within or visible from a state or locally-designated scenic highway.

The existing visual character of the site is an institutional campus, with multiple buildings constructed over time and with differing architectural styles, surrounded by landscaped areas, play areas and a mix of ornamental and natural landscape, including a large number of mature trees. The two most prominent buildings fronting onto Lincoln Avenue, and one additional building are historic buildings in relatively good to fair exterior condition, with landscaping that provides a positive, well-maintained visual character along the street frontage. The newer existing buildings on the site are generally smaller, not architecturally noteworthy, are distributed within the more internal portions of the site and not readily visible. The current use of the site for parking only contributes to the site's current baseline character of limited use.

Project Proposal

Use of the Project site by Head-Royce School will increase active use of the campus with students and faculty coming and going to classrooms, administrative space and the new Performing Arts Center building. The Project site's new uses would be merged with the existing Head-Royce School Campus to create one, larger campus for Head-Royce School. Physical changes associated with the Project that will affect the current baseline visual character of the site include the following:

Performing Arts Center Location, Site Plan



Performing Arts Center, North-South Cross-Section looking East

Figure 4-3
Locaton and Scale of the Performing Arts Center Building

Source: Skinmore, Owings & Merrill, 2020

Existing View at Linnett Ave., looking northeast (toward proposed South Campus

Simulated View at Linnett Ave., looking toward Proposed Performing Art Center

Figure 4-4
Existing View and Simulated View of Proposed Peforming Arts Center

Source: Skinmore, Owings & Merrill, 2020

- As more fully addressed in the Cultural Resources chapter of this EIR, there are three existing historic buildings on the site, two that front directly onto Lincoln Avenue (Buildings 0, 1 and 2). These historic buildings will be rehabilitated in conformance with Secretary of Interior Standards to more closely resemble their original design, thereby retaining and rehabilitating the historic and character defining features of these buildings.
- The Project has been designed to maintain over half of the on-site trees, and would add educational gardens and native and ornamental trees to the site. There are approximately 480 existing trees of varying health, age and size on the Project site, including approximately 321 protected trees pursuant to City ordinance. Of the 321 protected trees, 169 are intended to be preserved in place, as many as 31 are recommended for transplant elsewhere on the site, and 121 would be removed by the Project, including as many as 30 protected native trees (see details in the Biology chapter of this EIR). As part of the Project's Landscape Plan, a tree replacement program will be developed in accordance with the City of Oakland tree removal policies, replacing the 30 protected native trees to be removed. Pursuant to SCA Biology-2 (see the Biology chapter), these replacement tree plantings are required for multiple purposes, including visual screening and preventing excessive loss of shade. Replacement tree species will consist of Coast Redwood, Coast Live Oak, Madrone, California Buckeye, California Bay Laurel or other tree species acceptable to the Tree Division, and are required to be at least 24-inch box size (except that three 15 gallon size trees may be substituted for each 24-inch box size tree where appropriate). In the near-term, the new replacement trees and other trees included in the landscape plans would be substantially smaller and less visible than the mature trees to be removed, and the overall tree canopy would be reduced. Over time, these new trees would mature, and their tree canopy would increase, recontributing to the existing park-like campus setting (see **Figure 4-5**).
- A new outdoor quad space will encourage student interaction to occur within the central portion of the site. The quad will be surrounded by new and old buildings that will provide noise attenuation (see also Figure 4-5).
- The proposed new Performing Art Building would be larger than most of the other buildings on the site. To reduce the sense of mass of this building, its predominant exterior wall material is glass. The size of this building is a bit larger in scale, but of similar heights as other institutional buildings on the site (see also Figure 4-5).
- The architectural character of the new buildings on the proposed South Campus use modern materials and design styles, but seek to be complementary to the existing historic buildings intended to remain. Primary building materials will include stained wood, glass, white-painted cement plaster, cast-in-place concrete, and aluminum cladding materials in white and medium gray colors.
- As part of the Project, the applicant intends to construct a pedestrian tunnel below Lincoln Avenue, linking the existing Campus to the Project site. That pedestrian tunnel is not part of the initial (Phase I) improvements associated with the Project. Until the pedestrian tunnel is constructed, another physical change that will occur with the Project will be a regular schedule of students crossing Lincoln Avenue at a mid-block pedestrian crossing, located at or near the existing pedestrian crossing.

As an access-controlled campus, the internal portions of the Project will generally not be visible to most members of the public, other than through view corridors from Lincoln Avenue. The Lincoln Avenue frontage is the most prominent and visually accessible portion of the site. Plans for the renovation of the existing historic buildings, new structures and landscaping and pedestrian circulation along the Lincoln Avenue frontage will maintain and improve the existing visual character of this street frontage (see **Figure 4-6**).

Simulated View, Outdoor Space at Proposed South Campus

Simulated View, Proposed Commons and Performing Art Center

Figure 4-5
Visual Character, Proposed South Campus

Source: Skidmore, Owings & Merrill, 2020

Existing View, Lincoln Avenue Frontage at Proposed South Campus

Simulated View, Lincoln Avenue frontage with Proposed Project

Figure 4-6
Existing and Simulated View of Proposed Lincoln Avenue Frontage

Source: Skidmore, Owings & Merrill, 2020

Regulatory Requirements/ SCAs

Pursuant to ***SCA Aesthetics-1: Landscape Plan***, the Project applicant shall submit a final Landscape Plan to the City as part of subsequent Final Development Plans (FDPs) for review and approval. Those FDP landscape plans must be consistent with the Landscape Plan as presented in the Project's Preliminary Development (PDP). The Project applicant will be responsible for implementing the approved Landscape Plan and permanently maintaining the landscape in good condition. The Landscape Plan shall also include the area within the adjacent public right-of-way along Lincoln Avenue. All fences, walls and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced. Pursuant to SCA ***Aesthetics-3: Trash and Blight Removal*** and ***Aesthetics-4: Graffiti Control***, the Project applicant will maintain the property free of blight, will provide and maintain trash receptacles near public entryways, and will maintain and incorporate best management practices reasonably related to control and removal of graffiti.

Design Review

Pursuant to Chapter 17.136 of the Oakland Planning Code, the Project will be subject to the City's Design Review process. Design Review will be conducted for the Project as a whole pursuant to the proposed Preliminary Development Plan (PDP), and will be reassessed pursuant to individual Final Development Plans (FDPs) for each new building or phase of development. Design Review allows for City staff and Planning Commission consideration of the visible features of the Project and the Project's relationship to its physical surroundings. Design Review is focused on ensuring quality design, including site landscaping, site plan arrangement, building height and bulk, texture, materials, colors and appurtenances, and potential shadowing effects on adjacent properties. This EIR does not assess or pre-suppose the outcome of the City's Design Review process, but that process is specifically intended to ensure the following design considerations, pursuant to OMC Section 17.136: [4]

- That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design (only elements of design which have some significant relationship to outside appearance are considered)
- That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of private and public investments in the area
- That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable district plan or development control map that has been adopted by the City Council, and
- That any retaining walls are consistent with the overall building and site design, and respect the natural landscape and topography of the site and surrounding areas

Implementation of the City's Design Review process will ensure that the Project will not substantially degrade the existing visual character or quality of the site or its surroundings.

Mitigation Measures

None needed

Light and Glare

Aesthetics-3: The Project will add new sources of light which will be visible from off-site locations, and may emit glare that may substantially and adversely affect nighttime views in the area. (**Less than Significant with SCAs**)

[4] Criteria as established per Oakland Municipal Code, Section 17.136: Design Review

Existing lighting at the proposed South Campus is limited to building-mounted light fixtures on each of the existing buildings. No light poles or tall light fixtures are located within the existing parking lots or drive aisles within the proposed South Campus.

The Project proposes a number of new light sources as part of the Project design (see **Figure 4-7**). These new light sources include:

- 16 new eighteen-foot tall wooden light poles proposed along the new Loop Road, spaced at 70-foot intervals along this roadway. Downcast lighting fixtures would be attached to these light poles.
- 13 new eighteen-foot tall wooden light poles are proposed within redesigned upper parking lot on the proposed South Campus, also spaced at approximately 70-foot intervals. Downcast lighting fixtures would be attached to these light poles.
- Smaller pedestrian-scale light pole fixtures with downcast light are proposed at main pathways through the proposed South Campus. This includes 5 pedestrian-scale light poles at the Campus pedestrian entry at Lincoln (near Buildings 0, 1 and 2); 16 similar fixtures along the sides of the staircase at the central Commons space; and 9 fixtures along the pedestrian path behind (south of) existing Building 9.
- Throughout the proposed South Campus' secondary pedestrian pathways and at the pedestrian tunnel staircase, several different low-level lighting is proposed, including wooden bollards for nature trails at 12-foot spacing, recessed step-lights at the base of retaining walls at 10-foot spacing, integrated handrail lights at staircases, and toe-kick lights at pathway curbs.
- Within the central Commons area, one or more trees will have up-lights or down-light fixtures to add lighting to this internal Campus space for evening Special Events.
- At those historic buildings to remain (buildings 0, 1 and 2), existing building-mounted light fixtures may be replaced with fixtures more representative of the historic character of these buildings.
- The Project's proposed new Performing Art Center building proposed night lighting is limited to two external building-mounted fixtures at the loading dock, to be used only during loading and unloading operations.

Regulatory Requirements / Standard Conditions of Approval

Pursuant to ***SCA Aesthetics-2: Lighting***, all proposed new exterior lighting fixtures must be adequately shielded to a point below the light bulb, with a reflector to prevent unnecessary glare onto adjacent properties.

With implementation of SCA Aesthetics-2, the Project's potential adverse effects related to lighting and glare onto adjacent properties would be reduced to levels of less than significant. Although lighting fixture design is intended to be reviewed and approved pursuant to building permit approval, lighting levels are also an important consideration of the City's design review process.

Mitigation Measures

None required

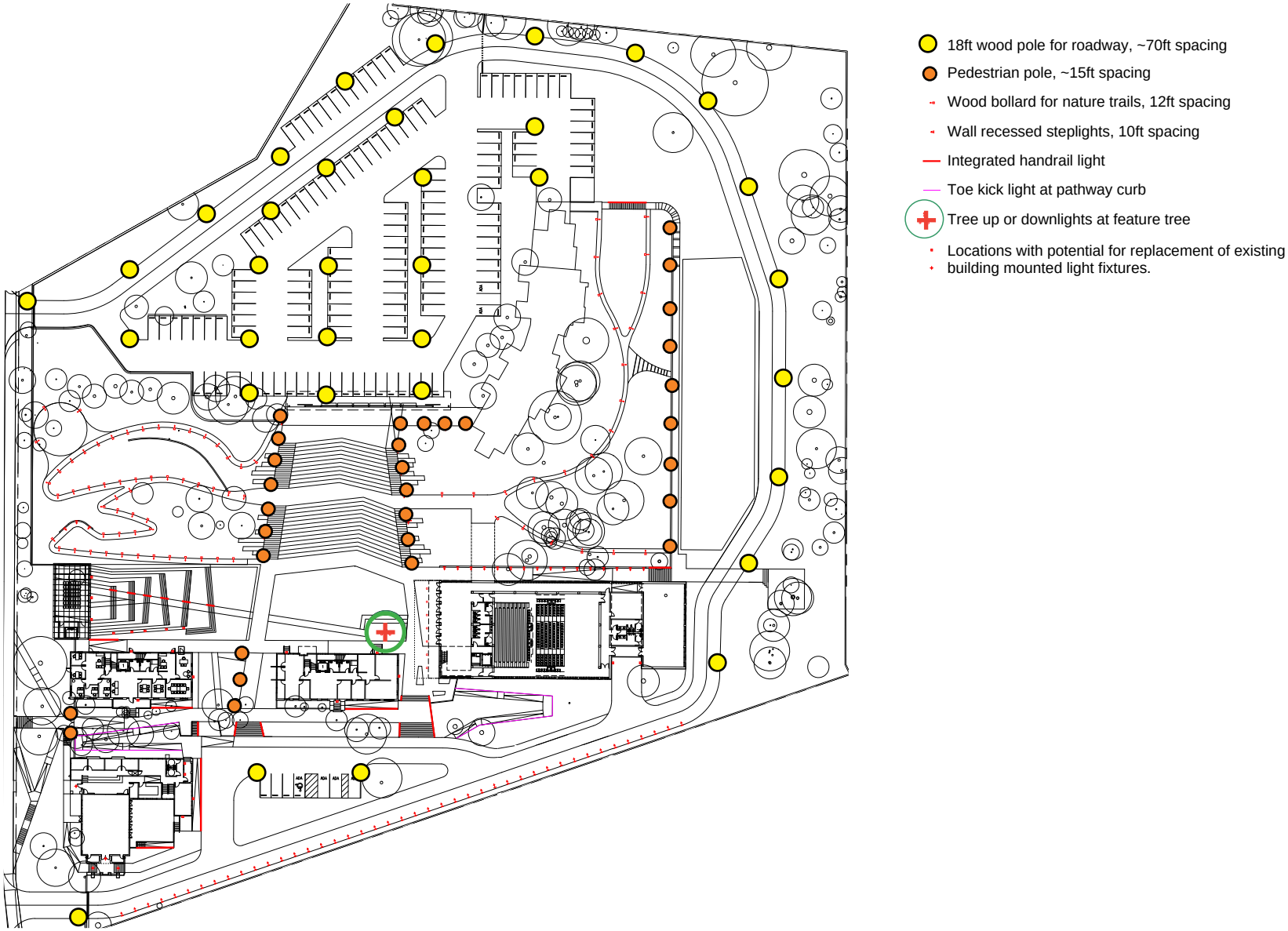


Figure 4-7
Conceptual Lighting Plan

Source: Skidmore, Owings & Merrill, 2019

Shadows

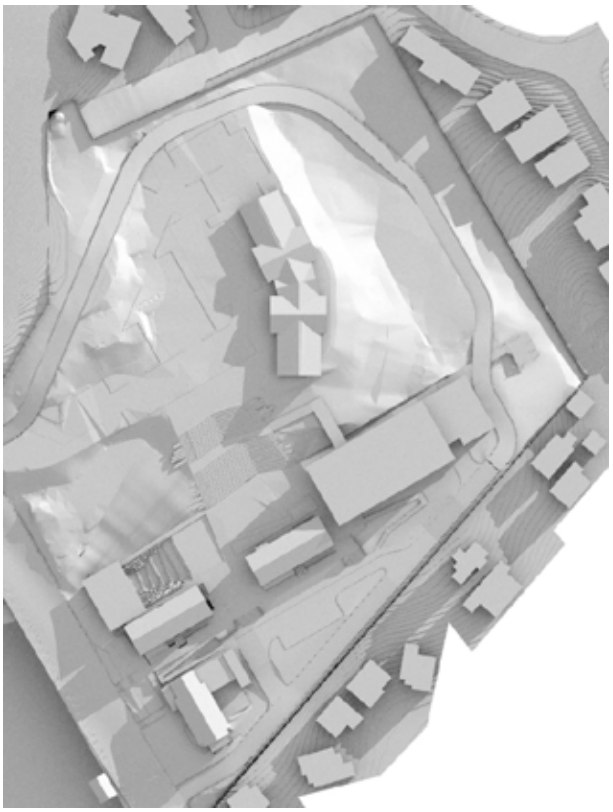
Aesthetics-4. The Project (including its new buildings and landscape) will not, now or in the future, cast substantial shadows that would substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, or that substantially impair the beneficial use of any public or quasi-public park, lawn, garden or open space. The Project would not cast shadow on an historic resource, such that the shadow would materially impair the resource's historic significance. (**No Impact**)

Consistent with City of Oakland CEQA Threshold Guidance, which states that, "unless directed otherwise by the City, a shadow analysis shall be prepared, evaluating shadows during the following dates and times: 9:00 AM, noon and 3:00 PM for the Spring Equinox, Summer Solstice, Fall Equinox and Winter Solstice," a shadow analysis of the Project has been conducted (Skidmore, Owings & Merrill, **Appendix 4**). This shadow analysis was conducted pursuant to City guidelines and methodologies. Shade patterns from existing and proposed buildings, hardscapes, walls and fences were simulated during the specified periods to determine if shadows form the Project would have significant shadow impacts on any existing or historic buildings or resources, solar collectors, public or quasi-public parks or open spaces.

As demonstrated in Appendix 4, the majority of existing buildings and neighboring properties are located far enough to the south of the Project site, such that they would not be adversely affected by shadows generated by new development. As demonstrated in **Figure 4-8** (which shows the most southwesterly-directed shadows that would occur in the morning hours, no shadows during any period of the year would be cast off the Project site and onto adjacent properties. Even during the winter, when the sun is lowest in the sky and creating the longest shadows, no Project-generated shadow would substantially impair the function of any building using passive solar heat collection, solar collectors for hot water heating or photovoltaic solar collectors, nor would Project-generated shadows substantially impair the beneficial use of any public or quasi-public park, lawn, garden or open space. Morning shadows generated by the new Performing Arts Center building would cast a shadow across the southerly portion of Building 2 (an identified historic resource), but these shadows would not materially impair any of the character-defining features of Building 2 that define its historic significance.

Mitigation Measures

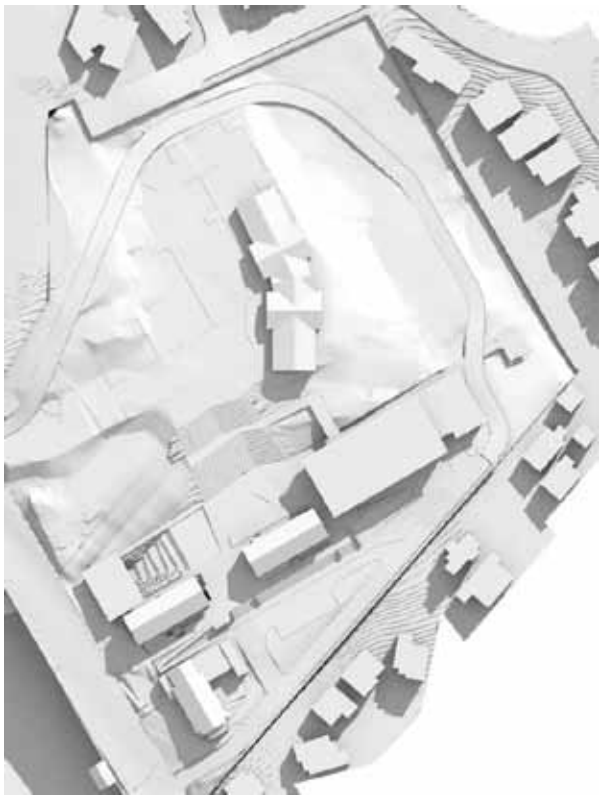
None required.



December 21, 9:00 AM

March 21, 9:00 AM

June 23, 9:00 AM



September 23, 9:00 AM

Figure 4-8
Shadow Study, Morning Shadows throughout Year
(shadows closest to nearest neighboring properties)

Source: Skidmore, Owings & Merrill, 2020

Cumulative Aesthetics Affects

The Project site is located in the Lincoln Highlands/Oakmore/Dimond neighborhoods of the City, which are primarily well-established residential neighborhoods with little opportunities for new development. The Project site is also in the immediate vicinity of long-established large institutional facilities of the Ascension Greek Orthodox Cathedral and the Mormon Temple. There are no known other past, present or reasonably foreseeable future larger-scaled development projects in the vicinity that would contribute to a cumulative aesthetic environmental effect, other than those aesthetic changes proposed pursuant to the Project, and as fully analyzed above. As such, the Project's aesthetic affects are limited to the Project only, and no cumulative aesthetic effects are identified.

5

Air Quality

This chapter of the EIR evaluates the potential impacts of the Project related to air quality. This chapter describes the existing air quality environment in the Project vicinity, and evaluates the extent to which the Project may generate significant new air quality effects.

Information for this chapter of the EIR has been derived from the following primary source:

- Illingworth & Rodkin, Inc., *Head-Royce School Expansion Air Quality and Greenhouse Gas Emissions Assessment*, August 6, 2020 (**Appendix 5)**

Existing Setting

The Project site is located in Alameda County, which is within the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone (O3), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone (O3) levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOX). These precursor pollutants react under certain meteorological conditions to form high O3 levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O3 levels. The highest O3 levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High O3 levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter, or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic Air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust (DPM) is the predominant TAC in urban air, and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This

complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. The State has identified the following people who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children.

The closest sensitive receptors to the Project site are the adjacent single-family residences to the southwest and southeast. There are more residences with sensitive receptors at farther distances. In addition, there is the KSS Immersion Preschool (2-6 years old), the existing Head-Royce School Campus (K-12 grades) and Growing Light Montessori Preschool (2-6 years old) near the Project site. The Project itself would introduce new sensitive receptors (i.e. students) to the area.

Regulatory Setting

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. At the State level, the California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency (CalEPA) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Federal Regulations

The United States Environmental Protection Agency (US EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial and mining activities (such as bulldozers and loaders). The US EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the US EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NOX and particulate matter (PM_{10} and $PM_{2.5}$) and because the US EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel standards for on-road vehicles, and the standards for non-road diesel engines are estimated to reduce particulate matter and NOX emissions from diesel engines up to 95 percent by year 2030, when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.

In concert with the diesel engine emission standards, the US EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight, to 15 parts per million by weight), and by 99 percent for off-highway diesel fuel (from about 3,000 parts per million by weight to 15 parts per million by weight). The low sulfur highway fuel, also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent, or with sooner implementation dates.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the Risk reduction Plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has also adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks, which represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. These regulations will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NOX emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NOX exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of these regulations, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NOX.

Regional Regulations - BAAQMD

BAAQMD (or District) has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County. BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards for the Bay Area. The District also has permit authority over most types of stationary equipment. The BAAQMD is responsible for permitting and inspection of stationary sources, enforcement of regulations (including setting fees, levying fines, and enforcement actions), and ensuring that public nuisances are minimized.

The BAAQMD's California Environmental Quality Act (CEQA) Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The Guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, as well as recommended thresholds of significance, mitigation measures and background air quality information. The Guidelines also include assessment methodologies for air toxics, odors and greenhouse gas emissions (**Appendix 5**, Attachment 1 includes detailed community risk modeling methodology).

BAAQMD Rules and Regulations

Combustion equipment associated with the Project, which would include emergency generators for elevators at pedestrian tunnel entrance and at the Performing Arts Center, would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators. The Project would also generate emissions from vehicles traveling to and from the Project site. Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 2 – Permits
    - Rule 2-1: General Requirements
    - Rule 2-2: New Source Review
- Regulation 6 – Particulate Matter and Visible Emissions
- Regulation 9 – Inorganic Gaseous Pollutants
    - Rule 9-1: Sulfur Dioxide
    - Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
    - Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits

Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an Authority to Construct (ATC).

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a Permit to Operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting. At the proposed facility, the diesel fuel storage tanks are expected to be exempt from permitting.

New Source Review

Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO2, PM10, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NOx emissions from the diesel-fueled generator engines.

BACT for Diesel Generator Engines

Since the Project's generators will be used exclusively for emergency use during involuntary loss of power, the Best Available Control Technology-2 (BACT 2) levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. The BACT 2 NOx emission factor limit is 6.9 grams per horsepower hour (g/hp-hr). The Project's emergency generator engines will have emissions lower than the BACT 2 level and, as such, will comply with the BACT requirements.

Offsets

Rule 2-2-302 require that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds. It is not expected that Project emissions of any pollutant will exceed the offset thresholds. Thus, is not expected that offsets for the Project would be required.

Prohibitory Rules

Regulation 6 pertains to particulate matter and visible emissions. Although the emergency generator engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 9-1 applies to sulfur dioxide. The Project's emergency diesel engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NOx and CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour, and is not expected to apply to the Project.

Rule 9-8 prescribes NOx and CO emission limits for stationary internal combustion engines. Regulation 9-8-110 exempts emergency diesel generator engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and testing). The Project's emergency generator engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

Stationary Diesel Airborne Toxic Control Measure

The BAAQMD administers the state's Airborne Toxic Control Measure (ACTM) for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The Project's stationary sources will be new stationary emergency standby diesel engines larger than 50 hp. Since these engines will have an uncontrolled PM emission factor of less than 0.15 g/hp-hour and operate no more than 50 hours per year, the engines will comply with the requirements of the ACTM.

Local

City of Oakland General Plan

Land Use and Transportation Element

The Land Use and Transportation Element (LUTE) of the Oakland General Plan contains numerous policies that address issues related to air quality. Generally, these policies seek to provide for new mixed use, transit-oriented development that encourages public transit use and increases pedestrian and bicycle trips at major transportation nodes; linking transportation facilities and infrastructure improvements to recreational uses, job centers, commercial nodes, and social services; promoting strategies to address traffic congestion; encouraging transit and other alternatives modes of travel; incorporating parking facilities for cars and bicycles into the design of projects in a manner that encourages and promotes safe pedestrian activity; and encouraging infill development. The majority of these polices are not directly applicable to the Project.

The LUTE also accounts for the air quality considerations of land use compatibility decisions with an objective to minimize land use compatibility conflicts by protecting existing activities from the intrusion of potentially incompatible land uses, and minimizing the potential for new or existing industrial or commercial uses to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.

Open Space, Conservation and Recreation Element

The Open Space, Conservation and Recreation Element (OSCAR) Element of the Oakland General Plan (Oakland, 1996) contains the following air quality policies that address criteria pollutants and would apply to the Project

- Policy CO-12.5: Use of Best Available Control Technology: Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.
- Policy CO-12.6: Control of Dust Emissions: Require construction, demolition and grading practices which minimize dust emissions.

City of Oakland Municipal Code

Pursuant to the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, 15.36.100 Dust Control Measures, includes the following language:

> *"Best Management Practices shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies."*

Standard Conditions of Approval

The City of Oakland's Standard Conditions of Approval (SCAs) relevant to reducing air quality impacts applicable to the Project are listed below. If the Project is approved, all applicable SCAs would be adopted as conditions of approval, as applicable, to help ensure less than significant air quality impacts from the Project. The SCAs are incorporated and required as part of all approved projects, so they are not listed as mitigation measures. The following SCA pertaining to air quality apply to the Project.

SCA Air-1, Dust Controls – Construction Related [1]

Applies to: All projects involving construction activities

The project applicant shall implement all of the following applicable dust control measures during construction of the project:

1. Water all exposed surfaces of active construction areas at least twice daily. 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 feasible.
2. 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).

[1] Additional Enhanced control will not be needed because the Project does involve extensive site preparation nor extensive soil transport

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. Limit vehicle speeds on unpaved roads to 15 miles per hour.
5. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per house (mph).
6. All trucks and equipment, including tires, shall be washed off prior to leaving the site.
7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Air-2, Criteria Air Pollutant Controls - Construction Related [2]

Applies to: All projects involving construction activities

The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:

1. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
2. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off- Road Diesel Regulations").
3. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.
4. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.
5. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.
6. All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.

When Required: During construction

Initial Approval: Bureau of Building

[2] Additional Enhanced control will not be needed since the average daily emissions from construction activities will not exceed the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10

Monitoring/Inspection: Bureau of Building

SCA Air-3, Diesel Particulate Matter Controls-Construction Related

Applies to: All projects involving construction activities of greater than 100 dwelling units or 50,000 square feet of non-residential floor area, or any project involving construction activities of greater than 50 dwelling units or 25,000 square feet of non-residential floor area for any area defined as needing "Best Practices" or needing "Further Study" on the BAAQMD Healthy Places Map

Diesel Particulate Matter Reduction Measures: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods:

1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.

-or-

2. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

   When Required: During construction

   Initial Approval: Bureau of Building

   Monitoring/Inspection: Bureau of Building

SCA Air-4, Exposure to Air Pollution - Toxic Air Contaminants

Applies to: All projects that involves residential uses (new dwelling units, excluding secondary units), or new or expanded schools, daycare centers, parks, nursing homes, or medical facilities, and projects located within 1,000' of significant sources of air pollution

Health Risk Reduction Measures: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods:

1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related

permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

- or -

2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

    a. Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.

    b. Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).

    c. Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.

    d. The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.

    e. Sensitive receptors shall be located on the upper floors of buildings, if feasible.

    f. Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: pine, cypress, hybrid poplar and redwood.

    g. Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.

    h. Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.

    i. Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:

    j. Installing electrical hook-ups for diesel trucks at loading docks.

    k. Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.

    l. Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.

    m. Prohibiting trucks from idling for more than two minutes.

    n. Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

Maintenance of Health Risk Reduction Measures: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Air-5, Stationary Sources of Air Pollution (Toxic Air Contaminants)

Applies to: All projects that involve a stationary pollutant source requiring a permit from BAAQMD, including but not limited to back-up diesel generators.

The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods:

1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

- or -

2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

    a. Installation of non-diesel fueled generators, if feasible, or;

    b. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

    When Required: During construction

    Initial Approval: Bureau of Building

    Monitoring/Inspection: Bureau of Building

SCA Air-6, Asbestos in Structures

Applies to: All projects involving either demolition of structures or renovation of structures known to contain or that may contain asbestos

The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential air quality impacts that could result from the Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

1. During project construction, result in average daily emissions of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10;
2. During project operations, result in average daily emissions of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or PM2.5 or 15 tons per year of PM10;
3. For new sources of toxic air contaminants (TACs), during either project construction or project operation, expose sensitive receptors to substantial levels of TACs under project conditions resulting in: a) an increase in cancer risk level greater than 10 in one million; b) a non-cancer risk (chronic or acute) Hazard Index greater than 1.0; or c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter.
4. For new sources of toxic air contaminants (TACs) under cumulative project construction and operational conditions, expose sensitive receptors to substantial levels of TACs resulting in: a) a cancer risk level greater than 100 in a million; b) a non-cancer risk (chronic or acute) hazard index greater than 10.0; or c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.[3]
5. Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours, and 20 ppm for one hour;
6. Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.
7. Expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in: a) a cancer risk level greater than 100 in a million, b) a non-cancer risk (chronic or acute) hazard index greater than 10.0; or c) annual average PM2.5 of greater than 0.8 micrograms per cubic meter.[4]

The above thresholds #1 through #5 are also presented in **Table 5-1** below.

[3] When siting new TAC sources, consider receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis should consider the combined risk from all TAC sources.

[4] This threshold pertains to the effect of the environment on the Project (as compared to the Project's impact on the environment), and is not legally required to be analyzed under CEQA. This topic is nevertheless evaluated in this EIR to provide information to decision-makers and the public.

Table 5-1: Air Quality Significance Thresholds

	Construction Thresholds	Operational Thresholds	
Criteria Air Pollutant	**Average Daily Emissions (lbs./day)**	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects that would generate traffic in amounts that would conflict with the applicable Congestion Management Program or that would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour. In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria. The Project would not contribute a significant amount of traffic that would conflict with the applicable Alameda County Congestion Management Program, nor would it substantially contribute to traffic levels at the MacArthur Maze in I-580. This threshold is not further analyzed in this EIR.

Similarly, there is nothing about the Project that would generate frequent and substantial objectionable odors that would affect a substantial number of people. Therefore, this threshold is not further analyzed in this EIR.

See also the Greenhouse Gas Emissions/Global Climate Change chapter and the Hazards and Hazardous Materials chapter of this EIR for additional thresholds and analysis related to GHG emissions and emission form hazardous substances (e.g., asbestos).

Construction Emissions of Criteria Pollutants

Air-1: The Project's construction activities would not result in average daily emissions of 54 pounds per day of ROG, NOx or $PM_{2.5}$, or 82 pounds per day of PM_{10}. (**Less than Significant**)

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction of the Project. Traffic generated by construction (i.e. off-site construction activities), which includes worker trips, vendor deliveries and material hauling trips, were computed separately using the CARB

EMission Factors 2017 model (EMFAC2017).[5] The model output from CalEEMod along with construction inputs are included in **Appendix 5, Attachment 2**. EMFAC2017 calculations and outputs are included in **Appendix 5, Attachment 3**.

Construction Activity Emissions

The Project's construction activities involve two different construction activity types as modeled for this analysis, as quantified in **Table 5-2**. The first type of construction activity is the traditional types of construction that would occur throughout the proposed South Campus, where the Project construction activity would include new and renovated school buildings and facilities and construction of the Loop Road and parking lots. The second type of construction activity is for the Project's proposed pedestrian tunnel. Both of these construction activities are anticipated to occur at the same time.

Table 5-2: Summary of Project Land Use Inputs for Air Emissions Modeling

	Size	Units	Acreage
Proposed South Campus			
School	46,250	Square Feet	2.7
Other Asphalt Surfaces	1.0	Acre	1.0
Parking Lot	1.3	Acre	1.3
Pedestrian Tunnel			
Other Asphalt Surfaces	0.1	Acre	0.1

Source: Illingworth & Rodkin, 2020, Appendix 5

The CalEEMod emission calculator computes annual emissions from construction projects based on the project type, size and acreage, and provides emission estimates for both on-site and off-site construction activities. On-site emissions are primarily from construction equipment. Data used as input for the CalEEMod calculator is derived from the Project Description and its associated technical reports. A list of anticipated construction equipment used, and a construction schedule, was then based on CalEEMod default values for similar types and sizes of projects. The Project Description assumes a possible construction start date of April 2021. The CalEEMod default schedule then estimates that the Project would be built-out over a period of approximately 14 months (or 300 construction workdays) for the proposed South Campus, and a concurrent 5 months (or 110 workday) schedule for the pedestrian tunnel. Emissions from construction equipment throughout that construction period was then calculated.

Emissions from off-site construction activity includes worker trips, hauling trips and vendor traffic. Trip estimates are produced by CalEEMod based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips needed. The EMFAC2017 model was used to provide aggregate emission rates for each type of vehicle trip. Model assumptions include the following:

- The vehicle mix was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos and light duty. Vendor trips are assumed to be comprised of delivery and large trucks. Haul trucks, including cement trucks, are comprised of large trucks.

[5] See CARB's EMFAC2017 Web Database at https://www.arb.ca.gov/emfac/2017/

- Travel distances are based on CalEEMod default lengths (10.8 miles for worker travel, 7.3 miles for vendor trips, and 20 miles for demolition material export and soil import/export).
- Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included.
- Alameda County on road emissions for 2021 and 2022 were used in these calculations.

The total average daily emissions from construction equipment and vehicle trip emissions was calculated by dividing the total construction emissions from the Project by the total number of construction workdays, and then averaged over the estimated 300 construction workdays**. Table 5-3** shows the calculated average daily construction emissions of ROG, NO_X, PM_{10} exhaust and $PM_{2.5}$ exhaust emissions during construction of the Project.

Table 5-3: Construction-Period Criteria Pollutant Emissions

	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Annual Total Construction Emissions (tons)	0.54	2.68	0.14	0.13
Average Daily Emissions (pounds/day)[1]	3.63	17.87	0.93	0.84
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Note 1: Assumes 300 workdays

Source: Illingworth & Rodkin, August 2020 (Appendix 5)

As indicated in Table 5-3, the predicted construction-period emissions attributed to the Project would not exceed significance thresholds.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries.

Standard Conditions of Approval

Certain City of Oakland SCAs apply to the Project, whether it would have a CEQA impact or not. Pursuant to ***SCA Air-1: Dust Controls – Construction Related***, the Project would be required to implement applicable best management practices to control fugitive dust during grading and other construction activities. Pursuant to ***SCA Air-2: Criteria Air Pollutant Controls - Construction Related***, the Project applicant is also required to implement basic control measures for criteria air pollutants. Implementation of these SCAs would further reduce the Project's less than significant construction-period emission of criteria pollutants.

Mitigation Measures

No further mitigation required

Operational Emissions of Criteria Pollutants

Air-2: During Project operations, the Project would not result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or $PM_{2.5}$ or 15 tons per year of PM_{10}. (**Less than Significant)**

The CalEEMod emissions estimator was also used to estimate operational air emissions, assuming full build-out of the Project. These emissions would be generated primarily from traffic generated from future students/parents, employees and vendors. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical operational emissions resulting from the Project. The following model assumptions were input into the CalEEMod emission estimator to derive operational emissions:

- The land use values entered into CalEEMod included 356 new students, entered as "Elementary School". Although the Project is a combined K-12 school, the operational emissions attributable to an elementary school are slightly higher than other school grades and therefore used to provide a conservative analysis.
- Emissions associated with vehicle travel depend on the year of analysis, because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. This analysis assumed that the Project would be fully built out and operating in the year 2022.
- The CalEEMod's assumed default vehicle emission factors and fleet mix were updated with emission rates and fleet mix factors from EMFAC2017, adjusted with the CARB EMFAC off-model adjustment factors. On-road emission rates for Alameda County for calendar year 2022 were used.[6]
- Project-specific trip generation rates were used, based on data provided in the Transportation Impact Study prepared for this EIR.[7] Based on this Study, the Project is projected to generate approximately 600 new daily vehicle trips. The default trip lengths and trip types specified by CalEEMod were used.
- CalEEMod defaults for energy use were used, which are based on 2016 Title 24 Building Standards.
- The Project would include two emergency generators that would be powered by diesel engines. The size of the generators were not known at the time of this study, so an estimated generator size of 150 kilowatts (kW) with a 201 horsepower (HP) engine for both generators was used. The emergency generators would be located at the elevators at pedestrian tunnel entrance, and at the Performing Arts Center building. These generators would be tested periodically to power the elevators in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.
- Default model assumptions for emissions associated with solid waste generation, and water and wastewater use were applied to the Project. Water and wastewater use assumes 100% aerobic conditions.
- The prior land uses on the Project site was the Lincoln Child Center. This prior use generated low levels of operational and traffic emissions. Emissions from the prior use at the site were not considered, nor used to offset Project emissions.

Annual emissions were predicted using CalEEMod, and daily emissions were estimated assuming 365 days of operation. **Table 5-4** shows the average daily emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the Project.

[6] See CARB 2018: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

[7] Fehr & Peers, 2020. *Head-Royce School Expansion – Preliminary Transportation Assessment*. April.

Table 5-4: Project Operational Emissions of Criteria Pollutants

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2022 Annual Project Operational Emissions (*tons/year*)	0.33 tons	0.47 tons	0.36 tons	0.10 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2022 Daily Project Operational Emissions (*pounds/day*)[1]	1.82 lbs.	2.59 lbs.	1.98 lbs.	0.57 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*

Source: Illingworth & Rodkin, August 2020, **Appendix 5**

Notes: [1] Assumes 365-day operation.

As indicated in Table 5-4, operational period emissions of criteria pollutants from the Project would not exceed significance thresholds, and this impact would be less than significant.

Mitigation Measures

No mitigation measures required

Community Health Risks from Toxic Air Contaminants

Air-3: The Project's new sources of toxic air contaminants (both during constructions) could expose sensitive receptors to substantial levels of TACs resulting in an increase in cancer risk levels greater than 10 in one million to the nearest sensitive receptor, and could increase annual average $PM_{2.5}$ concentrations to greater than 0.3 micrograms per cubic meter at other nearby sensitive receptors. Implementation of DPM emission reductions during construction (pursuant to City SCAs) would reduce this potential impact to levels of less than significant. (**Less than Significant with SCAs**)

Project impacts related to increased community risk from toxic air contaminants (TACs) can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the vicinity, or by significantly exacerbating existing cumulative TAC conditions. There are no existing mobile or stationary sources of TACs or other sources of localized air pollutants in the vicinity of the Project, so the impact of existing sources of TAC was not assessed in terms of cumulative risk.

The Project's impacts of introducing new sources of TACs with the potential to adversely affect existing sensitive receptors in the vicinity is assessed for both temporary construction activities, and for long-term Project operations. The Project would generate new sources of TACs during construction (i.e. temporary dust and equipment exhaust that would affect nearby sensitive receptors), and TACs emitted during operations (i.e. emergency diesel generators and traffic, including traffic on the Project's proposed Loop Road, that would emit TACs and other air pollutant emissions).

Community Risk Methodology

To evaluate the increased cancer risks from the Project, a 30-year exposure period was assumed, with sensitive receptors being exposed to Project construction and operation emissions during this timeframe. The Project's increased cancer risk is computed by summing the contribution of TAC emissions from Project construction and Project operations. The annual $PM_{2.5}$ concentration and HI values are not additive, but

instead are based on an annual maximum risk for the entirety of the Project. The Project's maximally exposed individual (MEI) is identified as the sensitive receptor that is most affected by the Project's emission of TACs during construction and operation. The methodology for computing community risks impacts is contained in **Appendix 5, Attachment 1,** including methodology for TAC and $PM_{2.5}$ emissions, dispersion modeling, and cancer risk computations.

For this assessment, sensitive receptors include those locations where sensitive populations would be present for extended periods of time and subject to chronic exposure of TAC emissions. These sensitive receptors include all existing adjacent residences to the north, south and east of the Project site. Residential receptors are assumed to include all receptor groups (i.e. infants, children, and adults) with almost continuous exposure to Project emissions. Community risks were also computed for children attending the nearby KSS Immersion Preschool, the existing Head-Royce School Campus, and the Growing Light Montessori Preschool.

Community Health Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although Impact Air-1 concluded that construction exhaust emissions would not make a significant contribution to existing or projected air quality violations for criteria pollutants, construction exhaust emissions may pose a different health risk for sensitive receptors. The primary community risks associated with construction emissions are cancer risks from DPM and exposure to $PM_{2.5}$.[8] A community health risk assessment of the Project's construction activities was conducted to evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$. This assessment includes dispersion modeling to predict off-site concentrations of TAC emission resulting from Project construction, so that lifetime cancer risks and non-cancer health effects can be evaluated.

Construction Emissions and Dispersion Modeling

The CalEEMod emissions calculator provides total annual PM_{10} exhaust emissions from the Project's off-road construction equipment and from exhaust emissions from on-road vehicles, which are conservatively all assumed to be DPM. Total PM_{10} emissions from all construction stages (including on-road emissions from haul truck travel during demolition and grading activities, worker travel and vendor deliveries during construction) is estimated at 0.09 tons (200 pounds) for construction activity at the proposed South Campus, and 0.027 tons (54 pounds) for construction of the pedestrian tunnel. Fugitive $PM_{2.5}$ dust emissions are estimated at 0.04 tons (81 pounds) for construction activity at the proposed South Campus, and only 1 pound for construction of the pedestrian tunnel.

Using these emission values, the U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors in the vicinity of the Project's construction area. The AERMOD dispersion model is a BAAQMD-recommended model for purposes of CEQA analyses of health risks.[9]

- The AERMOD modeling utilized four area source locations to represent on-site construction emissions, two for exhaust DPM emissions and two for fugitive $PM_{2.5}$ dust emissions.
- To represent the construction equipment exhaust emissions, an emission release height of 20 feet (6 meters) was used for the area sources.[10] The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the

[8] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

[9] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

[10] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source.

- Emissions from construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7:00 a.m. to 4:00 p.m., when the majority of construction activity would occur.
- Due to terrain elevation differences in the Project area, terrain was included in the AERMOD modeling.
- The modeling used a 5-year meteorological data set (2013-2017) from the Oakland International Airport, prepared for use with the AERMOD model by BAAQMD.

Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2021-2022 period were calculated using the model, and individual DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations.

Construction Period Health Risks

Exposure of Project-generated TAC emission to infants and adults is assumed to occur at each modelled sensitive receptor site during the entire construction period, as well as exposure of students at nearby schools. Calculations for the increased cancer risk attributed to Project construction at nearby sensitive receptors includes application of BAAQMD- recommended age sensitivity factors to reflect the greater sensitivity of infants and small children to cancer-causing TACs. Students at the KSS Immersion Preschool and at the Growing Light Montessori Preschool were assumed to be between the ages of 2 and 6 years old, while students at the existing Head-Royce School Campus were assumed to be between the ages of 5 and 18 years old. The modeled maximum annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive dust concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled, and a chronic inhalation reference exposure level of 5 $\mu g/m^3$.

Figure 5-1 shows the location where the maximum DPM and $PM_{2.5}$ concentrations from construction activities would occur. The maximum concentrations for DPM and $PM_{2.5}$ occur at a single-family residence southeast of the Project site along Charleston Street (the maximally exposed individual, or MEI).

- The maximum increased cancer risk at this location was calculated using the annual modeled DPM concentration and using BAAQMD-recommended methods for calculation health risks. The maximum increased cancer risk (assuming no emission reduction or mitigation) was found to be 29.3 cancer risks per million, exceeding the single-source threshold for community risks of 10 cancer risks per million.
- The annual $PM_{2.5}$ concentration and HI values (assuming no emission reduction or mitigation) would not exceed the applicable single-source thresholds.

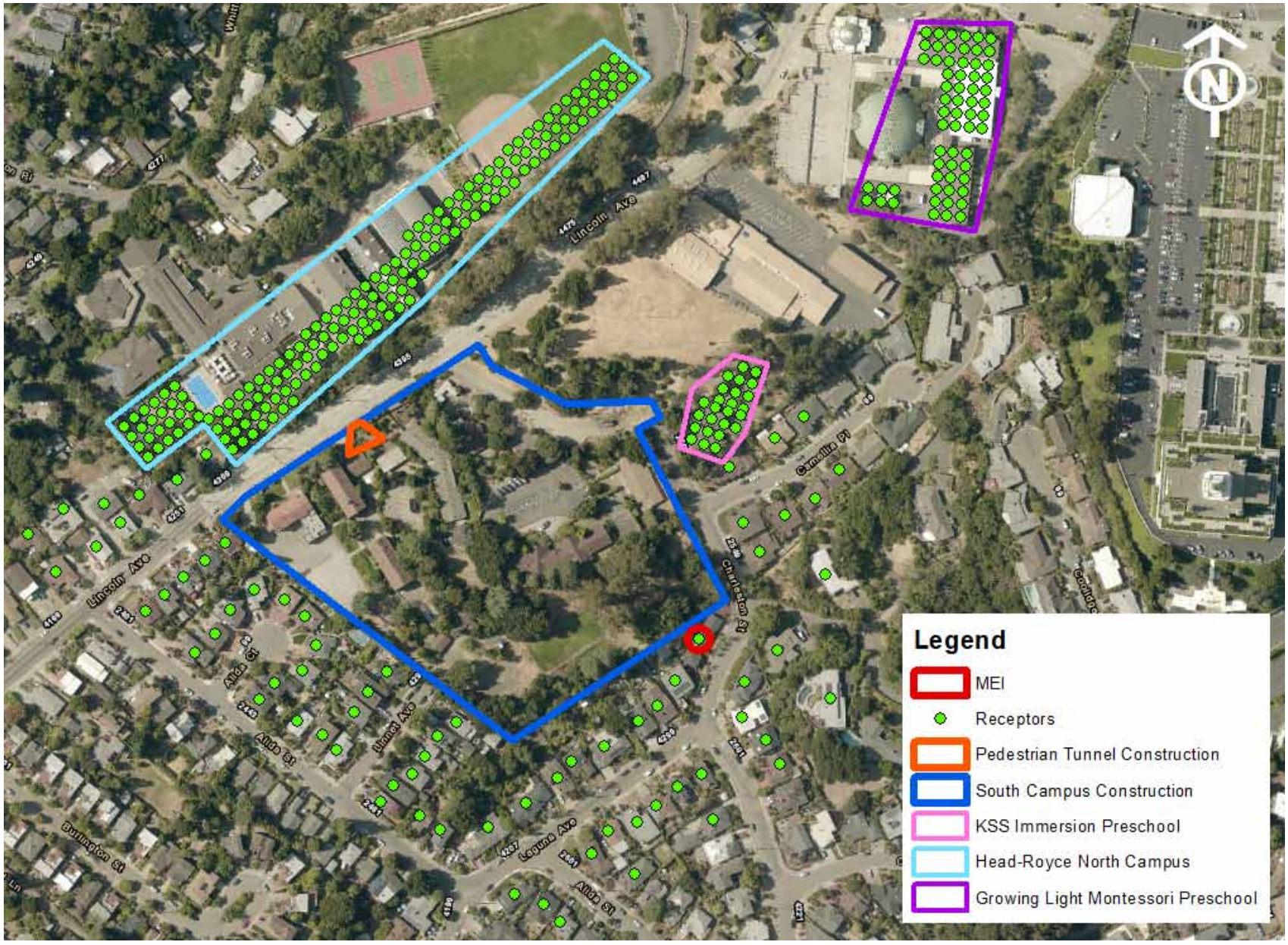


Figure 5-1
Maximum Exposed Individual to Construction Period Concentrations of DPM and PM2.5

Source: Illingworth & Rodkin, August 2020

Standard Conditions of Approval

Pursuant to **SCA Air-3, Diesel Particulate Matter Controls - Construction Related**, the Project applicant shall ensure that all off-road diesel equipment is equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type as certified by CARB. Tier 4 engines automatically meet this requirement. This equipment must be properly maintained and tuned in accordance with manufacturer specifications, and verified through an equipment inventory submittal and Certification Statement.

As shown in **Table 5-5** and pursuant to the SCA requirement for all diesel-powered construction equipment to use engines that are rated and certified as Tier 4, construction-related health risks and hazards would not exceed the single-source thresholds.

Table 5-5: Health Risk Impacts of Construction at the Maximum Exposed Off-site Receptor

	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction			
No Emission Controls	**29.3 (infant)**	0.26	0.03
With SCA Air-3, Diesel Particulate Matter Controls	2.4 (infant)	0.04	<0.01
Single-Source Threshold	*>10.0*	*>0.3*	*>1.0*
Exceed Threshold?			
No Emission Controls	**Yes**	No	No
With SCA Air-3, Diesel Particulate Matter Controls	No	No	No

Source: Illingworth & Rodkin, Inc., August 2020

Additional modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with construction activities at other nearby schools. The maximum increased cancer risks were adjusted using child exposure parameters. Even assuming no emissions controls, the cancer risk, $PM_{2.5}$ concentration, and HI at the nearby schools do not exceed the respective single-source significance thresholds.

Community Health Risks from Project Operation

Operation of the Project would have long-term emissions from mobile sources (i.e. traffic) and stationary sources (i.e. generators). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term health effects to sensitive receptors.

Project Traffic

The increase in traffic resulting from increased student enrollment, as well as the increase in on-site traffic attributed to the proposed South Campus Loop Road, the upper school drop-off area and lower/middle school drop-off area will result in increased emission of TACs and $PM_{2.5}$. TAC and $PM_{2.5}$ concentrations on the Loop Road were modeled for total Project traffic, as both the existing and proposed South Campus will use the Loop Road for drop-off areas, rather than the current drop-off and pick-up area on Lincoln Avenue. **Figure 5-2** shows the roadway segments and drop-off areas that have been modeled.

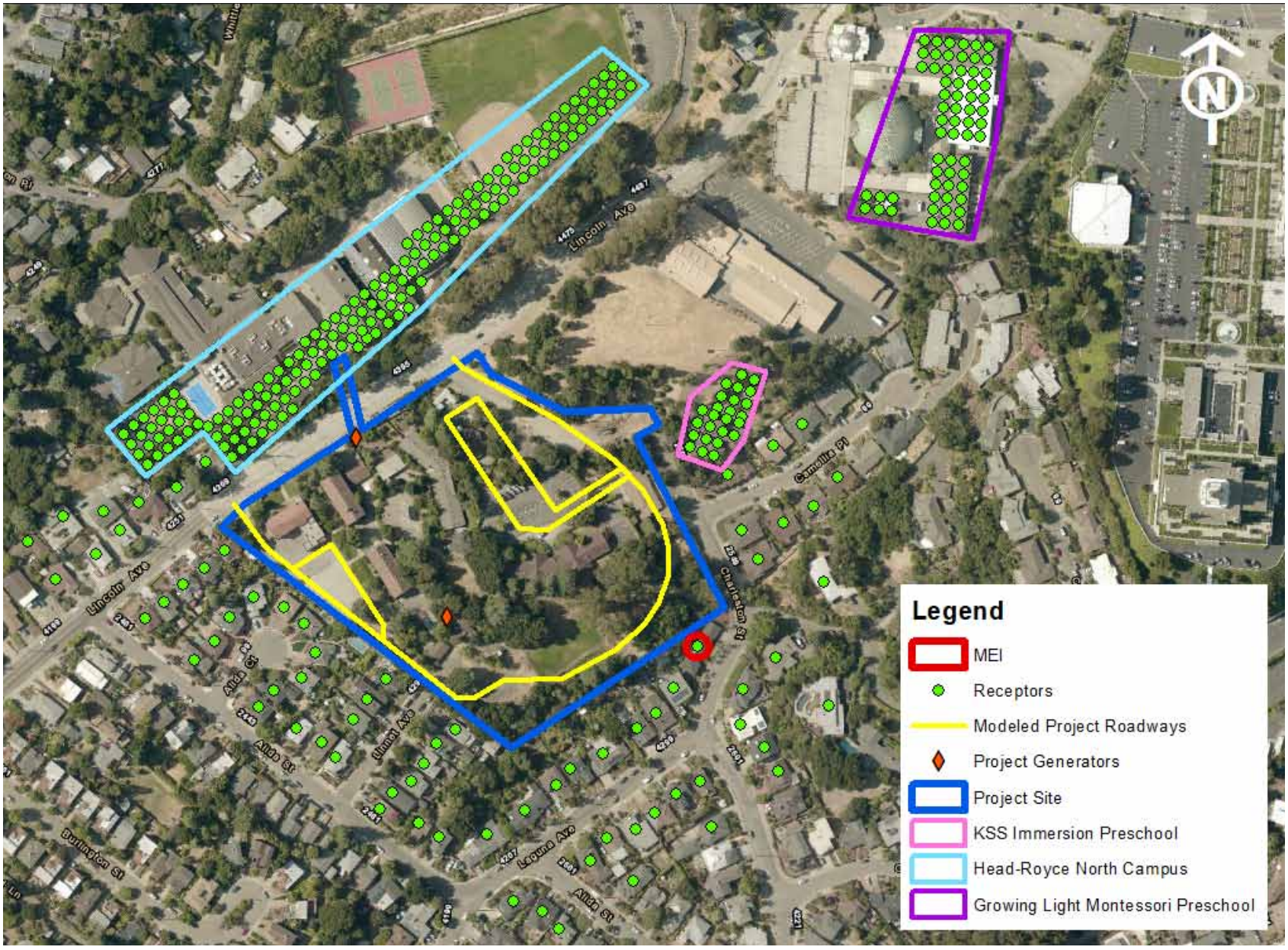


Figure 5-2
Maximum Exposed Individual to Operational Sources of TAC Emissions

Source: Illingworth & Rodkin, August 2020

The California Department of Transportation EMFAC2017 (CT-EMFAC2017) emissions model was used to estimate DPM, organic TAC and $PM_{2.5}$ roadway emissions, based on the increase in Project-related traffic volumes as contained in the Traffic Impact Study prepared for this EIR (Fehr & Peers, 2020). The Project-related traffic on the Loop Road is estimated to be 1,184 daily trips using the upper school drop-off/pick-up area (including on-site parking and other trips, and 1,066 daily trips using the lower/middle school drop-off/pick-up area – all circulating on the Loop Road. Average hourly Project-related traffic volumes were then used to calculate TAC and $PM_{2.5}$ emissions along the Loop Road.

Project operation was assumed to begin in 2022. To calculate the increased cancer risk from these Project-related trips, community health risks were adjusted for exposure duration, account for the MEI being exposed to construction for the first year of the 30-year period, and from roadway traffic for 29 years of exposure. Year 2022 emissions were conservatively assumed as being representative of future conditions over this 30-year time period, since emissions per vehicle (especially diesel emissions) are expected to decrease over time with increasingly stringent regulations. Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model. The Loop Road and drop-off/pick-up areas were evaluated with the model, using a series of traffic volumes along the Loop Road.

The maximum increased lifetime cancer risks and annual $PM_{2.5}$ concentrations for individual receptors were then computed, using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD-recommended methods and exposure parameters described in **Appendix 5, Attachment 1**. The modeled DPM and $PM_{2.5}$ concentrations at the same MEI identified in the construction dispersion modeling were used to calculate the community health risks, as shown on **Table 5-6**. In addition, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with Project traffic at other nearby schools, and the results are shown on **Table 5-7**. The emissions and health risk calculations for the proposed project traffic are included in **Appendix 5, Attachment 4**.

Emergency Generators

The Project is assumed to include two 150-kW emergency diesel generators with an approximately 201 HP engine. Figure 5-2 also shows the approximate locations of these generators. These diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM), and will require permits from the BAAQMD. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (TBACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on those results, BAAQMD would set limits for DPM emissions. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally are not be considered to have a significant air quality or community health risk impact.

To obtain an estimate of potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generators, the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations. The same sensitive receptors, breathing heights and meteorological data used for the construction dispersion modeling effort were used for the generator dispersion model. Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day. Increased cancer risks from use of the generators was calculated using the same modeled maximum annual DPM concentrations and BAAQMD-recommended risk assessment methods and parameters, evaluating cancer risk due to DPM exposure and incorporating age sensitivity factors for infants and children. The $PM_{2.5}$ concentrations and non-cancerous (i.e. Hazard Index) health risk impacts were calculated for the same MEI. An exposure duration of 29 years was used to calculate the increased cancer risk that the generators would contribute. These results are shown in Table 5-6. In addition, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with the Project's generators at the nearby schools. These results are shown in Table 5-7. The emissions and health risk calculations for the proposed generators are included in **Appendix 5, Attachment 4**.

Table 5-6: Operational Health Risk Impacts (at the off-site Project MEI)

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Residential Sensitive Receptor			
Project Traffic (Years 1-30)	0.9	0.14	<0.01
Project Generators (Years 1-30)	4.2	0.01	<0.01
Total Operational Emissions:	5.25	0.15	<0.01
BAAQMD Single-Source Threshold:	*>10.0*	>0.3	>1.0
Exceed Threshold?	No	No	No

Source: Illingworth & Rodkin, Inc., August 2020

Total Project-Related Community Risks

The health risk impacts from the Project is represented by the combination of construction and operational sources as described above. The same sensitive receptor identified as the construction-period MEI is also the MEI for all Project emissions. At this location, the MEI would be exposed to one year of construction cancer risks and 29 years of operational cancer risks. As seen in Table 5-5, the maximum cancer risks from construction and operation activities of the Project would exceed the single-source significance threshold, with a cancer risk of 29.3 per million attributed to construction, and a cancer risk of approximately 5.2 per million attributed to operational emissions. The $PM_{2.5}$ concentration and HI from combined construction and operation activities would not exceed the single-source significance threshold.

The $PM_{2.5}$ concentration at the nearby school that is most impacted by the Project emissions (the KSS Immersion School) would exceed the single-source significance threshold (assuming no emission controls), with approximately 61 percent of the PM2.5 concentration attributed to construction, and 39 percent attributed to operational emissions.

Standard Conditions of Approval

As discussed specifically as to construction-related emissions of the Project, **SCA Air-3, Diesel Particulate Matter Controls - Construction Related** will require the Project applicant to ensure that all off-road diesel equipment is equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type as certified by CARB. As shown in **Table 5-7** and pursuant to this SCA requirement, the total Project-related community health risks and hazards (for construction and operations, combined) would not exceed the single-source thresholds, and the Project's combined construction and operational health risks would be reduced to levels of less than significant.

Pursuant to **SCA Air-5, Stationary Sources of Air Pollution (Toxic Air Contaminants)**, the Project will require a stationary pollutant source permit from BAAQMD for proposed back-up diesel generators. Pursuant to that BAAQMD permit, the applicant shall demonstrate that any such generators are either non-diesel fueled, or are EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

Table 5-7: Combined Construction and Operation Health Risk Impacts (at the off-site Project MEI)

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Residential Sensitive Receptor			
Project Construction (Years 0-1)			
No Emission Controls	**29.3 (infant)**	0.26	0.03
With SCA Air-3, Diesel Particulate Matter Controls	2.4 (infant)	0.04	<0.01
Project Traffic (Years 1-30)	0.9	0.14	<0.01
Project Generators (Years 1-30)	4.2	0.01	<0.01
Maximum Project Emissions, No Emission Controls (Years 0-30)	**34.4**	0.26	0.03
Maximum Project Emissions with SCA Air-3 (Years 0-30)	7.5	0.14	<0.01
BAAQMD Single-Source Threshold:	*>10.0*	>0.3	>1.0
Exceed Threshold?			
No Emission Controls	***Yes***	No	No
With SCA Air-3, Diesel Particulate Matter Controls	***No***	**No**	**No**
Most Impact Nearby School – KSS Immersion Preschool Student Receptor[1]			
Project Construction (Years 0-1)			
No Emission Controls	8.4 (child)	0.17	0.02
With SCA Air-3, Diesel Particulate Matter Controls	0.7 (child)	0.02	<0.01
Project Traffic (Years 1-4)	0.5	0.13	<0.01
Project Generators (Years 1-4)	0.7	0.01	<0.01
Maximum Project Emissions, No Emission Controls (Years 0-4)	9.6	**0.31**	<0.04
Maximum Project Emissions with SCA Air-3 (Years 0-4)	7.5	0.16	<0.03
BAAQMD Single-Source Threshold:	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
No Emission Controls	*No*	***Yes***	*No*
With SCA Air-3, Diesel Particulate Matter Controls	***No***	***No***	***No***

Source: Illingworth & Rodkin, Inc., 2020

Cumulative Community Health Risks from All TAC Sources at the MEI

Air-4: The Project's new sources of toxic air contaminants (both during constructions) would not expose sensitive receptors to substantial cumulative levels of TACs resulting in an increased cumulative cancer risk level greater than 100 in one million, would not result in a cumulative non-cancer risk (chronic or acute) hazard index greater than 10, and would not increase cumulative annual average $PM_{2.5}$ concentrations to greater than 0.8 micrograms per cubic meter at any nearby sensitive receptors. (**Less than Significant)**

This cumulative health risk assessment considers all substantial sources of TACs that can affect sensitive receptors that are located within one-quarter mile of the Project site (i.e. influence area). Potential sources include freeways or highways, busy surface streets that have an average daily traffic volume that exceeds 10,000 vehicles, and stationary sources identified by BAAQMD. A review of the Project area finds that there are no freeways within one-quarter mile of the Project site, traffic on all nearby local roadways have ADTs of less than 10,000 daily vehicles, and no stationary sources of TAC emission are identified within the one-quarter mile influence area on BAAQMD's *Permitted Stationary Sources 2018* GIS website.[11] There are no nearby TAC sources with the potential to affect the health of nearby sensitive receptors (adjacent residents).

Since there are no other cumulative sources of TAC emissions, the cumulative health risks posed by the Project are the same as the Project's individual health risks as analyzed above. With implementation of applicable SCAs requiring diesel emission reductions by using Tier-4 diesel engines, the Project's resulting health risks were found to be less than significant, and would also not exceed the applicable cumulative thresholds. Therefore, the Project would not contribute to a cumulative health risk impact.

Cumulative Air Quality Effects

Other than the cumulative health risks from toxic air pollutants presented above, air pollution is largely a cumulative impact. Emissions from past, present, and reasonably foreseeable future projects all contribute to the region's air quality on a cumulative basis. However, few individual projects are of sufficient size to cause regional non-attainment of ambient air quality standards. Thresholds for air quality impacts as used in this EIR are set such that projects that do not meet the thresholds are considered to lead to cumulatively considerable air quality impact. With implementation of identified SCAs, air quality emissions associated with the Project would not make a cumulatively considerable contribution to significant cumulative air quality impacts.

Non-CEQA - Community Health Risks to New Project Students

Although not a CEQA threshold topic, the potential health risks to new students as a result of exposure to sources of TAC or $PM_{2.5}$ emissions from within a quarter-mile of the Project site. Within this one-quarter mile influence area, there are no roadways with over 10,000 ADT and no identified stationary sources listed on BAAQMD's *Permitted Stationary Sources 2018* GIS website. A public records request was made to BAAMQD to confirm the non-presence of any stationary sources within the one-quarter mile influence area. BAAQMD confirmed that there were no stationary sources within one-quarter mile from the Project site.[12] Since there are no substantial sources of TACs or air pollutant emissions nearby, a health risk assessment for new students was not necessary to conclude a less than significant impact.

[11] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

[12] Correspondence with Eric Chan, BAAQMD, July 14, 2020

6

Biological Resources

This chapter of the EIR evaluates the potential impacts of the Project on biological resources. This chapter describes existing biological resources in and near the Project, and evaluates the extent to which development of the Project may adversely affect these resource. Information for this chapter of the EIR has been derived primarily from the following sources:

- H.T. Harvey & Associates, *Head-Royce School South Campus Redevelopment – Biological Resources Report,* January 2020 (Biological Resources Report), **Appendix 6A**
- H.T. Harvey & Associates, *Head Royce School Detailed Peer Review - Arborist Report*, August 24, 2020 (**Appendix 6B**)

Methodology

The consulting biologists for this EIR (H. T. Harvey & Associates) reviewed the Project Description and plans provided by the applicant (as of November 2019), aerial images, the USGS topographic map, the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB - 2020) and other relevant reports, scientific literature and technical databases. In addition, they reviewed records of birds reported in nearby areas on eBird,[1] and the East Bay Birding Sightings List Serve (2020).

In addition, they reviewed all species on the current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists that occur in the region (defined as the Oakland East, California USGS 7.5-minute quadrangle and surrounding eight quadrangles). They considered the CNPS plant list for Alameda County (the CNPS does not maintain quadrangle-level records for CRPR 4 species). In addition, they queried the CNDDB for natural communities of special concern that occur within the Project region.

A reconnaissance-level field survey of the Biology Study Area was conducted.[2] The purpose of this survey was to provide an impact assessment specific to the proposed redevelopment of the Biology Study Area. Specifically, surveys were conducted to assess existing biotic habitats and plant and animal communities on the site, to assess the site for its potential to support special-status species and their habitats, and to identify potential jurisdictional habitats such as waters of the U.S./state and riparian habitat. A focused survey of the unnamed stormwater channel located adjacent to the proposed South Campus was conducted to characterize the habitat along this channel and to assess whether special-status plant and wildlife species can potentially occur. A focused survey for bats and signs of bat presence was conducted in trees and buildings on the site, and a focused survey was conducted for nests of San Francisco dusky-footed woodrat (Neotoma fuscipes annectens).

Before site surveys were conducted, maps and images of the site were obtained from several sources, and reviewed. These sources included the USGS, National Wetlands Inventory (2020), Nationwide Environmental

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1 Cornell Lab of Ornithology, 2020

2 H. T. Harvey & Associates associate wildlife ecologist Robin Carle, M.S., and plant ecologist Jill Pastick, M.S., on November 11, 2019

Title Research (2020), and aerial images. Plant species observed during the field survey were identified using Baldwin et al. (2012).

Environmental Setting

The approximately 22-acre Project site is located in Oakland, in Alameda County, California. For the purposes of the biological resource analysis, the approximately 8-acre proposed South Campus and a limited extent of the existing Campus where the proposed pedestrian tunnel would open onto are referred to as the Biology Study Area, and the "project vicinity" is defined as the area within a 5-mile radius surrounding the Project site.

Based on a 30-year normal climate (from 1980 through 2010), the Biology Study Area receives approximately 24 inches of annual precipitation and has a mean temperature range of 49.7°– 65.3°F.[3]

Elevations on the Biology Study Area range from approximately 390 feet to 463 feet above sea level. The site is underlain by two soil units: Xerorthents-Millsholm complex at 30 to 50 percent slope, and Urban Land-Tierra complex at 5 to 15 percent slopes.[4] The Xerorthents-Millsholm complexes are found on hill backslopes, and are composed of somewhat deep, well-drained soils formed from weathered sandstone and shale. Urban Land-Tierra complexes are very deep, moderately well drained soils found on the foot slopes of fan terraces, and are formed in alluvium from mixed rock sources.

Biotic Habitats

Reconnaissance-level surveys identified only one habitat type/land use on the Biology Study Area: developed/landscaped (8.0 acres). This habitat type is described in detail below. Plant species observed during the reconnaissance-level survey are listed in **Appendix 6A**.

Developed/Landscaped

Vegetation

The entirety of the Biology Study Area site consists of developed and landscaped habitat in the form of hardscape, landscaping and unpaved game fields. Hardscape on the Biology Study Area includes sidewalks, buildings, gravel and asphalt parking lots, and playground game courts. There are a total of 12 buildings located throughout the Biology Study Area most of which are connected via sidewalks lined with a high diversity of landscaped trees and shrubs. The dominant tree species on the site include coast live oak, holly oak, blackwood acacia (Acacia melanoxylon), and coast redwood. The site of the proposed tunnel opening located on the existing Campus (northwest of Lincoln Avenue) is primarily landscaped and is situated on a steep slope containing ornamental shrubs and planted coast live oaks.

There are three paved playground game courts on the proposed South Campus, which appear to be unused and support the growth of ruderal, non-native species, including Italian thistle (Carduus pycnocephalus), foxtail barley (Hordeum murinum), and stinkwort (Dittrichia graveolens). These paved playgrounds are surrounded by landscaped vegetation and buildings. Unused sports fields located in the southeast portion of the Biology Study Area are colonized by ruderal species such as wild oat (Avena fatua), foxtail barley, and Bermuda grass (Cynodon dactylon). This vegetation appears to have been periodically mowed, likely for fire prevention or weed control. Adjacent to these sports fields and bordering the fence line of the property, there are sections of landscaping which have not been maintained. These patches of landscaping include planted trees and ornamental vegetation such as coast redwood, sweetgum (Liquidambar styraciflua), and

[3] PRISM Climate Group, 2020

[4] National Resources Conservation Service, 2020

coast live oak, as well as English ivy (Hedera helix) and Italian thistle in the understory. Unlike the hardscaped areas in the northern portion of the Biology Study Area, these fields and landscaped areas are moderately sloped to the southeast, towards the adjacent neighborhoods and the stormwater channel described below.

Wildlife

Wildlife species associated with developed/landscaped habitat on the Biology Study Area are adapted to high levels of human disturbance. These species include introduced species such as the Virginia opossum (Didelphis virginianus), Norway rat (Rattus norvegicus), black rat (Rattus rattus), house mouse (Mus musculus), and common native species such as the western fence lizard (Sceloporus occidentalis) and raccoon (Procyon lotor). A variety of native birds will nest and forage within the on-site trees and vegetation. These birds include the California scrub jay (Aphelocoma californica), chestnut-backed chickadee (Poecile rufescens), oak titmouse (Baeolophus inornatus), California towhee (Melozone crissalis), Bewick's wren (Thryomanes bewickii), bushtit (Psaltriparus minimus), and lesser goldfinch (Spinus psaltria). The eaves and corners of buildings on the Biology Study Area may be attractive to certain nesting and/or roosting bird species that make use of structures, including the black phoebe (Sayornis nigricans), house finch (Haemorhous mexicanus), and mourning dove (Zenaida macroura). Large trees on the site such as eucalyptus and coast redwoods provide potential nesting sites for raptors, especially red-tailed hawks (Buteo jamaicensis). No raptor nests were observed on the site during the survey. Cooper's hawks (Accipiter cooperi) may also nest in trees on the site. Non-native eastern gray squirrels (Sciurus carolinensis) were common on the site, and these and other mammal species provide prey for raptors that may nest in the vicinity. Buildings on the site, especially those that have been unoccupied for long periods of time, provide ostensibly suitable roosting habitat for common species of bats, such as the California myotis (Myotis californicus) and Mexican free-tailed bat (Tadarida brasiliensis). However, no signs of bats were observed on the interiors and/or exteriors of any buildings on the site during the November 2019 focused survey, and bats do not currently appear to be roosting on the site.4.3 Adjacent Habitat Areas

Stormwater Channel

Vegetation

A stormwater channel is located outside of, and downslope from the southern boundary of the Biology Study Area (**Figure 6-1**). This channel emerges from a culvert behind an adjacent residence along Laguna Avenue and travels southwest through the backyards of several residences before re-entering a culvert to travel beneath Alida Street. The channel's vertical walls are lined with concrete and stone, and the bed is approximately 4 feet wide. This stormwater channel is situated in a topographically low position relative to the adjacent slopes, and at the time of the survey in November 2019, a small amount of standing water was present in portions of the channel. This channel likely conveys seasonal flows, primarily following winter storm events. The channel is connected to the underground stormwater system via the downstream culvert near Alida Street, and it eventually flows downstream to Peralta Creek. Vegetation along the channel consists of landscaping in the backyards of the residences. No wetland vegetation was observed in the channel and no native stands of riparian vegetation are present along the banks.

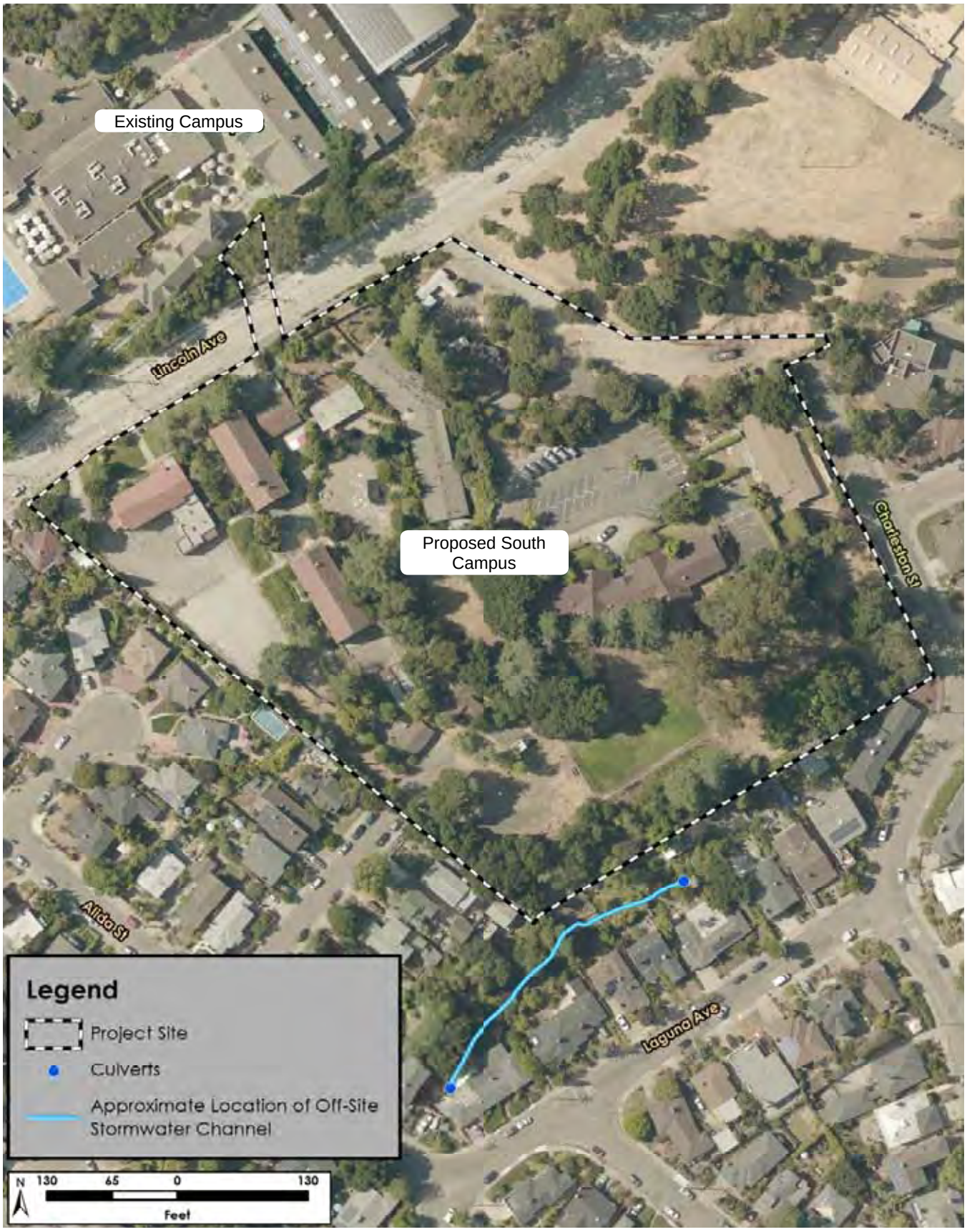


Figure 6-1
Off-Site Stormwater Channel

Source: H.T. Harvey & Asoc., 2019

Wildlife

The stormwater channel provides habitat that is of extremely limited value to wildlife species due to the heavily urbanized surrounding context, long history of human disturbance, vertical channel banks that make access difficult for terrestrial wildlife, lack of riparian vegetation to provide cover and foraging opportunities, and because it supports only seasonal flows. Wildlife species that can access the channel (e.g., birds) likely drink opportunistically from water in the channel during periods with low rainfall. The channel is unlikely to support native fish or other aquatic species due to the extremely low quality of the habitat present, lack of year-round flows, lack of vegetation in the channel bed, and the fact that the majority of the channel is located underground.

Special-Status Species and Sensitive Habitats

CEQA requires assessment of the effects of a project on species that are protected by federal, state or local governments as "threatened, rare, or endangered". Such species are typically described as "special-status species". For the purpose of this EIR, special-status species have been defined as described below. Impacts on these species are regulated by the federal, state and local laws and ordinances described in the Regulatory Setting of this chapter.

For purposes of this analysis, "special-status" plants are considered plant species that are:

- listed under the Federal Endangered Species Act (FESA) as threatened, endangered, proposed threatened, proposed endangered, or a candidate species
- listed under the California Endangered Species Act (CESA) as threatened, endangered, rare, or a candidate species
- listed by the California Native Plant Society (CNPS) as California Rare Plant Rank (CRPR) 1A, 1B, 2, 3, or 4

For purposes of this analysis, "special-status" animals are considered animal species that are:

- listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species
- listed under CESA as threatened, endangered, or a candidate threatened or endangered species
- designated by the California Department of Fish and Wildlife (CDFW) as a California species of special concern
- listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515)

Information concerning threatened, endangered and other special-status species that potentially occur within the Biology Study Area was collected from several sources and reviewed by the EIR biologists. **Figure 6-2** depicts CNDDB records of special-status plant species in the general vicinity of the Project site, and **Figure 6-3** depicts CNDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.

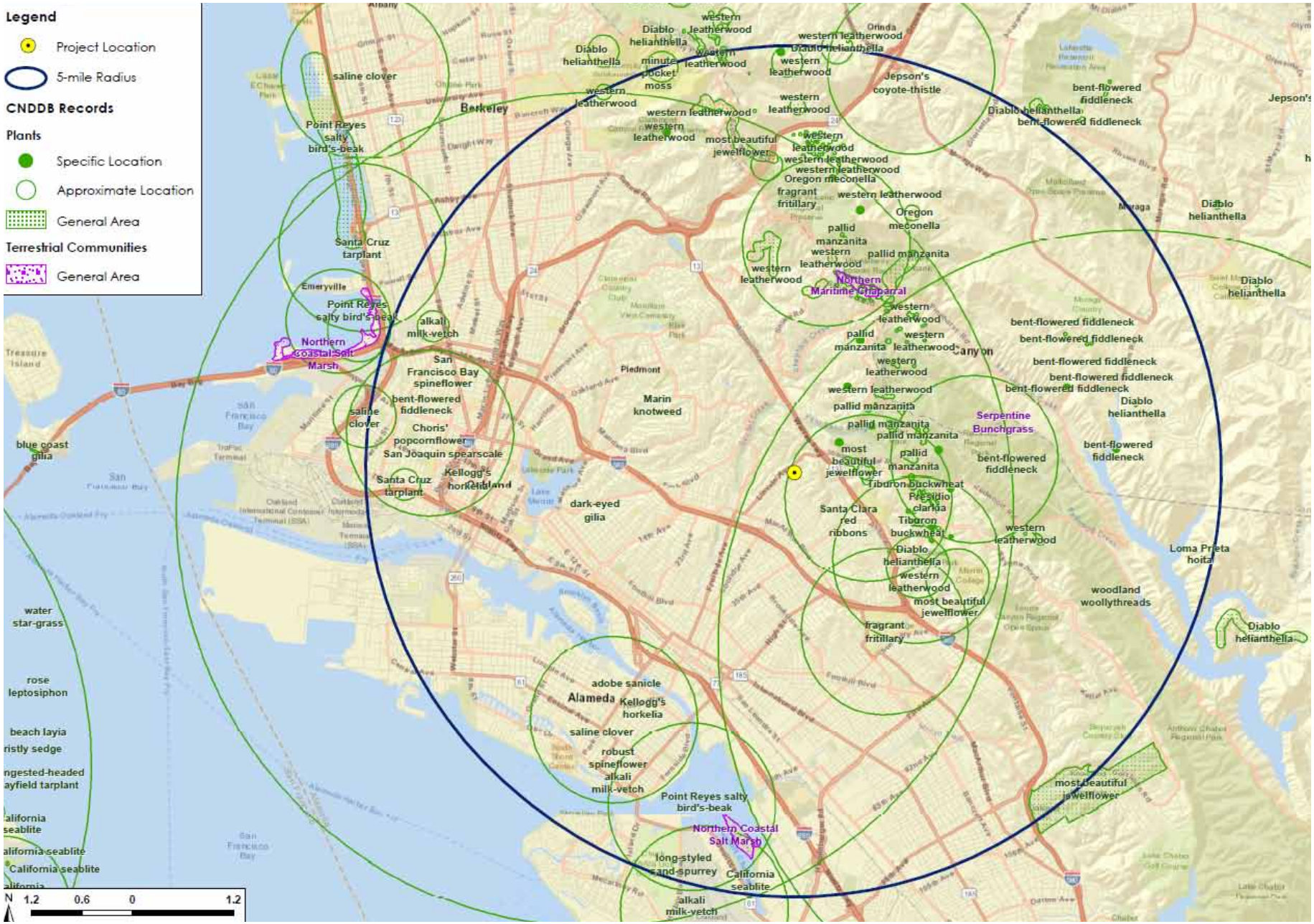


Figure 6-2
CNDDB Mapped Records of Special Status Plants

Source: H.T. Harvey & Asoc., 2019

Figure 6-3
CNDDB Mapped Records of Special Status Animal Species

Source: H.T. Harvey & Asoc., 2019

Special-Status Plant Species

The CNPS (2020) and the California Natural Diversity Data Base (CNDDB, 2020) identify 84 special-status plant species as potentially occurring in at least one of the nine USGS quadrangles containing or surrounding the Project site for CRPR 1 or 2 species, or in Alameda County for CRPR 3 and 4 species. All of these species were determined to be absent from the Biology Study Area for at least one of the following reasons:

- lack of suitable habitat types
- absence of specific micro-habitat or edaphic requirements, such as serpentine soils
- the elevation range of the species is outside of the range within the Biology Study Area; and/or
- the species is considered extirpated from the site vicinity

Due to the current and historic land use of the Biology Study Area as well as the surrounding developed land use, no suitable habitat is present on the Biology Study Area, and the potential for any special-status plant species to occur on the Biology Study Area has been ruled-out.

Special-Status Animal Species

The legal status and likelihood of occurrence on the Biology Study Area of special-status animals known to occur, or to potentially occur in the surrounding region are presented in Biological Resources Report, Appendix 6. None of the special-status species listed in the Biological Resources Report is expected to occur on the Biology Study Area because it lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development, or otherwise unsuitable habitat.

A number of following special-status animals that are present in less urbanized settings in Alameda County, or in specialized habitats in Alameda County, are absent from the Biology Study Area due to a lack of suitable habitat, restricted range, and/or isolation of the site from populations by urbanization. These species include the crotch bumble bee (Bombus crotchii), western bumble bee (Bombus occidentalis), California tiger salamander (Ambystoma californiense), foothill yellow-legged frog (Rana boylii), California red-legged frog (Rana draytonii), Alameda whipsnake (Masticophis lateralis euryxanthus), western pond turtle (Actinemys marmorata), burrowing owl (Athene cunicularia), San Francisco common yellowthroat (Geothlypis trichas sinuosa), and American badger (Taxidea taxus).

A focused survey of the Biology Study Area for nests of San Francisco dusky-footed woodrats determined that the species is absent from the site, and a focused survey for roosting bats determined that bats are not currently roosting on the site.

No aquatic habitats to support special-status fish species are present on the Biology Study Area. The site is located immediately adjacent to a stormwater channel that connects downstream to Peralta Creek, but the quality of habitat in this channel is extremely low, and native fish species (including special-status fish) have not been detected during previous surveys along Peralta Creek.[5] Special-status fish species, including the Central California Coast coho salmon (Oncorhynchus kisutch), Central California Coast steelhead (Oncorhynchus mykiss), river lamprey (Lampetra ayresi), Central Valley fall-run Chinook salmon (Oncorhynchus tshawytscha), and Pacific lamprey (Entospherus tridentatus), are absent from the Biology Study Area and adjacent areas.

Several special-status animal species do occur in the surrounding region as non-breeding transients, foragers or migrants, but they do not breed in or very close to the Biology Study Area and/or suitable nesting/breeding habitat is absent from the site. These species are the bald eagle (Haliaeetus leucocephalus), golden eagle (Aquila chrysaetos), white-tailed kite (Elanus leucurus), American peregrine falcon (Falco

[5] Leidy et al, 2005

peregrinus anatum), yellow warbler (Setophaga petechia), western red bat (Lasiurus blossevillii), pallid bat (Antrozous pallidus), and Townsend's big-eared bat (Corynorhinus townsendii). The majority of these species are not expected to make any use of the site, even for foraging, due to a lack of suitable habitat and the surrounding urbanized context. However, the yellow warbler may forage on the site occasionally during migration, and the western red bat may roost in trees on the site year-round and forage on the site. Suitable roosting habitat for pallid bats is present in buildings on the site, but no pallid bat roosts were observed during a focused survey of the buildings in November 2019.

Sensitive Natural Communities, Vegetation Alliances and Habitats

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. CDFW determines the level of rarity and imperilment of vegetation types, and tracks sensitive communities in its "RareFind" database.[6] Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings are a reflection of the condition of a habitat within California. Natural communities are defined using NatureServe's standard heritage program methodology as follows):[7]

- G1/S1 - Critically imperiled
- G2/S2 - Imperiled
- G3/S3 - Vulnerable
- G4/S4 - Apparently secure
- G5/S4 - Secure

In addition to tracking sensitive natural communities, CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance and other environmental factors.[8] If an alliance is marked G1-G3, all of the vegetation associations within it will also be of high priority. CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP's) currently accepted list of vegetation alliances and associations.

Impacts on CDFW-listed sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies and regulations, must be considered and evaluated under CEQA. Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state or local regulations, and are generally subject to regulation, protection or consideration by the USACE, RWQCB, CDFW and/or the USFWS.

Sensitive Natural Communities

A query of sensitive habitats in Rarefind (CNDDB 2020) identified four sensitive habitats as occurring within the nine USGS quadrangles containing or surrounding the Project site:

- Northern coastal salt marsh (Rank G3/S3) - Northern coastal salt marsh is characterized as occurring along sheltered inland margins of bays, often co-dominated by pickleweed (Salicornia spp.), California cordgrass (Spartina foliosa) and sometimes saltgrass (Distichlis spicata). None of these species and no salt marsh habitats were observed on the Biology Study Area.

6 CNDDB, 2020

7 Faber-Langendoen et al., 2012

8 Sawyer et al., 2009

- Northern maritime chaparral (Rank G1/S1) - Northern maritime chaparral is characterized by dense shrub cover with species of manzanita (Arctostaphylos spp.) and chamise (Adenostoma fasciculatum), which does not occur on the Biology Study Area.
- Serpentine bunchgrass (Rank G2/S2) - Serpentine bunchgrass occurs only on serpentine soils, which are not present on the Biology Study Area.
- Valley needlegrass grassland (Rank G3/S3) - Valley needlegrass and other perennial native bunchgrasses were not observed on the Biology Study Area, and no grasslands are present on the Biology Study Area to support this community.

Sensitive Vegetation Alliances

No sensitive vegetation alliances exist on the Biology Study Area.

Sensitive Habitats (Waters of the U.S./State)

There are no aquatic habitats on the Biology Study Area that would be considered waters of the U.S./state. The stormwater channel located adjacent to the Biology Study Area has potential to be considered a waters of the U.S. and/or waters of the state by virtue of its hydrologic connectivity.

Riparian

No riparian habitat occurs on the Biology Study Area, and there is no riparian habitat associated with the adjacent stormwater channel that would be considered jurisdictional by the CDFW and the RWQCB.

Regulatory Setting

Federal Regulations

Clean Water Act

The Clean Water Act (CWA) functions to maintain and restore the physical, chemical, and biological integrity of waters of the U.S., which include, but are not limited to, tributaries to traditionally navigable waters currently or historically used for interstate or foreign commerce, and adjacent wetlands. Historically, in non-tidal waters, U.S. Army Corps of Engineers (USACE) jurisdiction extends to the ordinary highwater mark, which is defined in Title 33, Code of Federal Regulations, Part 328.3. If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the ordinary highwater mark to the outer edges of the wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and, depending on the circumstances, may be subject to USACE jurisdiction. In tidal waters, USACE jurisdiction extends to the landward extent of vegetation associated with salt or brackish water or the high tide line. The high tide line is defined in 33 Code of Federal Regulations Part 328.3 as “the line of intersection of the land with the water’s surface at the maximum height reached by a rising tide.” If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the ordinary highwater mark or high tide line to the outer edges of the wetlands.

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or take, which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as take even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests; and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

State Regulations

Porter-Cologne Water Quality Control Act

The State Water resources Control Board (SWRCB) works in coordination with the nine Regional Water Quality Control Boards (RWQCBs) to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the State. Their authority comes from the CWA and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands and riparian areas. Moreover, the San Francisco Bay RWQCB asserts that, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. In these new guidelines, riparian habitats are not specifically described as waters of the state, but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures describe riparian habitat buffers as important resources that may be included in mitigation requirements for permits for those projects that affect waters of the State. Impacts to riparian habitat buffers may also require permit authorization from the RWQCBs. Pursuant to the CWA, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification permit from the RWQCB. This certification ensures that the projects will uphold water quality standards of the State. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System permits and Waste Discharge

Requirements for certain point source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in take of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of take under the California Fish and Game Code. The CDFW, however, has interpreted take to include the "killing of a member of a species which is the proximate result of habitat modification."

California Environmental Quality Act

CEQA is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. CEQA requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA are known as the State CEQA Guidelines. Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists". Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

The CNPS, a non-governmental conservation organization, has developed CRPRs for plant species of concern in California in the Inventory of Rare and Endangered Plants. The CRPRs include lichens, vascular and non-vascular plants. CRPR ratings are defined as follows:

- CRPR 1A - Plants considered extinct
- CRPR 1B - Plants rare, threatened or endangered in California and elsewhere
- CRPR 2A - Plants considered extinct in California but more common elsewhere
- CRPR 2B - Plants rare, threatened or endangered in California but more common elsewhere
- CRPR 3 - Plants about which more information is needed (review list)
- CRPR 4 - Plants of limited distribution (watch list)

The CRPRs are further described by the following threat code extensions:

- .1 - seriously endangered in California

- .2 - fairly endangered in California
- .3 - not very endangered in California

Although the CNPS is not a regulatory agency, and plants on these lists have no formal regulatory protection, plants appearing as CRPR 1B or 2 are in general considered to meet CEQA's Section 15380 criteria, and adverse effects on these species may be considered significant. Impacts on plants that are listed by the CNPS as CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those of CRPR 1B or 2, impacts to these species are less frequently considered significant.

Compliance with CEQA Guidelines Section 15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of "special concern" are tracked in Rarefind. Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas S rankings reflect the condition of a habitat within California. Alliance marked as a G1–G3, and all associations within that alliance are of high priority. The CDFW provides the Vegetation Classification and Mapping Program's currently accepted list of vegetation alliances and associations.

All potential Project-related impacts to biological resources are considered in this EIR for the Project, and discussed below.

California Fish and Game Code

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A stream is defined in Title 14, California Code of Regulations Section 1.72, as "a body of water that follows at least periodically or intermittently through a bed or channel having banks and that supports fish and other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Using this definition, CDFW extends its jurisdiction to encompass riparian habitats that function as a part of a watercourse. California Fish and Game Code Section 2786 defines riparian habitat as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, CDFW would claim jurisdiction over a stream's bed and bank. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code Section 1603, CDFW regulates any project proposed by any person that will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds." California Fish and Game Code Section 1602 requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake. If CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Certain sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code. The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered take by the CDFW. Raptors (e.g., eagles, hawks, and owls) and their nests are specifically

protected in California under Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Bats and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. The CDFW may consider those activities that result in mortality of non-game mammals (e.g., destruction of an occupied bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), as "take".

Local Policies and Regulations

City of Oakland General Plan

The Open Space, Conservation and Recreation (OSCAR) Element of the Oakland General Plan (City of Oakland, 1996) includes objectives, policies and actions related to the protection of plant and animal resources. The following are the key relevant policies pertaining to biological resources:

- *Policy CO-7.1, Protection of Native Plant Communities*: Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a ways that prevents or mitigates adverse impacts to these communities.
- *Policy CO-7.2, Native Plant Restoration*: Encourage efforts to restore native plant communities in areas where they have been compromised by development or invasive species, provided that such efforts do not increase an area's susceptibility to wildfire.
- *Policy CO-7.3, Forested Character*: Make every effort to maintain the wooded or forested character of tree-covered lots when development occurs on such lots.
- *Policy CO-7.4, Tree Removal:* Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.
- *Policy CO-8.1, Mitigation of Development Impacts:* Work with federal, state, and regional agencies on an on-going basis to determine mitigation measures for development that could potentially impact wetlands. Strongly discourage development with un-mitigatable adverse impacts.
- *Policy CO-9.1, Habitat Protection*: Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.
- *Policy CO-11.1, Protection from Urbanization:* Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.
- *Policy CO-11.2, Migratory Corridors*: Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures that help sustain local wildlife population and migratory patterns.

City of Oakland Municipal Code: Protected Tree Ordinance

The City promotes the health, safety and welfare of the city by regulating the planting and maintenance of trees in the city. The City list three Oakland Municipal Code (OMC) chapters under Title 12, Streets, Sidewalks, and Public Spaces pertaining to the Tree Ordinance:

- Street Trees – Pursuant to OMC Chapter 12.32, it is not permitted for any person to destroy, deface, or mutilate any tree or shrub along, or within, any public street without first obtaining a permit from

the Director of Parks and Recreation for the City. A street tree is considered any tree or shrub in or along any public street or public grounds.

- Protected Trees - The City provides tree protection for "protected trees" under Municipal Code Chapter 12.36. The Protected Tree Ordinance requires that a permit be applied for and approved before tree related work including removal, pruning, and planting occurs. A protected tree is defined as:
    - Any coast live oak 4 inches or larger in diameter, measured at 4.5 feet above the ground, on any property
    - Any other species of tree except eucalyptus (Eucalyptus spp.) and Monterey pine (Pinus radiata) that is 9 inches in diameter or larger measured at 4.5 feet above the ground, on any property
    - Monterey pines when more than five Monterey pine trees per acre are proposed to be removed

  Permit requirements for development-related tree removals are found in Municipal Code Section 2.36.070.
- Hazardous Trees - An application and fees for a Tree Removal Permit may be waived if a tree is considered hazardous and/or as presenting an immediate threat to safety or property. The City's hazardous tree ordinance (Chapter 12.40) discusses the process for removing hazardous trees on private property.

City of Oakland Creek Protection, Storm Water Management, and Discharge Control Ordinance

The City promotes the health, safety and welfare by regulating development and construction projects that take place in or near creeks. The City provides creek protection under Municipal Code Chapter 13.16, which details permit requirements for work on creek-side properties in order to limit impacts on the creek both during and following construction. The ordinance defines a creek as "a watercourse that is a naturally occurring swale or depression, or engineered channel that carries fresh or estuarine water either seasonally or year-round" (Chapter 13.16). More specifically, in order for the City to identify a feature as a creek, it must be hydrologically connected as part of a contiguous waterway; have a channel, bed, and bank; and occupy a specific topographic position (e.g., a 'U' or 'V' shape at the low point of a macro-topographic feature).

The type of permit required by the City depends on the type of creek-side work being performed:

- A Category 1 creek protection permit is issued for interior construction and alterations (e.g., remodeling).
- A Category 2 permit is for exterior work, other than earthwork, located more than 100 feet from the centerline or the creek.
- A Category 3 permit is issued for either exterior work other than earthwork located between 20 feet from the top of bank and 100 feet from the centerline of the creek, or for exterior work that includes earthwork involving more than three cubic yards of material and is more than 20 feet from the top of bank.
- A Category 4 permit is for projects with exterior work conducted within 20 feet of the top of bank.

Standard Conditions of Approval

SCA Biology-1, Tree Removal during Bird Breeding Season

***Applies to**: All projects that involve removal of a tree (either protected or unprotected tree)*

To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird-breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

When Required: Prior to removal of trees

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Biology-2, Tree Permit

***Applies to**: All projects requiring a tree permit per the City's Tree Protection Ordinance (OMC Chap. 12.36)*

a. Tree Permit Required: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.

When Required: Prior to approval of construction-related permit

Initial Approval: Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building

Monitoring/Inspection: Bureau of Building

b. Tree Protection during Construction: Adequate protection shall be provided during the construction period for any trees that are to remain standing, including the following, plus any recommendations of an arborist:

1. Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree, to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris that will avoid injury to any protected tree.
2. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
3. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

4. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.
5. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.
6. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

   When Required: During construction

   Initial Approval: Public Works Department, Tree Division

   Monitoring/Inspection: Bureau of Building

c. Tree Replacement Plantings: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

1. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.
2. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division.
3. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.
4. Minimum planting areas must be available on site as follows:
   a. For Sequoia sempervirens, three hundred fifteen (315) square feet per tree
   b. For other species listed, seven hundred (700) square feet per tree
5. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.
6. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings that fail to become established within one year of planting shall be replanted at the project applicant's expense.

   When Required: Prior to building permit final

   Initial Approval: Public Works Department, Tree Division

   Monitoring/Inspection: Bureau of Building

SCA Hydro-1, State Construction General Permit

The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI),

Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.

(See further details in the Hydrology chapter of this EIR).

SCA Hydro-2, NPDES C.3 Stormwater Requirements for Regulated Projects

The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction.

(See further details in the Hydrology chapter of this EIR).

SCA Hydro-3, Creek Protection Plan

The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek.

(See further details in the Hydrology chapter of this EIR).

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

Based on the CEQA Guidelines Section 15065, the Project would have a significant environmental impact if it were to 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, and/or reduce the number or restrict the range of a rare or endangered plant or animal. In addition to the Section 15065 criteria that trigger mandatory findings of significance, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the Project would:

1. 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 Game or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or identified by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Potential impacts on existing biological resources were evaluated by comparing the quantity and quality of habitats present on the Biology Study Area under baseline conditions, to the anticipated conditions after implementation of the Project. Direct and indirect impacts on special-status species and sensitive natural communities were assessed based on the potential for the species, their habitat or the natural community in question to be disturbed or enhanced following implementation of the Project.

Special Status Plant or Animal Species

Biology-1: The Project will not result in 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 Game or U.S. Fish and Wildlife Service (**Less Than Significant)**

Special Status Plants

As indicated in the Setting section of this chapter, no federally listed or candidate plant species occur on the Biology Study Area, no state listed or candidate plant species occur on the Biology Study Area, and no special-status plant species are considered to have potential to occur on or adjacent to the Biology Study Area. As a result, the Project will have no impact on special-status plant species.

Special Status Animals

As also indicated in the Setting section of this chapter, there are no special-status animal species expected to occur on the Biology Study Area. The site lacks suitable habitat, is outside the known range, and/or is isolated from the nearest known extant populations of the majority of potentially occurring species by development or otherwise unsuitable habitat. Focused surveys determined that the San Francisco dusky-footed woodrat is absent from the site, and that no bats are currently roosting on the site. Several special-status birds and bat species do occur in the surrounding region as non-breeding transients, foragers or migrants. However, the majority of these bird and bat species do not breed in or very close to the Biology Study Area, suitable nesting or breeding habitat is absent from the site, and these species are not expected to make any use of the site, even for foraging, due to a lack of suitable habitat and the surrounding urbanized context.

Of all potentially occurring special-status animals, only the yellow warbler and western red bat potentially occur on the Biology Study Area as non-breeding migrants, transients or foragers. They are not known or expected to breed or occur in large numbers on or near the site, and at most, a few individuals of each of these species could occasionally roost or forage on the site.[9] The Project's construction activities would not result in injury or mortality to individuals of either of these species because they are mobile enough to avoid construction equipment. Because these species do not breed on the site, ongoing activity related to the Project will not affect breeding habitat or vulnerable young of these species. At most, the Project may result in the disturbance of a few foraging individuals and loss of a relatively limited extent of foraging habitat, but these impacts would not be significant.

Special Status Fish

No aquatic habitat capable of supporting special-status fish species is present on the Biology Study Area. The site is located immediately adjacent to a stormwater channel that connects downstream to Peralta Creek, but the quality of habitat in this channel is extremely low, and non-native fish species have not been detected during previous surveys along Peralta Creek. Special-status fish species are absent from the Biology Study

[9] Suitable roosting habitat for pallid bats is present in buildings on the site, but no pallid bat roosts were observed during a focused survey of the buildings in November 2019.

Area and adjacent areas, and development of the Project will not adversely affect any sensitive or special status fish species or their habitat.

Developed/Landscaped Habitat

The Project will redevelop approximately 8.0 acres of developed/landscaped habitat on the site, and permanent impacts to this habitat types would occur as a result of building demolition, new construction and paving, and the removal of trees and other landscaped vegetation. However, the developed/landscaped habitat of the site is regionally abundant and widespread, and is not sensitive or considered high value as providing important plant or wildlife habitat. Impacts to these developed/landscaped habitats would not be considered significant.

The developed/landscaped habitat does support a number of common wildlife species. However, due to its largely developed nature, the site provides relatively low-quality habitat for most of these common species and thus supports relatively small numbers of individuals of any one species. The common wildlife species that occur on the site are regionally abundant, are present in widely available habitats in the region, and will continue to be present on the site following construction of the Project. The Project would affect only a small proportion of the regional populations of these common species, and the number of individuals likely to be displaced by habitat disturbance and loss would be quite small as compared to the amount of suitable habitat available in the area. New landscaping pursuant to the Project would provide resources useful to some common wildlife species. Project impacts to most common wildlife species and their habitat would not meet the threshold a substantial adverse effect, and would be less than significant.

Plant species observed on the Biology Study Area are not regulated under state or federal laws, and are not listed as rare by the CNPS. All native plant species found on, or with any potential to occur on the site are regionally abundant and common in California. Implementation of the Project would substantially affect common plant species, and impacts to such species would be less than significant.

Regulatory Requirements

No federal, State or locally listed candidate, sensitive or special status species plant or animal species occur on the Biology Study Area. No regulatory provisions of the FESA, the CESA or the CDWC Code apply. No streams that provide EFH for fish species are present on the Biology Study Area, and the unnamed stormwater channel located south of the site does not provide suitable habitat for FMP-managed fish species.

Mitigation Measures

No mitigation measures are required.

Sensitive Natural Communities

Biology-2: The Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or identified by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (**No Impact**)

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe's standard heritage program methodology. Based on this methodology, potential Project-related impacts on sensitive natural communities, vegetation alliances/associations or any such community identified in local or regional plans, policies, and regulations were considered and evaluated. No riparian habitat or other sensitive natural communities are located on or adjacent to the Biology Study Area and no impacts to riparian habitat or other sensitive natural communities will occur as a result of the Project (indirect impacts to aquatic habitat due to water quality are discussed below).

Regulatory Requirements

No aquatic, wetland or riparian habitats protected under applicable federal, state or local regulations and/or subject to regulation, protection or consideration by the USACE, RWQCB, CDFW and/or the USFWS exist on the site, and none of these regulatory provisions is applicable. No riparian habitat occurs along the banks of the unnamed stormwater channel adjacent to the Biology Study Area or on the Biology Study Area itself. Therefore, a CDFW Streambed Alteration Agreement would not be required for the Project.

Mitigation Measures

No mitigation measures are required.

Wetlands

Biology-3: The Project will not have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act. (**Less than Significant with SCAs**)

No wetlands or other waters of the U.S. or the State are present on the Biology Study Area, and the Project would have no direct impacts on State or federally protected wetlands or aquatic habitats. However, wetlands and other waters of the U.S. and/or the State are present adjacent to the Biology Study Area in the off-site stormwater channel. Potential indirect impacts to water quality in this channel could occur as a result of Project construction and operational activities (which are located upslope of the channel), if runoff from the Biology Study Area increases in intensity or frequency.

Regulatory Requirements/SCAs

No habitats that would be considered waters of the U.S. or the State are located on the Biology Study Area. The unnamed stormwater channel located outside of and downslope of the Biology Study Area has the potential to be considered waters of the U.S. based on hydrologic connectivity to other waters downstream through the stormwater system. However, no Project activities are proposed within the bed and banks of the stormwater channel. Therefore, a permit from the USACE would not be required for the Project. No waters of the state or riparian habitats regulated by the RWQCB are present on the Biology Study Area. The stormwater channel located outside of and downslope of the Biology Study Area is likely to be claimed as jurisdictional waters of the State by the RWQCB, but no riparian habitat is present along this stormwater channel. No impacts to riparian habitat or waters of the State will result from activities under the Project. Therefore, a Section 401 permit or Waste Discharge Requirement from the RWQCB is unlikely to be required.

All construction projects in California that result in land disturbances equal to 1 acre or greater must comply with State requirements to control the discharge of stormwater pollutants, pursuant to the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order #2009-0009-DWQ). Pursuant to ***SCA Hydrology-1: State Construction General Permit***, a Notice of Intent must be filed with the State Water Board prior to the start of any Project-related construction or demolition, and the Project applicant must submit a Stormwater Pollution Prevention Plan (SWPPP) and other required permit registration documents to SWRCB. The SWPPP must be developed and maintained during construction of the Project, and it must include the use of Best Management Practices (BMPs) to protect water quality until the site is stabilized. Standard permit conditions under the Construction General Permit require that the applicant utilize various measures including: on-site sediment control BMPs, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors.

The Project must also comply with the RWQCB San Francisco Bay Region's Municipal Regional Stormwater NPDES permit (Water Board Order #R2-2015-0049). Pursuant to ***SCA Hydrology-2: NPDES C.3 Stormwater Requirements for Regulated Projects***, the Project must also implement BMPs and incorporate Low Impact

Development practices into the Project's design to prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from the site after construction has been completed. In order to meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

These regulatory requirements will reduce the potential for the Project to cause indirect impacts to water quality in the nearby off-site drainage channel during Project construction and operational activities to less than significant.

Mitigation Measures

No mitigation measures are required.

Wildlife Movement and Nursery Sites

Biology-4: The Project will not 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 with SCAs**)

Wildlife corridors are segments of land that provide a link between different habitat types, while also providing wildlife cover. Development that fragments natural habitats can affect wildlife corridors by reducing their size such that the corridors are unable to support individual species, and by causing the areas between habitat types to become unsuitable for wildlife species to traverse.

The Biology Study Area is entirely developed and is located within a dense matrix of urban development, and the stormwater channel located adjacent to the site does not provide an important movement pathway for aquatic or terrestrial wildlife species as it is surrounded by extremely steep vertical walls, and the majority of its length is located underground. The Project would not fragment natural habitats, and any common, urban-adapted wildlife species that currently move through the site will continue to be able to do so following Project construction. The Project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors in the site vicinity.

Impacts on Nesting Birds

Construction disturbance during the nesting season for birds (February 1 through August 31, for most species) could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests, or indirectly by causing the abandonment of nests. Due to the absence of native or sensitive habitats from the Biology Study Area, the habitat on the site supports only regionally common, urban-adapted breeding birds, and the numbers that occur on the site (i.e., one to several pairs of each species) represent only a very small proportion of these species' regional populations. Many of these birds are expected to continue to nest and forage on the Project site following construction. Although the Project will remove the majority of existing landscape vegetation and trees, it will plant new trees, shrubs and forbs as part of the landscape design. This new vegetation will provide some food and structural resources for common, urban-adapted resident and migrant birds that use the site. Therefore, Project impacts on nesting and foraging birds that occur on the site would not rise to a standard of a substantial adverse effect, and these impacts are less than significant.

Regulatory Requirements/ SCAs

All native bird species that occur on the Biology Study Area are protected under the MBTA, and all native migratory birds, including raptors, are protected under the California Fish and Game Code. Pursuant to ***SCA Biology-1: Tree Removal during Bird Breeding Season***, all projects that involve removal of a tree shall not, to the extent feasible, remove any tree and/or other vegetation suitable for nesting birds during the bird breeding season of February 1 to August 15. If tree removal must occur during the bird breeding season, all

trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. If the survey indicates the potential presence of nesting raptors or other birds, the biologist (in consultation with the CDFW) shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. With implementation of this SCA, the CDFW regulatory requirements for protecting native migratory birds (including raptors) will be met, and the Project's effects on nesting native migratory birds during tree removal will be less than significant.

Mitigation Measures

No mitigation measures are required.

Conflict with the City of Oakland's Tree Protection Ordinance

Biology-5: The Project's proposed removal of protected trees would not fundamentally conflict with the City of Oakland's Tree Protection Ordinance. Factors considered in determining a potentially significant conflict include the number, type, size, location and condition of protected trees to be removed and/or affected by construction, the number of protected trees to remain, and the Project's proposed relocation and replacement of appropriate new tree species. (**Less than Significant with SCAs**)

An arborist's tree survey has been conducted for the Project, surveying trees located within the entire proposed South Campus, plus trees near the Project's proposed pedestrian tunnel entrance on the existing Campus, plus trees located on an easement between the Biology Study Area and the adjacent property owned by Ability Now Bay Area. A total of 480 trees were inventoried and assessed, accounting for all trees on the Biology Study Area. Tasks that were conducted during the tree inventory and assessment included of the following:

- mapping and confirming the locations of all trees on the site
- tagging each tree with an identifying number
- identifying each tree to species (scientific name and common name)
- assessing the native status of each tree to Oakland, California
- measuring tree trunk diameter (DBH) to the nearest whole inch
- determining the protected status of each tree
- assessing the structural root zone (SRZ) and critical root zone (CRZ) for each tree
- evaluating tree health and structural conditions, and
- taking representative photos of the inventoried trees

The DBH for each tree was measured using a diameter tape at 4.5 feet above the ground. The protected status of each tree, based on the City's definition of protected trees, was verified. The location of each tree was recorded via GPS. The structural root zone (SRZ) was calculated using a commonly accepted method by Dr. Kim Coder in Construction Damage Assessments: Trees and Sites (Coder 1996), and the critical root zone (CRZ) was obtained by multiplying the DBH by 1.5. Tree assessments were made using ground-level visual observations. The health and structural conditions of each tree were given a score from 0 to 5. The results of this tree inventory and assessment effort are presented in **Appendix 6B** to this Draft EIR, specifically shown on Table 3 - Tree Quantity and Condition Summary of Appendix 6B, as briefly summarized below in **Table 6-1**.

Table 6-1: Existing Tree Quantity and Conditions

			Tree Condition			
Common Name	**Total Trees**	**Protected Trees**	**Dead**	**Poor**	**Fair**	**Good**
Coast Live Oak	156	155	1	6	97	52
Holly Oak	90	28	0	1	42	47
Coast Redwood	38	28	7	0	11	20
Blackwood Acacia	20	15	1	2	10	7
Italian Cypress	17	1	0	0	2	15
Sweetgum	12	8	0	0	3	9
Olive	12	11	0	0	10	2
Incense Cedar	10	10	0	0	10	0
All other species (less than 10 each)	125	65	7	10	78	30
Total:	**480**	**321**	**16**	**19**	**263**	**182**

Source: HT Harvey Associates, August 2020

The condition of on-site trees is mostly assessed as being in fair to good condition, with 38% of the trees rated as "good", 55% rated as "fair" and only about 7% of the on-site trees rated as "poor" or worse. Many trees in fair condition exhibited moderate canopy dieback and codominant stems. Many trees in poor condition exhibited substantial canopy dieback and poor structure, such as included (ingrown) bark or codominant stems, or were leaning heavily. Tree diameters range from 4 inches to 54 inches, with a slight majority of trees falling into the 10-inch to 14-inch range, which indicates a mixed age population of trees from young to mature.

Protected Trees

Of the 480 total existing trees inventoried, 321 trees are identified as protected trees pursuant to the definitions of the City Tree Protection Ordinance (i.e., coast live oaks 4 inches or larger DBH, any other species of tree 9 inches DBH except eucalyptus and Monterey pine, and Monterey pines at densities of 5 or more per acre). Of the 321 protected trees within the Biology Study Area, 40 different tree species are represented. The predominant species consist of coast live oaks (representing 48% of all protected trees), and holly oak and coast redwood (each representing 8% of all protected trees). Of the 321 protected trees, 185 are native species, and 136 are non-native.

Proposed Removal of Protected Trees

Removal of protected trees pursuant to the Project includes; a) removal of non-native trees in poor condition and trees that should be removed for safety, b) removal of trees that the Project requires to be removed because they are directly within the limits of grading or construction, and c) removal of trees that would be too compromised by adjacent grading or construction to assume that they would survive. Two separate methods were used to determine those individual trees that would likely be too compromised by adjacent development, based on impacts to the protected perimeter of each tree. The first method identifies the Structural Root Zone (SRZ) for each tree, calculated as the root plate size (i.e. pedestal roots, zone of rapid taper area, and roots under compression) and limit of disruption based upon tree diameter at breast height (DBH). This zone is considered the minimum distance from the tree trunk that any disruption may occur during construction, without compromising the health of the tree. A significant risk of tree failure exists if structural roots within this SRZ are destroyed or severely damaged by grading and/or construction activity.

Trees with impacts to their SRZs are assumed to be removed, as impacts to their health and stability are considered too great and the residual risk would be too high if these trees were to remain. The second method identifies a larger Critical Root Zone (or CRZ) for each tree, calculated by multiplying the tree DBH by 1.5 feet. For example, a tree with a DBH of 20 inches has a calculated CRZ diameter of 30 feet (20 x 1.5), which may extend beyond the dripline of the tree canopy. Grading or construction activity that would affect more than 25% of the CRZ would result in risk of tree failure, and any tree with 25% of its CRZ that extends into the limits of proposed grading is assumed to require removal.

As shown on **Table 6-2**, of the 321 total protected trees on the site:

- 35 protected trees (11%), including 14 trees of native species, are recommended for removal because they are in poor condition and should be removed for safety
- 86 additional protected trees (27%), including 21 trees of native species, are indicated for removal because they are either located within the limits of proposed grading, their SRZ overlaps with the limits of proposed grading, or at least 25% of their CRZ would be affected by proposed grading
- 31 protected trees (10%) are considered transplant candidates, and
- 169 protected trees (52%) would be preserved and retained

Of the 121 protected trees indicated for removal, 30 are natives (including 22 coast live oaks, seven coast redwoods and one box elder), and 86 trees are of varying non-native species. All trees recommended for transplant are natives, and include 29 coast live oaks, one valley oak and one coast redwood. The removal/ transplant status and location of each protected tree on the Biology Study Area is provided in **Figures 6-4 through 6-8**, and details regarding each individual tree can be found in **Appendix 6B**).

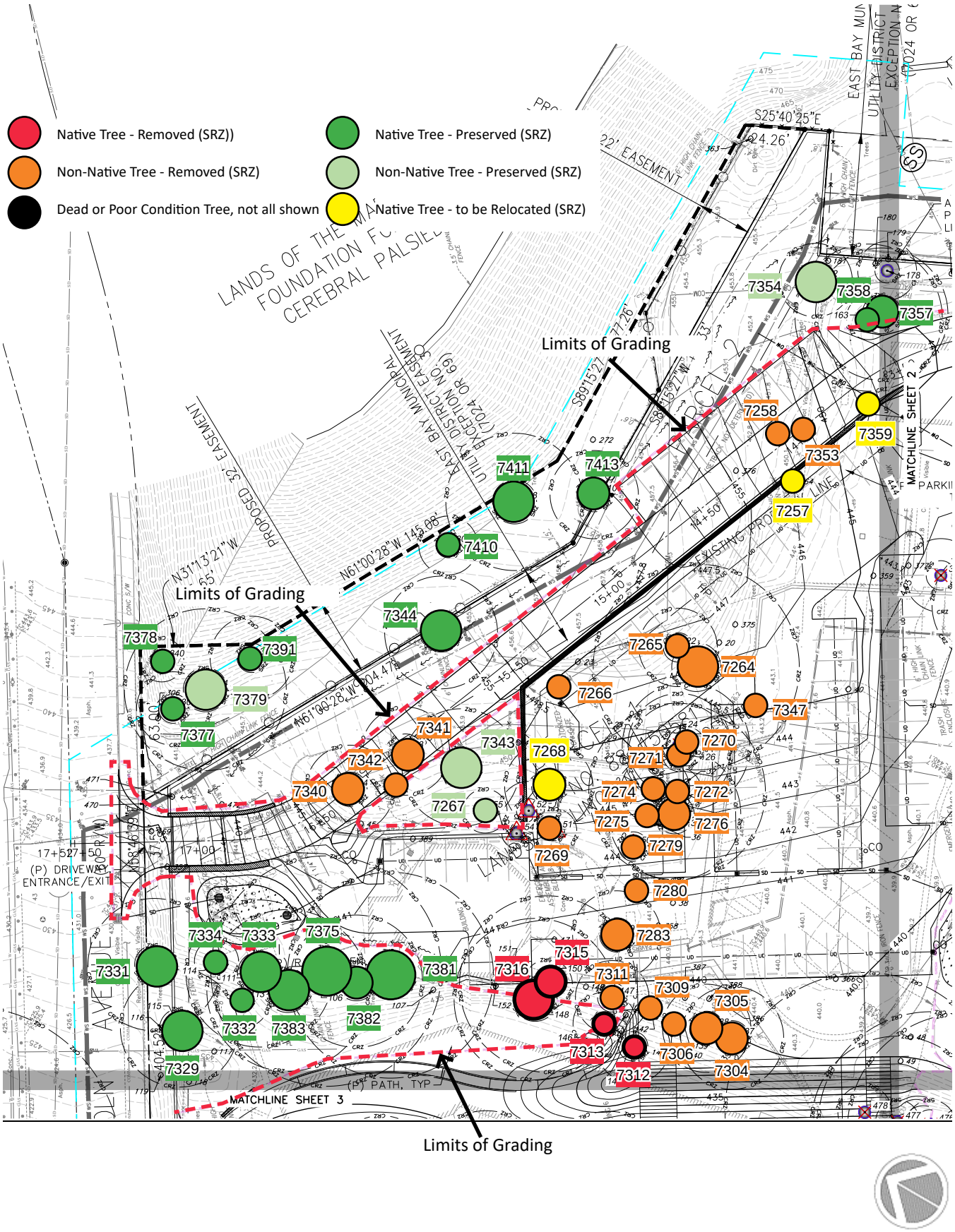


Figure 6-4
Proposed Removal of Protected Trees, Northeast Quadrant of Proposed South Campus

Source: Basemap - Davey Tree Group (2018), Tree Status - H.T. Harvey & Assoc. (2020)

Figure 6-5
Proposed Removal of Protected Trees, Southeast Quadrant of Proposed South Campus

Source: Basemap - Davey Tree Group (2018), Tree Status - H.T. Harvey & Assoc. (2020)

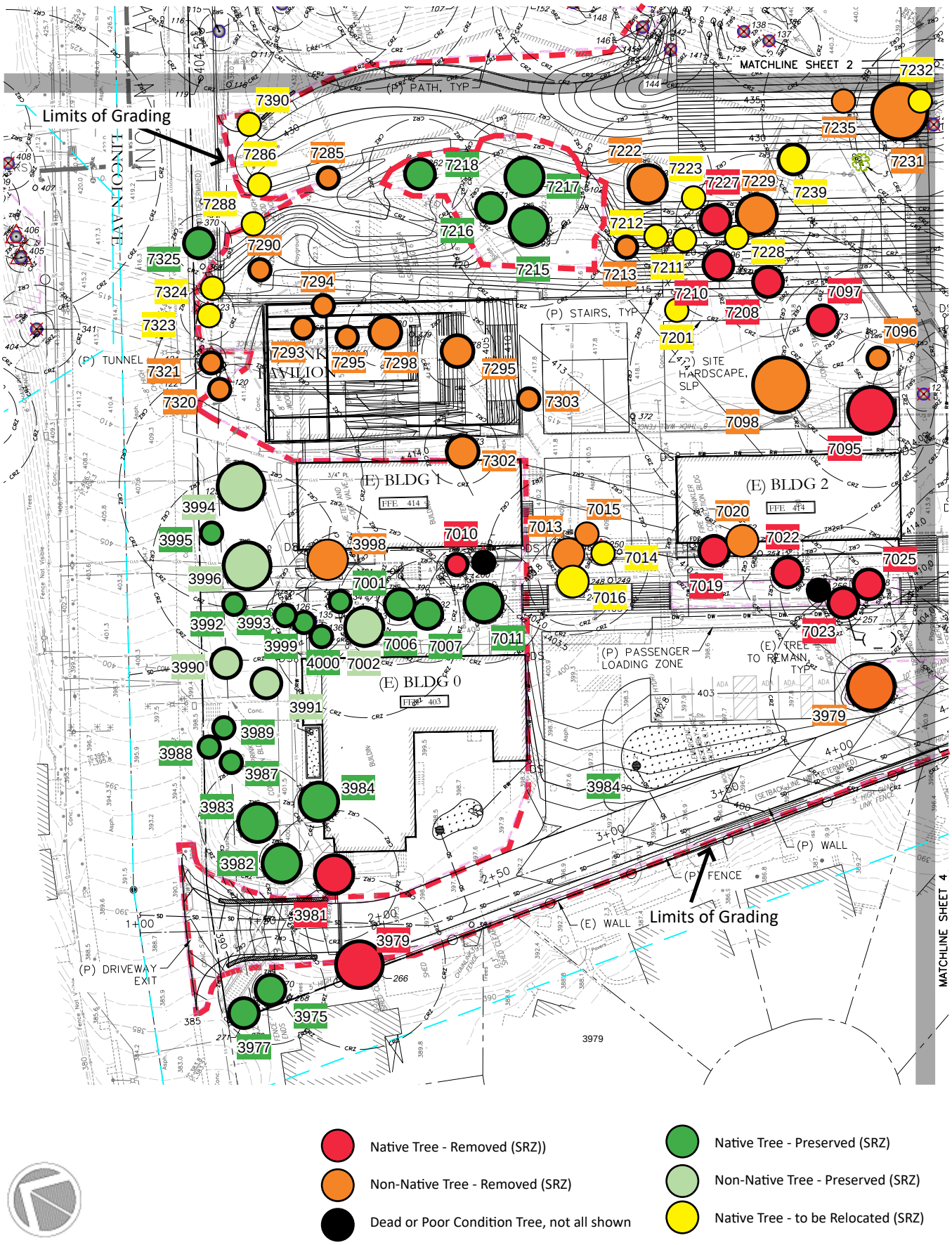


Figure 6-6
Disposition of Protected Trees, Northwest Quadrant of Proposed South Campus

Source: Basemap - Davey Tree Group (2018), Tree Status - H.T. Harvey & Assoc. (2020)

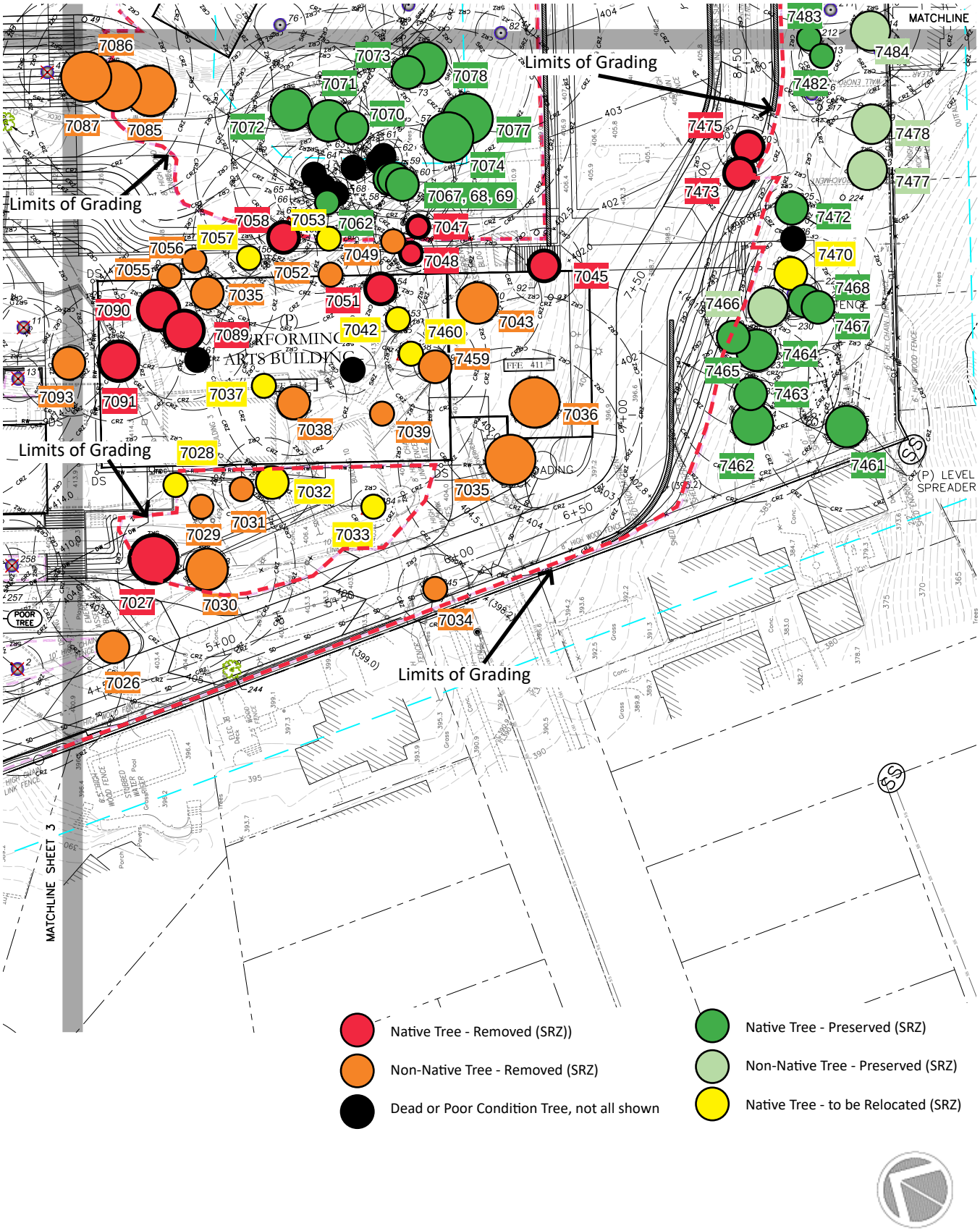


Figure 6-7
Proposed Removal of Protected Trees, Southwest Quadrant of Proposed South Campus

Source: Basemap - Davey Tree Group (2018),
Tree Status - H.T. Harvey & Assoc. (2020)

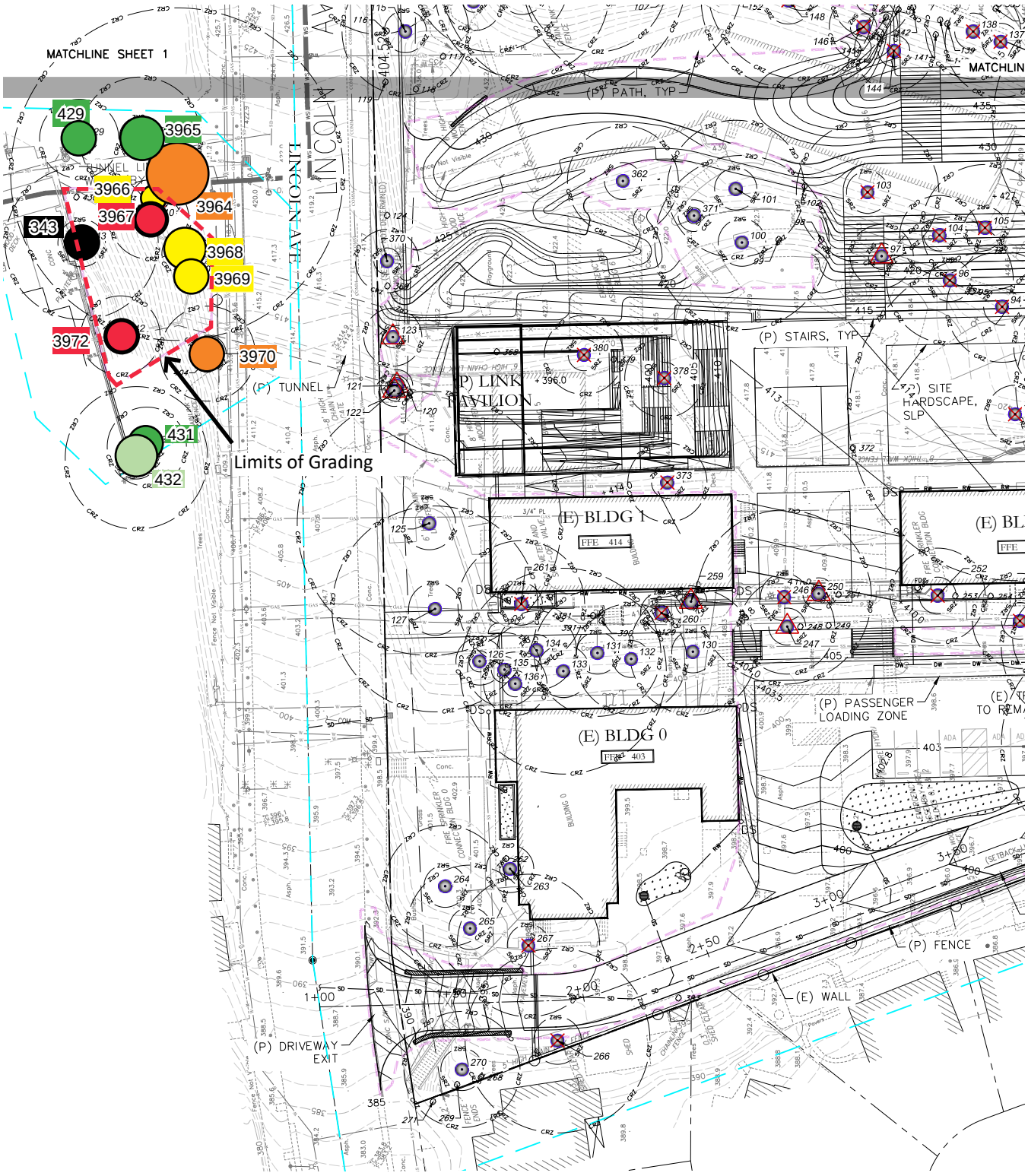


Figure 6-8
Disposition of Protected Trees, Existing Campus Tunnel Opening

Source: Basemap - Davey Tree Group (2018),
Tree Status - H.T. Harvey & Assoc. (2020)

Table 6-2: Disposition of Protected Trees

Common Name	Protected Trees	Tree Disposition: Remove	Tree Disposition: Preserve	Tree Disposition: Transplant
Native Species				
Coast Live Oak	155	22 (+5 poor condition)	99	29
Coast Redwood	28	7	20	1
Box Elder	1	1	0	0
Valley Oak	1	0	0	1
Total:	***185***	***30** (+5 poor condition)*	***119***	***31***
Non-Native Species				
Holly Oak	28	17	11	0
Blackwood Acacia	15	12	3	0
Olive	11	6	5	0
Incense Cedar	10	0	10	0
Sweetgum	8	7	1	0
Arizona Cypress	6	5	1	0
Italian Stone Pine	6	6	0	0
All other non-native species (less than 5 each)	52	33	19	0
	136	86	50	0
Total:	**321**	**121**	**169**	**31**

Source: HT Harvey & Associates, *Head Royce School, Detailed Peer Review Arborist Report*, August 2020

The disposition of protected trees associated with the Project indicates that approximately 81% of existing protected native trees (150 of 185 protected native trees) will be either retained in place, or are recommended for transplant on site. Approximately 16% of existing protected native trees (30 of 185 protected native trees) will be removed pursuant to the Project.

Regulatory Requirements/SCAs

Tree Permit

Pursuant to ***SCA Bio-2: Tree Permit*** and pursuant to OMC Chapter 12.36 (the Protected Tree Ordinance), the Project applicant is required to obtain a Tree Permit for the removal or pruning of any protected tree, and to abide by all conditions of that permit. Native protected trees that are to be removed (not including transplanted trees) are required to be replaced per the City's Code, Section 12.36.060 (see Section 2.3). A finding of any one of the following situations is grounds for denial of a tree removal permit:

1. Removal of a healthy tree of a protected species could be avoided by reasonable re-design of the site plan prior to construction, or trimming, thinning, tree surgery or other reasonable treatment.
2. Adequate provisions for drainage, erosion control, land stability or windscreen have not been made in situations where such problems are anticipated as a result of the removal.

3. The tree to be removed is a member of a group of trees in which each tree is dependent upon the others for survival.
4. The value of the tree is greater than the cost of its preservation to the property owner. The value of the tree shall be measured using criteria established by the International Society of Arboriculture, and the cost of preservation shall include any additional design and construction expenses required thereby. This criterion shall apply only to development-related permit applications.

Protection of Trees to Remain

SCA Bio-2 requires that adequate protections must be provided during the construction period for any trees to remain standing. These tree protections shall include, but are not limited to secure fencing, preventing encroachment into the protected perimeter of any protected tree, BMPs for storage or dumping of substances that may be harmful to trees, BMPS for site maintenance, and any additional recommendations of an arborist. The *Davey Tree Inventory Update and Tree Protection Plan for Head Royce School* (**Appendix 6B**) includes a list of General Tree Protection Measures and additional tree protection guidelines and recommendations specific to the Project.

Tree Replacement Plantings

SCA Bio-2 requires that replacement tree plantings be provided for the removal of native trees. Replacement tree plantings are not required for the removal of non-native species, for the removal of a tree that is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. Replacement tree species shall consist of Coast Redwoods, Coast Live Oak, Madrone, California Buckeye, California Bay Laurel, or other tree species acceptable to the Tree Division. All replacement trees are to be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, or three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. The Project applicant is required to install the replacement tree plantings and maintain the trees until established. Any replacement tree that fails to become established within one year of planting would require re-planting another tree at the Project applicant's expense.

A Tree Replacement Plan for the Project will be prepared in accordance with the City tree removal ordinance and policies.

Conclusions

With review and approval of a Tree Permit for the removal of protected trees, and implementation of all conditions of that permit (including tree protection measures and tree replacement plantings), potential impacts pertaining to a conflict with the City's Tree Protection Ordinance will be less than significant.

Mitigation Measures

No mitigation measures are required.

Compliance with the City of Oakland Creek Protection Ordinance

Biology-6: With implementation of SCAs, the Project will not conflict with any local policies or ordinances protecting biological resources, including the City's Creek Protection Ordinance. (**Less than Significant with SCAs**)

The City's Creek Protection Ordinance (Municipal Code Chapter 13.16) details permit requirements for development and construction projects that are within or near creeks, which avoid or limit negative impacts to creeks both during and following construction. The stormwater channel located adjacent to, and south of the Biology Study Area, likely meets the definition of a "creek" under the City's ordinance. This channel has a

day-lighted (i.e. not culverted) channel with a bed and bank, is hydrologically connected via a culvert to other waters downstream, and conveys seasonal flows.

As an off-site feature, the Project will avoid direct impacts to this stormwater channel. However, Project-related construction will occur between 20 feet from the top of bank and 100 feet from the centerline of the creek, and earthwork involving more than three cubic yards of material will occur more than 20 feet from the top of bank. Based on measurements from the Project's construction and grading plans, these near-creek construction activities include the following (see **Figure 6-9**):

- construction of a stormwater spreader (energy dissipater), at about 46 feet from the creek
- construction of a stormwater bio-swale at about 50 feet from the creek
- grading for the Loop Road at about 100 feet from the creek at its nearest point
- construction of an "outdoor classroom" deck at about 65 feet from the creek, and
- construction of a retaining wall at about 86 feet from the creek

These grading and construction activities have the potential to erode the underlying soil and result in increased sedimentation and pollution of water within this creek.

Regulatory Requirements/ SCAs

Pursuant to the requirements ***SCA Hydro-3: Creek Protection Plan*** and the City's Creek Protection Ordinance, the Project will be required to obtain a Creek Permit (assumed to be a Category 3 permit) for those elements of the Project listed above. Pursuant to that permit, a Creek Protection Plan (to be reviewed and approved by the City) must incorporate Best Management Practices (BMPs) to protect indirect adverse effects to the creek both during construction and after construction. Construction-period BMPs must incorporate all applicable erosion, sedimentation, debris and pollution controls. Post-construction BMPs shall prevent any substantial increase in stormwater runoff volume or velocity into the creek, shall include site design measures to reduce the amount of impervious surface runoff to the creek, and shall include energy dissipation at any new drainage outfalls to the creek to slow the velocity of the runoff, maximize infiltration and minimize erosion.

With review, approval and implementation of a Creek Protection Plan according to these requirements, potential impacts pertaining to a conflict with the City's Creek Protection Ordinance will be less than significant.

Mitigation Measures

No mitigation measures are required.

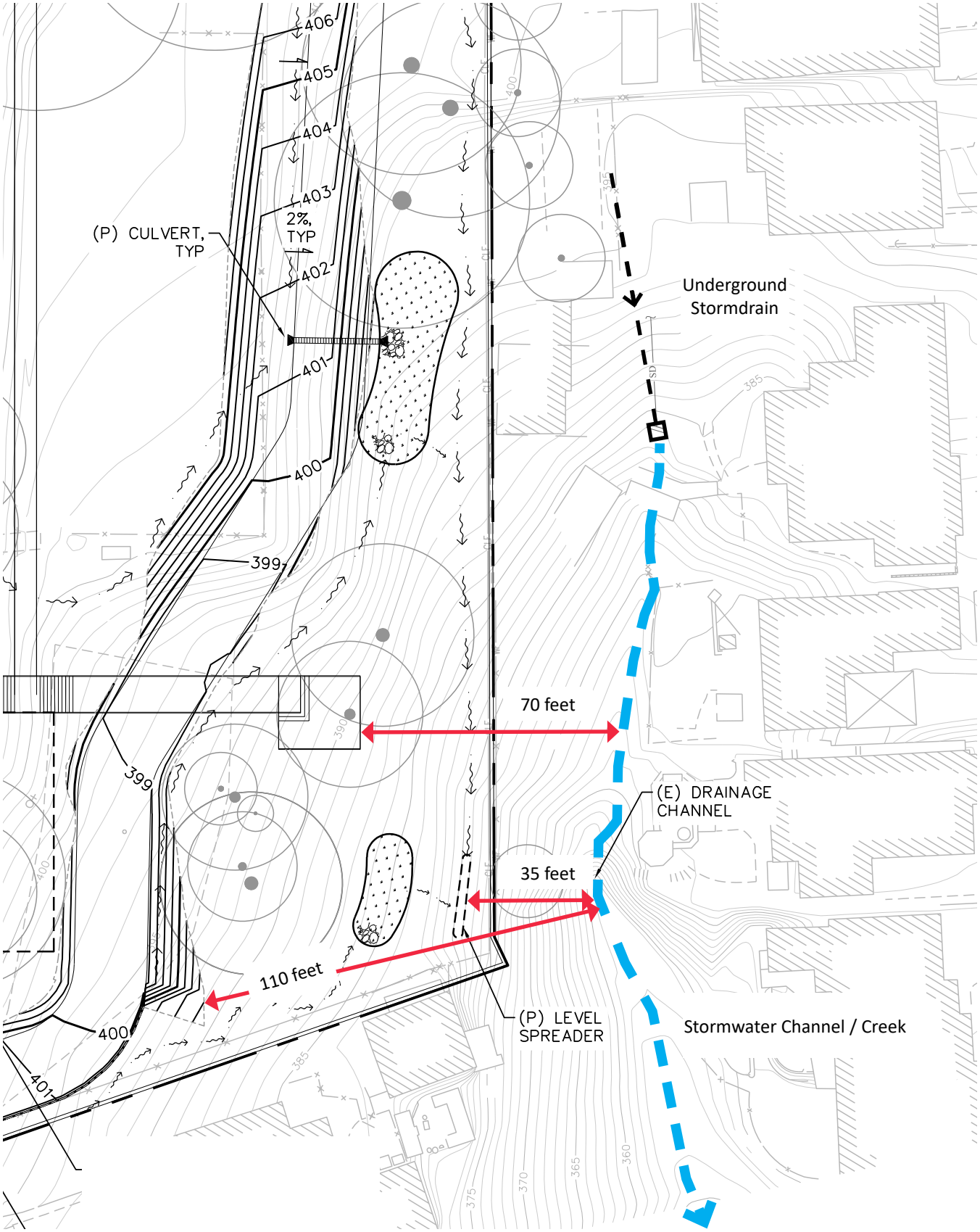


Figure 6-9
Proposed Grading and Development near Off-Site Creek

Source: Sherwood Engineers, Grading and Drainage Plan, 2018

Conflicts with an Adopted Habitat Conservation Plan

Biology-7: The Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (**No Impact**)

The Biology Study Area is not located within an area covered by a Habitat Conservation Plan, Natural Community Conservation Plan, or other local, regional or state-approved habitat conservation plan. Therefore, the Project would not conflict with any such plans.

Cumulative Biological Resource Effects

Cumulative impacts to biological resources may arise due to the linking of impacts from past, current and reasonably foreseeable future projects pursuant to the City General Plan. Cumulative impacts to biological resources depends on the relative magnitude of adverse effects, as compared to the relative benefits of avoiding impacts or minimizing impacts pursuant to applicable CEQA mitigation measures and regulatory requirements for each project. In the absence of avoidance, minimization, compensatory mitigation and conservation measures, cumulatively significant impacts on biological resources would occur. However, all cumulative projects that may affect biological resources similar to those affected by the Project will be subject to CEQA and to the same regulatory requirements, and these requirements will similarly mitigate cumulative impacts on sensitive habitats, special-status species and other biological resources.

Regardless of the magnitude and significance of cumulative impacts that result from other projects, the Head-Royce School South Campus Redevelopment Project is not expected to have a substantial effect on biological resources, and will implement mitigation measure and SCAs as described above to reduce its impacts to less than significant levels. Thus, provided that the Project successfully incorporates these mitigation measures and SCAs, the Project will not make a cumulatively considerable contribution to cumulative effects on biological resources.

7

Cultural Resources

This chapter evaluates the potential impacts of the Project related to cultural resources. This chapter describes existing cultural resources in the Project Area and evaluates the extent to which development of the Project may cause a substantial adverse change in the significance of any historic or cultural resource (as defined in Section 15064.5 of the CEQA Guidelines, and Section 106 of the National Historic Preservation Act).

Information presented in this chapter of the EIR is derived from the following primary sources:

- Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue - *Historic Resource Evaluation*, April 19, 2019 (**Appendix 7A**)
- Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue - *Proposed Project Analysis*, April 16, 2020 (**Appendix 7B**)
- PaleoWest. Inc., *Cultural Resources Technical Report, Head-Royce School Project*, January 23, 2020 (**Appendix 7C**), including a Record Search of the Head-Royce School South Campus from the California Historical Resources Information System (CHRIS) Inventory, Northwest Information Center, Sonoma State University

The Page & Turnbull 2019 Historic Resource Evaluation (HRE) provides a review of the existing historic status of all campus buildings, historic context for the Lincoln Heights neighborhood and Lincoln Child Center, and architectural descriptions of the proposed South Campus and each of its buildings. Each building that is 45 years old or older is evaluated for its historic significance and eligibility for inclusion in the California Register of Historical Resources (California Register) and as a City of Oakland Designated Historic Property. The proposed South Campus as a whole is also evaluated for eligibility as a historic district for inclusion in the California Register, and as a City of Oakland Local Historic District.

Environmental Setting

The following contextual information is summarized from the more detailed research and documentation as presented in the Cultural Resources Technical Report for the Head-Royce School Project (Appendix 7C), and the Head-Royce School South Campus Historic Resource Evaluation (Appendix 7A) respectively.

Cultural Resources Context

Prehistoric Context

Research into local prehistoric cultures began in the 1890s and early 1900s with the work of N. C. Nelson of the University of California at Berkeley. Nelson documented 425 shellmounds along the Bay shore and adjacent coast, and maintained that the intensive use of shellfish, a subsistence strategy as reflected in both coastal and bay shoreline middens, indicated a general economic unity in the region during prehistoric times, and he introduced the idea of a distinct San Francisco Bay archaeological region.

The development of radiocarbon dating in the 1950s and obsidian hydration analysis in the 1970s allowed for more accurate dating of archaeologic deposits, which led to the creation of a number of increasingly specific ways of classifying the prehistory of California. During California's prehistoric time, stylistically distinct beads made from the shell wall of purple olive snail became one of the most common burial accompaniments and they were widely traded. Specific combinations of bead types have proven to be particularly good indicators of different time periods and cultural phases. The current generally accepted understanding of prehistoric San Francisco Bay Area cultural periods includes:

- Early Holocene (Lower Archaic) from 8000 to 3500 B.C.
- Early Period (Middle Archaic) from 3500 to 500 B.C.
- Lower Middle Period (Initial Upper Archaic) from 500 B.C. to A.D. 430
- Upper Middle Period (Late Upper Archaic) from A.D. 430 to 1050
- Initial Late Period (Lower Emergent) from A.D. 1050 to 1550
- Terminal Late Period, post-A.D. 1550

No archaeological evidence dating to pre-8000 B.C. has been located in the Bay Area, potentially due to environmental changes that submerged sites, buried sites beneath alluvial deposits, or destroyed sites through stream erosion (see Appendix 7C).

Ethno-Historic Context

This section provides a brief summary of the ethnography of the Project vicinity, and is intended to provide a general background only (see Appendix 7C, pages 11-12, which also references detailed documentation prepared by others).

The Project area lies within the region occupied by the Costanoan group of Native Americans at the time of historic contact with Europeans. The term Costanoan (derived from the Spanish word Costaños, or coast people) is applied by ethnographers as a means of identifying this population based in linguistics. Tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur, spoke eight different languages of the Costanoan family. Modern descendants of the Costanoan prefer to be known as Ohlone, derived from the Oljon group, which occupied the San Gregorio watershed in San Mateo County. The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature. On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about A.D. 500, having moved south and west from the Sacramento-San Joaquin Delta.

Although linguistically linked as a family, the eight Costanoan languages comprised a continuum in which neighboring groups could understand each other. Each of the eight language groups was subdivided into smaller villages or tribal groups representing independent political entities, each occupying specific territories. Chochenyo (or East Bay Costanoan) was the language spoken by the estimated 2,000 people who occupied the east shore of San Francisco Bay between Richmond and Mission San Jose, and probably also in the Livermore Valley.

The arrival of the Spanish in the 1770s led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal life ways. Brought into the missions, the surviving Ohlone, along with others, were transformed from hunters and gatherers into agricultural laborers. Following secularization of the mission system in the 1830s, numerous ranchos were established in the 1840s. Generally, the few Ohlone who remained were then forced to work on the ranchos.

In the 1990s, some Ohlone groups (e.g., the Muwekma, Amah, and Esselen) submitted petitions for federal recognition. Many Ohlone are active in preserving and reviving elements of their traditional culture, and are active participants in the monitoring and excavation of archaeological sites.

East Bay Area Historic Context

Important contextual background on the broader historic period in the eastern San Francisco Bay region is briefly summarized below (see further detail in Appendix 7C pages 12-14, and Appendix 7A pages 57-63):

- The Spanish expedition of Fages-Crespi in 1770 explored the eastern shore of San Francisco Bay, where they traded with the local Costanoan people, and members of the expedition sighted the entrance to San Francisco Bay from the Oakland Hills. A subsequent expedition traveled from Monterey through what are now most of the East Bay communities.
- In 1775, Captain Juan Manuel Ayala's expedition studied the San Francisco Bay and ventured up the Sacramento and San Joaquin rivers. They also established the first mission in the region, as Mission San Francisco de Asis (Mission Dolores) in San Francisco. Mission Santa Clara followed in 1777, and Mission San Jose in 1797.
- The Mission era lasted approximately 60 years and proved to be the downfall of the native inhabitants of the region, who were brought to the missions to be assimilated into a new culture as well as to provide labor for the missionaries. It is estimates that the Costanoan population had been reduced from of over 10,000 people in 1770, to less than 2,000 people by 1832.
- In 1820, Sergeant Luis Maria Peralta received a land grant in the East Bay, and named his grant Rancho San Antonio. It comprised the land that lay from the water's edge to the crest of the Oakland hills, and between San Leandro Creek to the south and El Cerrito Creek to the north. Following the U.S. takeover of Alta California from Mexico in 1848, the rancho lands were divided up and generally overrun by Anglo immigration, coincident with the land boom following the Gold Rush of 1849.
- In 1863, the San Francisco & Oakland Railroad was completed, connecting Oakland to San Francisco by way of San Jose. The Central Pacific Railroad located the western terminus of its transcontinental rail route at Oakland Point, where buildings were clustered, and wharves were extended into the Bay.
- By the turn-of-the-century, electric railways connected the most densely populated areas of Oakland to the outlying suburbs, and the 1906 earthquake further encouraged some urban residents to relocate to outlying areas of the Oakland Hills.

Local Historic Context

In 1842, the original Rancho San Antonio was divided into four separate portions, each portion granted to one of Peralta's sons. Antonio Maria Peralta received the large eastern portion, roughly bounded by Dimond Canyon to the west, and what is now Skyline Boulevard to the north, 73rd Avenue to the southeast and Alameda and San Leandro Bay to the southwest. European settlers began logging the San Antonio redwood forest on Peralta's land in the 1840s, and built a steam sawmill in 1850. Park Boulevard was originally a logging road used to transport logs down through Dimond Canyon.

Hugh Dimond purchased the canyon area from Peralta in 1867. By the early 20th century, a residential district surrounding a commercial area on Hopkins Street (now MacArthur Boulevard) developed, known as the Dimond District. As with much of the Bay Area, the 1920s were a period of rapid residential and commercial development in the Dimond District. Houses were generally modest-sized Craftsman bungalows or residences with Spanish Colonial Revival influences. In 1926, Leimert Bridge was constructed, spanning Sausal Creek and providing access to the Oakmore Highlands area for further residential development. East of Oakmore Highlands and across Lincoln Avenue, the Lincoln Highlands residential neighborhood began rapid

development in the 1930s. By the mid-1940s, Lincoln Highlands south of Alida Street was largely developed. Mountain Boulevard Freeway (now Warren Freeway or Highway 13) was constructed in the 1950s, providing faster, easier access to the residential neighborhoods in the Oakland hills, and residential development continued during the post-World War II years. This postwar development included the upper reaches of the Lincoln Highlands residential neighborhoods, and the north end of Lincoln Highlands came to include several large institutional campuses:

- The West Oakland Home (later renamed Lincoln Child Center), moved to Lincoln Highlands in 1929.
- The United Cerebral Palsy Association established a campus in the mid-1950s at 4766 Lincoln Avenue, with the buildings formally dedicated in 1957.
- The Greek Orthodox Cathedral of the Ascension built a church at 4700 Lincoln Avenue in 1960. Noted for its architectural blend of Modernist and traditional elements, the parish was elevated to the status of a cathedral in 1992.
- In 1963-64, the University of California, Berkeley acquired the Anna Head School's campus in Berkeley, and the Anna Head School moved to a six-acre parcel on Lincoln Avenue, directly across the street from the Project site.
- In 1964, the Oakland California Temple opened as the 13th temple of the Church of Jesus Christ of Latter Day Saints (LDS Church or Mormon Church) in the world, located at 4770 Lincoln Avenue. The Temple complex includes an event center, visitor center, landscaping and is also home to the Oakland Family History Center, a geological organization run by the Mormon Church.

Historic Context of the Project Site

Important contextual background on the history of the Project site, its prior uses, and the various institutional uses of the site is briefly summarized below (see further detail in Appendix 7A pages 63-81). Greater detail on each individual building on the Project site is provided in the Existing Physical Setting section, below.

West Oakland Home (1883-1928)

Lincoln, (the former owners of the Project site) have been known by many different names during their institutional past, including the Little Worker's Home, West Oakland Home, Lincoln Child Center and Lincoln. Lincoln traces its history back to 1883 and founder Rebecca McWade.

In 1883, McWade and her organization, known as "The Little Workers of East and West Oakland, founded the Little Workers' Home, accepting orphaned infants and children into McWade's home in East Oakland (at 1547 12th Avenue). By 1885, McWade and the Little Worker's Home relocated to West Oakland (at Taylor and Campbell Street – no longer extant). The newly named West Oakland Home (also known as the Roseberry House) was the first integrated orphanage in Northern California, and first documented integrated charity in Oakland. By the late 1880s, McWade was in poor health and gave control of the orphanage to Mary and Ethel Crocker, and formally retired in 1890. In January 1891, under the leadership of Ethel Crocker, the organization's first purpose-built home was completed at 907 Campbell Street in West Oakland. In 1925, the West Oakland Home suffered a fire, and the organization was forced to look for a new home. In 1926, the West Oakland Home purchased a 7.5-acre site on Lincoln Avenue in the Oakland hills (the former Lincoln site).

Lincoln Avenue Campus (1928-1949)

In 1928, under the leadership of then-president Ms. F. Bruce Maiden, a capital campaign was initiated by the West Oakland Home's Board of Directors to construct two new "cottages" on the Lincoln Avenue campus. The cottages were designed by the local architectural firm of Reed & Corlett, and ground was broken on

these cottages in 1929. The cottages included a boy's dormitory known as the Mary Crocker Cottage (Building 1), and a girl's dormitory known as the Grace Trevor Cottage (Building 2).

At about this same time, Reed & Corlett also designed a master plan for the construction of future cottages, which would be based on the same design and floor plans as the first two buildings. However, Building 1 and Building 2 were the only two cottages constructed according to Reed & Corlett's master plan.

During the 1930s, some of the values of West Oakland Home shifted. Notably, the institution became segregated and began to move away from the more progressive and innovate aspects of Rebecca McWade's original vision. In 1935, the institution was able to construct a new gymnasium/auditorium and administrative office building, named the Junior Alliance Hall (Building 0), which was also designed in a Spanish Colonial Revival Style by architect William G. Corlett, Jr. (formerly of Reed & Corlett).

In 1940, West Oakland Home began accepting children referred through Oakland foster agencies at the request of Alameda County. During WWII, West Oakland Home provided needed foster care housing, childcare programs, boarding homes, emergency placement facilities and child psychological services. After the war, the West Oakland Home organization shifted its emphasis to handling children with increasingly severe developmental and psychological problems such as posttraumatic stress disorder, depression, or extreme anxiety. In 1948, West Oakland Home was renamed to Lincoln Home for Children. By 1947, an Executive Cottage (Building 4) and an adjacent workshop garage (Building 10) were constructed, and in 1948 a small addition was constructed to expand the available office space within the Junior Alliance Hall (Building 0).

Lincoln Home for Children (1950-1959)

At the end of the 1940s, the Lincoln Home for Children campus consisted of five buildings (Buildings 0, 1, 2, 4, and 10), but experienced a significant period of growth and change in the 1950s. In the 1950s, Lincoln Home for Children offered three main services: consultation, a foster home program, and residential treatment.

In 1958, the residential treatment program, which included individual and group therapy, was greatly enhanced with the construction of Bushell Cottage (Building 6) and an attached kitchen and dining hall (Building 7), designed by architect Gerald McCue. In 1959, the Mary Crocker Cottage (Building 1) was remodeled to accommodate classrooms and offices. A landscaped playground area with modern play equipment, designed by Robert Royston, was constructed in the late 1950s. In 1957, Lincoln Home for Children leased a portion of their site along Charleston Street to the East Bay Activities Center (EBAC), now known as East Bay Agency for Children. The EBAC hired Robert Ratcliff to construct their building, known variously as EBAC/Charleston House/Holmgren (Building 8) to accommodate educational day schooling, which was eventually returned back to Lincoln Home for Children in 1979.

Lincoln Child Center (1960-2013)

In 1961, the institution's name changed to Lincoln Child Center, and it operated as a long-term foster placement, where many children stayed until turning age 18. To accommodate the changing services and needs of the organization, the Trevor Cottage (Building 2 was extensively remodeled in 1967, converted from residential use to classrooms, offices, a group therapy room and several activity rooms. The only new building constructed in the 1960s on the Lincoln Child Center campus was a maintenance garage (Building 5) built in 1967.

By the end of the 1960s, Lincoln Child Center was running six programs, which included residential treatment, day treatment, group homes, consultation, tutoring workshops, and after care, serving some 700 children and families each year. In 1971, the Executive Cottage (Building 4) was expanded to accommodate four new bedrooms as a boys' group home, and renamed Linnet Cottage. In 1971, the Anna Head School (which was located immediately across Lincoln Avenue) also established the Josiah Royce School for Boys, which opened under a lease for use of the Junior Alliance Hall (Building 0). The Junior Alliance Hall (Building 0) was

extensively remodeled in 1971 to accommodate the Royce School for Boys. The Josiah Royce School for Boys (together with the Anna Head School, collectively renamed The Head-Royce School in 1974) remained at this location until 1982. No new buildings were constructed on the campus during the 1970s.

During the 1980s, many of the existing buildings on the campus were being used for administrative offices, schoolrooms, residential casework and group home casework. In 1987, Lincoln Child Center became an accredited public school. It opened several new programs and began using the Junior Alliance Hall (Building 0) for children's programming. In 1990, a two-room portable classroom (Building 3) was installed on campus, where a middle school program was established.

By 1997, all of Lincoln Child Center's former group homes on the site were being used for classrooms and as treatment facilities. Lincoln Child Center also had a variety of programs in 12 other schools in Alameda and Contra Costa counties, and leased three sites in Pittsburg and Oakland. A new 16-room residential treatment facility, the Virginia and Malcom Champlin House (Building 9) was completed in 2000, and provided more modern amenities for residential care on the campus. A series of four combined prefabricated storage sheds (Building 11), were installed sometime between 2005 and 2009.

The decision to close down Lincoln Child Center's 128-year residential program at the Project site was made in 2011. At the same time, Lincoln Child Center opened its Project Permanence Program (a home-based program for families and youth as they transitioned out of foster care or the juvenile justice system) at 1244 14th Street in West Oakland, just blocks from Rebecca McWade's original West Oakland Home. In February 2013, the Head-Royce School purchased the property at 4368 Lincoln Avenue from Lincoln Child Center.

Existing Physical Setting

Site Description

The proposed South Campus is a complex of twelve educational-use buildings located on an irregular-shaped lot south of Lincoln Avenue, between Alida Street and Charleston Street in the Lincoln Highlands neighborhood of Oakland. The site is bounded by Lincoln Avenue to the north, the United Cerebral Palsy campus at 4500 Lincoln Avenue and Charleston Street to the east, residences along Charleston Street and Laguna Avenue to the south, and residences along Alida Street, Alida Court and Linnet Avenue to the west. Campus buildings are between one and two stories in height, and range in date of construction from 1930 (Buildings 1 and 2) to after 2000 (Building 9 and Building 11). All eleven buildings were constructed by the Lincoln Child Center (or their predecessor institution), primarily for educational or residential use related to the organization's mission. The site also includes several maintenance and storage buildings, mature trees, a variety of playground equipment and play areas, pedestrian and auto circulation routes, and several surface parking lots. Head-Royce School uses the surface parking lots at the subject property, and the maintenance staff uses Building 5 and several rooms on the first story of Building 1, but otherwise all of the buildings are unoccupied and used for storage.

As shown on **Figure 7-1**, the oldest buildings on the proposed South Campus (Buildings 0, 1 and 2) are located at the west end of campus, as is Building 5 and the lower parking lot. East of the oldest buildings are several playground areas. Buildings 6, 7 and 11 are located near the north end of campus, by former Perkins Street. Three buildings, Buildings 3, 4, and 10, are located near the driveway off Linnet Avenue. Building 8 is located along Charleston Street at the northeast end of campus. Building 9 and the upper parking lot are located at the central north area of the campus. A grass playing field and undeveloped wooded areas are located at the south and east end of the campus.

Figure 7-1
Building Construction Over Time at Former Lincoln Site

Source: Page & Turnbull, 2019

Current Historic Status

The following is an overview of any national, State, and local historic ratings currently assigned to the buildings on the Project site (i.e., prior to preparation of Appendix 7A).

National Register of Historic Places

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources (see additional discussion in the Regulatory Setting). None of the buildings on the Project site are currently listed in the National Register of Historic Places.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is an inventory of significant architectural, archaeological, and historical resources in the State of California (see additional discussion in the Regulatory Setting). None of the buildings on the Project site are currently listed in the California Register of Historical Resources.

California Historical Resource Status Code

Properties listed or under review by the State of California Office of Historic Preservation are assigned a California Historical Resource Status Code of "1" to "7" to establish their relative historical significance in relation to the National Register of Historic Places or California Register of Historical Resources. None of the buildings on the Project site are currently listed in the database, nor have they been formally evaluated using the status codes.

Oakland Cultural Heritage Survey

The Oakland Cultural Heritage Survey (OCHS) was established in 1981, and since that time the OCHS has been evaluating resources based on a letter grade (A to F) to rate the relative significance of individual properties, and a number grade (1 to 3) to rate historic districts (greater detail and explanation of the OCHS rating system can be found in the Regulatory Setting section of this chapter of the EIR). **Table 7-1** shows the current (prior to reevaluation pursuant to the 2019 HRE) historic status of each building of the Project site, and the current rating of the proposed South Campus as a historic district.

Table 7-1: 1996 Oakland Cultural Heritage Survey Ratings, Buildings on the Project Site

Building	Const. Date	1996 OCHS Rating	Building	Const. Date	1996 OCHS Rating
Building 1	1930	C3	Building 7	1958	F
Building 2	1930	C3	Building 5	1957	No rating assigned
Building 0	1935	C3	Building 3	1990	No rating assigned
Building 4	1938-46	No rating assigned	Building 9	1999	No rating assigned
Building 10	1945	No rating assigned	Building 11	2005-09	No rating assigned
Building 8	1957	No rating assigned	Campus as an Historic District		PDHP
Buildings 6	1958	F			

Source: Page & Turnbull, 2019 HRE, Summary of Findings

OCHS Rating of C = superior or visually important examples of Secondary Importance

OCHS Rating of F = buildings that are less than 45 years old, or that have been modernized

PDHP = Potential Designated Historic Property

As indicated in this table, three buildings on the Project site (Building 0, Building 1, and Building 2) were assigned an OCHS rating of "C3" in 1996. This rating indicates that each is a building of secondary importance and not located in a historic district. Buildings 6 and 7 were assigned a rating of "F," meaning that they were less than 45 years old at the time of the survey. Other buildings on the proposed South Campus were not assigned a rating at the time of the 1996 survey. The entire proposed South Campus was identified as a Potential Designated Historic Property (PDHP).

In 2019, the proposed South Campus was subject to an intensive survey and evaluation (Appendix 7A), as summarized below.

Detailed Buildings Descriptions

The following section provides a summary description of each building within the proposed South Campus, by chronological order of date of construction, including:

- the date of construction
- the architect and/or builder (where known)
- a brief architectural description of all buildings over 45 years of age, with and general description of changes made to those buildings over time, and
- a current reassessment of the historic significance each building, including a determination of whether the building is eligible for listing under any of the four evaluative criteria of the California Register (see description of California Register and applicable criteria in the Regulatory Setting), an assessment of the current integrity of those buildings determined potentially eligible for listing, a reassessment of OCHS ratings for each building, and a conclusion as to whether buildings over 45 years of age are considered historic resources pursuant to CEQA.

This section also provides a summary assessment of whether the proposed South Campus, as a whole, is eligible for listing as a historic district. Greater detail pertaining to each building, pertaining to the Campus as a whole, and pertaining to their current evaluation as historic resources can be found in Appendix 7A.

Building 1 (Mary A. Crocker Cottage)[1]

- Building 1, known originally as the Mary A. Crocker Cottage, is one of the two first purpose-built buildings on the site. It was constructed in 1929-1930 as the boys' dormitory for the West Oakland Home.
- The building was designed by architects Reed & Corlett in the Spanish Colonial Revival style, and constructed by F.C. Stolte.

Description

Building 1 is a two-story, Spanish Colonial Revival style, wood frame building with a basement and concrete foundation (see **Figure 7-2**). The building features textured stucco siding and a side-gable roof with terra cotta tile roofing. The roof has overhanging eaves with decorative wood brackets on the primary (southwest) and rear façades. The building has two interior chimneys, one is stucco clad with a gable tile roof, and the other has an elaborated top with brick columns, a cornice and pyramid roof. Decorative leader heads are connected to internal wall downspouts. Circular tile vents are located along the basement level of the

[1] Page & Turnbull, *Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation,* April 19, 2019, pages 14-20, 94-96, 109-13

building. Typical windows are non-original aluminum-sash sliding windows set in a wood frame. Most windows are recessed within the wall, typically with a simple projecting sill. Diagonal patterned wood and plaster grilles are flush with the exterior wall and painted to match the stucco cladding; the screens have thick wood divided and are located in front of recessed windows.

The primary (southwest) façade of Building 1 faces the rear of Building 0, perpendicular to Lincoln Avenue. The primary entrance is located at center of the façade within a slightly recessed archway framed by pilasters with simple molded capitals. Adjacent the primary entrance is a metal plaque that reads "Mary A Crocker Cottage 1929." Two additional archways flank the entry, each with a typical window. The primary entrance is accessed via concrete steps with terra cotta tile treads which lead to an open porch. The concrete porch has terra cotta tile edging and decorative diamond patterning, and is surrounded by a low stucco-clad wall with terra cotta tile coping. Low stucco-clad walls with terra cotta coping and wrought iron railings flank the steps. Decorative Spanish tile vents are located at the porch walls. North (left) of the primary entrance are two sets of tripartite windows spanned by a carved wood lintel beam, with wood and stucco-clad corbeling above. South (right) of the primary entrance is a typical window and two tripartite windows. Each tripartite window is recessed between pilasters with simple molded capitals. Three three-lite windows are located at the exposed basement level. Directly above the primary entrance (on the second story) is a recessed doorway opening with a non-original window and window air-conditioning unit. A balconette is located at the central opening at the second story, with a wood plank base, metal railings, a zigzag metal edge pattern, and is supported by curved metal brackets below and hung by metal rods and brackets from above.

Changes over Time

Based on original drawings and 1951 Sanborn fire insurance maps, the building originally featured a central balconette at the second story on side façades, which was replaced prior to 1951 with simple wood fire escape stairs. The original glazed wood doors were retained, and metal awnings installed. All original exterior wood windows, except two bathroom windows, were replaced with aluminum-sash windows during 1960s and 1970s remodels. An office renovation conducted in 1992 included the construction of a wooden ADA-compliant ramp on the northeast façade, and construction of a new stair on the northwest façade.

Most interior features have been removed or replaced during the various remodels over the decades. Original extant features include several wood beams in the ceiling of one of the rooms on the first floor and several radiators and possibly radiator covers. The wood balustrade of the interior staircase may be original, and a portion of the original brick chimney is still exposed at the second floor, but the fireplace has been covered with drywall.

Building 1 (Mary A. Crocker Cottage)
1930

Partial view of Building 1, looking southeast (current)

Primary entrance to Building 1, looking southeast (current)

Figure 7-H
Images of Building 1 (Mary A. Crocker Cottage)

Source: Page & Turnbull, 2019

Historical Significance

The Page & Turnbull HRE (Appendix 7A) includes a re-evaluation of Building 1 against the California Register and OCHS criteria and finds that it meet the eligibility requirements for consideration for listing under California Register Criteria 1 (Events) and 3 (Architecture).

Criteria 1: Events

The term "cottage" as applied to institutional residential buildings such as Building 1 refers to its distinction in type and philosophy from larger, multi-wing institutional buildings popular through the nineteenth century. The design of Building 1 represents an attempt by West Oakland Home to adapt to the cottage model, rather than the institutional model, for providing childcare and services in the early twentieth century, while dealing with more practical financial constraints. Building 1 originally served as a boys' dormitory, directly serving the mission of the institution to provide shelter for needy children, and was part of the initial establishment of the institution on the new site.

Building 1 is significant under California Register Criterion 1: Events, as one of the two first purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. The period of significance under Criterion 1 is 1929 to 1935

Criteria 3: Architecture

Reed & Corlett was an architecture firm formed by Walter D. Reed and William G. Corlett, Jr. in 1912. Originally based in San Francisco, they soon moved their offices to Oakland. The firm is known for a variety of institutional, industrial and commercial buildings. Among the dozens of buildings that the firm built in Oakland, notable examples include the iconic Mutual Stores Office and Warehouse Building at 5701 International Boulevard (built 1928), and the Hebern Electric Code Company Building at 801 Harrison Street (built 1923), a twentieth century commercial building with Gothic ornamentation. The firm was adept in numerous architectural styles, from Art Deco to revival styles such as Spanish Colonial, Renaissance and Baroque revivals, and had a significant impact on the architectural development of Oakland in the 1920s. Building 1 is a good, representative example of Reed & Corlett's work as local master architects.

Historically rooted in the building traditions of early Spanish and Mexican settlers of California and other Spanish colonies, the Spanish Colonial Revival style was popular in California and throughout the American Southwest from the early 1900s to the 1930s, with variations on the style continuing in popularity today. Making use of terra cotta tile gabled roofs, thick masonry walls, plaster finishes, and smaller fenestration openings than previous popular styles, the Spanish Colonial Revival style was popular between 1915 and 1930 for commercial buildings, institutions, apartments and houses. The Spanish Colonial Revival style was also used in many institutional buildings such as schools, churches, hospitals, and libraries. Several notable local examples include several buildings at Mills College (Julia Morgan, 1904 – 1925), Piedmont High School (W. H. Weeks, 1921, and Chapel of the Chimes (Julia Morgan, 1928). Building 1 exhibits many character-defining features of the Spanish Colonial Revival style such as a gable roof, terra cotta tile roofing; stucco cladding; balconettes; recessed arches; decorative details such as pilasters, carved wood lintels, corbelling, wood colonettes, wood shutters and leader heads; and brick chimneys with decorative roof caps.

Building 1 is also significant under California Register Criterion 3: Architecture, for its association local master architects Reed & Corlett, and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 3 is 1930.

Conclusion

Building 1 retains sufficient integrity to convey its historic significance under both of the California Register's evaluative Criterion 1: Events, and Criteria 3: Architecture. The HRE also reevaluates Building 1 pursuant to OCHS criteria, and gives a rating of B3, which means that it is a building of major importance but not located

in an eligible district. Therefore, the HRE (Appendix 7A) concludes that Building 1 is individually eligible for listing in the California Register and as a City of Oakland Designated Historic Property, and does qualify as a historic resource under CEQA.

Building 2 (Grace L. Trevor Cottage)[2]

- Building 2, known originally as the Grace L. Trevor Cottage, is also one of the two first purpose-built buildings on the site. It was constructed in 1929-1930 as the girls' dormitory for West Oakland Home.
- This building was also designed by architects Reed & Corlett in the Spanish Colonial Revival style, and built by F.C. Stolte.

Description

Like Building 1, Building 2 is a two-story, Spanish Colonial Revival style, wood frame building with a basement and concrete foundation (see **Figure 7-3**). The rectangle-plan building features textured stucco siding and a side-gable roof with terra cotta tile roofing. The roof has overhanging eaves with decorative wood brackets on the primary and rear façades. Decorative leader heads are connected to internal wall downspouts. Circular tile vents are located along the basement level of the building. Typical windows are non-original aluminum-sash paired casement windows. All windows are aluminum-sash set in a wood frame unless otherwise specified. Most windows are recessed within the wall, typically with a simple projecting sill. Diagonal patterned wood and plaster grilles are flush with the exterior wall and painted to match the stucco cladding; the screens have thick wood divided and are located in front of recessed windows.

The primary (southwest) façade of Building 2 is perpendicular to Lincoln Avenue and faces the lower parking lot. The primary entrance, a non-original wood slab door, is located at the center of the façade, recessed within a projecting frame. At the projecting frame is a metal plaque reading "Grace L Trevor Cottage 1929" and an original wall-mounted light fixture. Above the primary entrance is a balconette with a metal railing and typical recessed window with a cement asbestos spandrel. The primary entrance is accessed via concrete steps with terra cotta tile treads which lead to an open porch. Low stucco-clad walls with terra cotta coping and simple metal railings flank the steps. North (left) of the primary entrance, at the first story, are two typical windows set between pilasters, and two typical windows with cement asbestos spandrels. South (right) of the primary entrance, at the first story, are two typical windows with cement asbestos spandrels, and two recessed, arched windows with tripartite wood frames and non-original aluminums-sash fixed and casement windows.

Changes over Time

Based on original drawings and 1951 Sanborn fire insurance maps, Building 2 originally featured a central balconette at the second story on the side façades, which was replaced prior to 1951 with simple wood fire escape stairs. The original glazed wood doors were retained at the time and metal awnings installed, but have since been replaced with windows.

[2] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 21-25, 96-97, 1112-114

Drawings of Building 2 (Grace L. Trevor Cottage) by Reed & Corlett, 1929

Primary façade of Building 2, looking northeast

Existing Building 2 from Northwest

Figure 7-3
Images of Building 2 (Trevor Cottage)

Source: Page & Turnbull, 2019

In 1967, Building 2 was extensively remodeled to change the building from a dormitory to a day school with classrooms. That work included:

- replacing all original windows with aluminum sash windows
- removing the two original wood fire escape stairs, and installing new concrete fire escape stairs along the northeast façade
- constructing a new interior staircase that included an exterior landing housed in a projecting bay on the northeast façade, supported by wood posts
- a ground level door and a window and balconette that were located at the level of the interior stair landing were all removed, and the balconette was attached to the new projecting bay
- a total of nine original window openings were removed or altered on the northeast façade
- the doors at the second story fire escapes on the northwest and southeast facades were replaced with new windows
- on the southeast façade, recessed arches and pilasters with molding were removed, and three new window openings added
- on the northwest façade, two new window openings were installed at the first story, a window replaced the original door at the second story, a stairwell to the basement was infilled, and the basement door was replaced with a small mechanical door

The interior of Building 2 has also been remodeled several times, resulting in the removal and replacement of many of the original finishes and reconfiguration of several rooms to convert the building from dormitory use to administrative and classroom use. The remaining original interior features include wood ceiling beams in one of the first story rooms, several corridor transom windows, the wood balustrade at the interior staircase, the brick chimney flue (although there are no fireplaces), radiator covers, and some bathroom fixtures.

Historical Significance

The 2019 HRE (Appendix 7A) re-evaluated Building 2 against the California Register and OCHS criteria and found that it met the eligibility requirements for consideration for listing under California Register Criteria 1 (Events).

Criterion 1: Events

Building 2 represents an attempt by West Oakland Home to adapt to the cottage model rather than the institutional model. It originally served as a girls' dormitory, directly serving the mission of the institution to provide shelter for needy children, and retains a strong association with the West Oakland Home during the transitional period when it was establishing at the new Lincoln Avenue site.

Building 2 is significant under California Register Criterion 1: Events, as one of the two first purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. Building 2 retains sufficient integrity of location, setting, feeling and association to convey its historic significance under Criterion 1. The period of significance under Criterion 1 is 1929 to 1935.

Criterion 3: Architecture

Based on the conclusions of the HRE, Building 2 is also potentially significant under California Register Criterion 3: Architecture, for its association local master architects Reed & Corlett, and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. However, Building 2 no longer retains integrity of design due to extensive alterations related to the removal of the balconettes on the side façades prior to 1951, and a significant remodel in 1967. Although Building 2 retains some elements

of its original Spanish Colonial Revival design, the cumulative alterations and additions have resulted in a loss of integrity of design, it no longer retains integrity of materials, and it no longer retains integrity of workmanship. As such, Building 2 no longer retains sufficient integrity to convey its historic significance under Criterion 3: Architecture.

Conclusion

Based on the conclusions of the HRE, Building 2 retains sufficient integrity to convey its historic significance under the California Register's evaluative Criterion 1: Events. The HRE also evaluates Building 2 pursuant to OCHS criteria, and gives a rating of C3, which means that it is a building of secondary importance, not located in an eligible district. Therefore, the HRE concludes that Building 2 is individually eligible for listing in the California Register and does qualify as a historic resource under CEQA.

Building 0 (Junior Alliance Hall) [3]

- Building 0, known as the Junior Alliance Hall, is the third purpose-built buildings on the site. It was constructed in 1935 as a gymnasium and administrative office building.
- The building was designed by architect William G. Corlett Jr., in the Spanish Colonial Revival style, and constructed by F.C. Stolte.

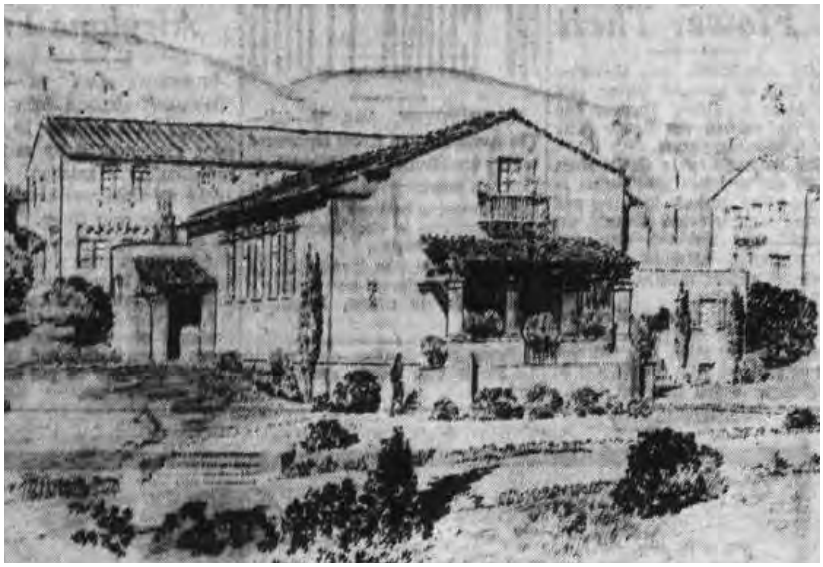
Description

Building 0 is located at the westernmost corner of the Project site near Lincoln Avenue. The building faces a lawn and Lincoln Avenue to the north, Building 1 to the east, an asphalt parking lot to the south, and a driveway to the west. Building is a one-story, Spanish Colonial Revival style, wood-frame building with a partial basement (see **Figure 7-4**). The concrete foundation of the building is partially exposed, clad in stucco, and defined by a molded base course. Clad in stucco siding, the L-shaped building features a double-height wing with a front-gable roof with terra cotta tiles, and a one-story wing with a flat roof and parapet. The gabled roof has overhanging eaves and decorative, carved rafter tails at the northwest and southeast façades. Terra cotta tiles line the coping of the parapet at the flat roof portions of the building.

Constructed to house an auditorium and stage, two bedrooms, a kitchen, an office, and several related ancillary rooms, the building was converted to classrooms in the early 1970s. Typical windows are paired steel-sash, three-lite casement windows with two-lite transoms. Typical doors are non-original wood slab doors with one lite or no lites.

[3] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 7-13, 93-94, 107-109

Rendering of Building 0
(Junior Alliance Hall),
Oakland Tribune, August 1935



Northwest façade of Building 0,
looking south (current)

Primary, southwest façade of
Building 0, looking northeast
(current)

Figure 7-4
Images of Building 0 (Junior Alliance Hall)

Source: Page & Turnbull, 2019

The primary (southwest) façade features paired, divided-lite wood casement windows above a single-height covered entry porch covered by a shed roof clad with terra cotta tiles. The entry porch roof has exposed wood rafters and wood sheathing, and is supported by four square, stucco-clad columns set on stucco-clad piers, on a stucco-clad wall with terra cotta tile coping. The outer two piers are buttressed. A wrought-iron railing spans the central two piers, and a stucco-clad wall with terra cotta tile coping spans between the outer piers. Carved wood beams span from the wall to the outer two columns. Curved terracotta lined vents are located near the ground-plane of the porch wall. The primary entrance to Building 0 is recessed through an arched opening, supported by pilasters, at the center of the entry porch. Typical, paired slab doors are located at the primary entrance. A double staircase leads up to the landing of the covered entry porch from the north and south. The stairs have stucco-clad concrete risers and terra cotta tile treads, and the landing is concrete with terra cotta tile edging and decorative diamond patterning. At the southwest corner of the south wing is a small, one-story, flat-roofed addition with typical stucco siding and terra cotta tile coping at the parapet. The northwest-facing wall of the addition volume has a metal grate at the exposed-basement level, and two sets of typical windows on the southwest-facing wall.

Changes over Time

In 1948, a small, one room office addition of approximately 13 feet by 12 feet was constructed at the south corner of the flat-roofed wing of the original building. In 1956, work was conducted at Building 0 to repair damage caused by a fire, including burned floor joists, flooring, plate, bridging, studding, trusses, roof sheathing, sidewall sheathing, as well as interior and exterior trim and millwork

In 1971, Corlett & Spackman (the firm of Corlett's son William G. Corlett III) remodeled Building 0 to accommodate the Royce School for Boys, which leased the building from Lincoln Child Center. The remodel included the construction of interior partition walls within the auditorium; conversion of the stage into two small and a narrow hallway; and the replacement of interior wall, ceiling and floor finishes. New exterior doorways and doors were constructed at the northwest, southeast, and the northeast façades, and exterior wood stairs were constructed at the new southeast entrance. Replacement steel-sash windows were installed at the southeast façade with a different pattern of lites; the replacement windows are two lites across, as opposed to three, and two awning sashes. A wrought iron balcony and wood shutters at the upper window on the primary façade, as well as wood shutters at the upper windows at the east end of the southeast façade and along the northeast façade, were removed at an unknown date, possibly in 1971. Wood grills with eight-pointed-star patterning at the west bathroom and coatroom windows were also removed. All of the exterior doors have been replaced.

Historical Significance

The 2019 HRE (Appendix 7A) re-evaluated Building 1 against the California Register and OCHS criteria and found that it met the eligibility requirements for consideration for listing under California Register Criteria 1 (Events) and 3 (Architecture).

Criteria 1: Events

Built for an institution dedicated to providing homes for needy children and families, Lincoln Child Center (then West Oakland Home) did not have a large budget for capital improvements, and the funds for Building 0 were provided by a volunteer organization, the Junior Alliance. The funding was pulled together during the Great Depression, when institutions like West Oakland Home struggled with funding and donations. Built soon after the initial construction of the first two West Oakland Home cottages at the new Lincoln Avenue site, Building 0 directly served the mission of the institution to provide a quality home for needy children, and was part of the initial establishment of the institution at their new location. The move to Lincoln Heights represents a continuation in the mission to provide shelter to orphans and other needy children in Oakland.

Based on the conclusions of the HRE, Building 0 appears significant under California Register Criterion 1: Events, for its strong association with the West Oakland Home institution and for its strong association during the institution's transitional period when it was establishing at the new Lincoln Avenue site. The period of significance for Building 0 under Criterion 1: Events is 1935.

Criteria 3: Architecture

Following his partner's (Walter Reed's) death in 1933, Corlett maintained an individual practice in Oakland until his retirement in 1944. Corlett is credited with the designs for Oakland High School, McClymonds High School, and a circular building for Berkeley High Community Theater. He also designed the Oakland Exposition Building, Napa Junior College, and Peralta, Fairmont and Palo Alto Hospitals. William G. Corlett, Jr. was inducted into the American Institute of Architect (AIA) College of Fellows in 1968, which is one of the highest national honors in field. When Corlett died in 1954, his Oakland Tribune obituary stated that Corlett was "an architect whose fame rests securely in the Oakland skyline." Known for his abilities in various revival style designs, including the Spanish Colonial Revival style, and for numerous commercial and institutional projects, Building 0 is a good representative example of Corlett's work as a master architect. Corlett's son, William G. Corlett III (architect for the 1971 remodel), formed the firm Corlett & Spackman, which is most noted for their design collaboration with Ernest Born on the Glen Park BART Station (1970) in San Francisco.

While the building does not exhibit lavish or exuberant detailing and ornamentation, Building 0 exhibits many character-defining features of the Spanish Colonial Revival style such as terra cotta tile roofing and decorative flooring, stucco cladding, covered porches, decorative wood brackets, square columns and pilasters, a molded wood frieze, and large steel-sash windows.

Building 0 also appears to be significant under California Register Criterion 3: Architecture, as a representative work by local master architect William G. Corlett, Jr. and as an example of Spanish Colonial Revival style design. The period of significance for Building 0 under Criterion 3: Architecture is 1935, the year the building was completed.

Conclusion

Based on the conclusions of the HRE, Building 0 retains sufficient integrity to convey its historic significance under the California Register's evaluative Criterion 1: Events and Criteria 3: Architecture. The HRE also reevaluates Building 0 pursuant to OCHS criteria, and gives Building 0 a rating of B3, which means that it is a building of major importance not located in an eligible district. Therefore, Building 0 is eligible for individual listing in the California Register and as a City of Oakland Designated Historic Property, and does qualify as a historic resource under CEQA.

Building 4 (Ethel Moore Cottage)[4]

- Building 4 has been known by a variety of names including Executive Cottage, Linnet Cottage, and Ethel Moore Cottage. It was constructed sometime between 1938 and 1946 to house the director of Lincoln Child Center (see **Figure 7-5**)
- No builder or architect has been identified for Building 4.

[4] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 26-31, 97-98, 109-111

Building 4

Building 10

Building 8

Figure 7-5
Images of Buildings 4, 10 and 8

Source: Page & Turnbull, 2019

Description

Building 4 is located near the southwest edge of the Project site, at the end of a driveway that extends from Linnet Avenue. The one-story, wood frame building is vernacular in style and is set on a post and pier foundation. The original portion of the building had a cross-gabled roof clad in asphalt shingles and stucco siding. The addition is clad in vertical wood siding, and is capped by a flat roof covered with rolled asphalt. Building 4 has an exterior brick chimney and an internal stucco-clad chimney.

The building has several entrances. The primary entrance is located on the southwest façade of the projecting southeast addition. The southeast addition has a gable roof and no eaves at the southwest façade. The primary entrance has a wood slab door and metal security gate, accessed via brick stairs with a metal railing, running parallel to the projecting wing. A tripartite fixed window with a wood frame is located adjacent the door. A horizontal wood bracing has been installed at the center of the two westernmost window and the easternmost window has been replaced with a two-part aluminum sash window. The original volume of the building has no eaves, except at the southeast corner of the volume where the shallow eaves of the cross-gabled roof overhang and have exposed rafter tails. Decorative tile vents are located at the peak of the gable end. A secondary wood slab door with a metal security gate is located at the west end of the original volume, accessed by a set of steps and low stucco-clad wall parallel to the residence. A one-over-one double-hung wood window with ogee lugs is located at approximately the center of the southwest façade of the original volume.

Changes over Time

A projecting wing containing a large living room on the southeast side of the building, adjacent the bay window, was constructed in 1954. In 1971, another addition was constructed at the northwest end of the building, and four additional bedrooms were constructed to convert the building to a boys group home. The 1971 addition consisted of flat roofed volumes with vertical wood siding, wood slab doors and aluminum-sash windows. Most of the original windows were replaced with aluminum-sash windows during the same remodel. The interior of the building was also remodeled with new finishes in 1971.

Historical Significance

Based on the conclusions of the HRE, Building 4 does not appear eligible for individual listing in the California Register under any of the four evaluative criteria. The HRE assigns Building 4 a rating of D3, which means that it is a building of minor importance and not located in an eligible district. Therefore, the HRE concludes that Building 4 is not individually eligible for listing in the California Register, does not qualify as a City of Oakland Potential Designated Historic Property, and does not qualify a historical resource under CEQA.

Building 10 (Garage)[5]

- The Building 10 Garage was constructed in 1945 as a “workshop” garage (see prior Figure 7-5)
- The architect was Paul Hammarberg, built by H. K. Jensen

Description

Building 10 is located at the southwest edge of the Project site along a driveway that extends from the end of Linnet Avenue. The wood frame, one-story building is rectangular in plan and set on a concrete slab foundation. Built in a vernacular style, the building has a gable roof clad in asphalt shingles and stucco-clad

[5] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 50,105, 122-124

walls. The roof has overhanging eaves at the southeast and northwest façade with exposed rafters and rafter tails.

The primary (southeast) façade faces an asphalt driveway that extends from Linnet Avenue. A metal gutter partially obscures the exposed rafter tails along the primary façade. As originally designed, the primary façade was primarily open, with no windows or doors. The stucco-clad wall along the primary façade is non-original, as are the two tripartite aluminum-sash sliding windows, and the wood slab door with metal safety door at the north end of the façade. An HVAC unit covered by a metal grate is located at the center of the southernmost window.

Changes over Time

Observed alterations include the enclosure of the southeast façade with a stucco-clad wall with new windows and a new door, the replacement of the original clay tile roof with asphalt shingles, and the addition of metal security gates along the roofline.

Historical Significance

Based on the conclusions of the HRE, Building 10 does not appear eligible for individual listing in the California Register under any of the four evaluative criteria. The HRE assigns Building 4 a rating of D3, which means that it is a building of minor importance and not located in an eligible district. Therefore, the HRE concludes that Building 10 is not individually eligible for listing in the California Register and does not qualify as a City of Oakland Potential Designated Historic Property, and does not qualify a historical resource under CEQA.

Building 8 (EBAC/Charleston House/Holmgren)[6]

- Building 8 was constructed in 1957 to house the East Bay Activities Center (EBAC), which provided educational and recreational space for children with emotional or behavior disabilities, on land leased from Lincoln Child Center. Lincoln Child Center began to use the building in 1979, after EBAC had moved out.
- The building was designed and constructed by architect Robert Ratcliff in a modest expression of Midcentury Modern style.

Description

Building 8 is located at the northeastern corner of the Project site, at the end of Charleston Street. The one-story building is of modest Midcentury Modern style, featuring wood board and batten siding, a rectangular plan, and a covered patio (see prior Figure 7-5). The building sits on a concrete slab foundation and has a low-pitch gable roof clad in rolled asphalt with overhanging eaves, exposed rafters and a simple wood fascia. The building has several additions, but is still generally rectangular in plan. Building 8 is clad in non-original, highly textured stucco cladding. Typical windows are rectangular two-lite wood windows with a larger, fixed upper lite, and a smaller, horizontal awning-sash lower lite. Typical doors are non-original wood slab doors with one narrow vertical lite (original doors were slab doors with no lites). Two skylights are located near the ridge of the roof on the northeast-facing slope. Building 8 is surrounded by a perimeter fence (chain-link except the concrete wall along Charleston Street) that originally fenced-in a schoolyard, but has since been altered to include concrete walkways, a concrete paver patio, smaller grass lawns, and an asphalt basketball court. When occupied by EBAC, the building was approached primarily from Charleston Street with the northeast

[6] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 44-48, 102-104, 120-122

façade acting as the primary entrance. After EBAC moved out in 1979, Lincoln Child Center began to use the southwest façade as the primary entrance.

The interior of Building 8 typically features plaster walls and carpeting. The central volume has an open pitched roof with an exposed ridge beam, while the ends of the building have drop ceilings. A series of smaller rooms which were likely originally used as classrooms by EBAC appear to have later been used as offices by Lincoln Child Center. The wood slab doors and carpeting do not appear to be original, and the floor plan of Building 8 has been altered several times with at least three additions.

Changes over Time

In 1960, a 400-square-foot addition was constructed, which appears to have been a full-width extension at the north end of the building. In 1963, another room was added at the southeast end of the building, and in 1966 another remodel was undertaken. In 1968, the EBAC installed a 10-foot by 52-foot portable building, 20 feet southeast of Building 8, and a permanent arcade connecting the portable to the main building. The EBAC occupied Building 8 until they moved into their own permanent facility across the street at 2540 Charleston Street in December 1979. The building appears to have been subsequently used as administrative offices by Lincoln Child Center, and was known as Charleston House or Holmgren.

Historical Significance

Based on the conclusions of the HRE, Building 8 does not appear eligible for individual listing in the California Register under any of the four evaluative criteria.[7] The HRE assigns Building 8 a rating of D3, which means that it is a building of minor importance and not located in an eligible district. Therefore, the HRE concludes that Building 8 is not individually eligible for listing in the California Register, does not qualify as a City of Oakland Potential Designated Historic Property, and does not qualify a historical resource under CEQA.

Building 6 (Bushell Cottage) and Building 7 (Bushell Kitchen)[8]

- Building 6 (known as the Bushell Cottage) and Building 7 (known as the Bushell Kitchen), were constructed in 1958 to serve as a residential dormitory for boys and girls, with a connecting kitchen and dining hall (see **Figure 7-6**).
- Buildings 6 and 7 were designed by architect Gerald M. McCue & Associates in a Midcentury Modern style

Description

Building 6 is located at the north end of the Project site, roughly perpendicular to Lincoln Avenue. The wood frame building is one story in height, set on a concrete perimeter foundation, and capped by a low-pitch gable roof. The building, roughly 300 feet long and 30 feet wide, has an irregular plan. A north and south wing form an asymmetrical, obtuse-angled V-shape (or boomerang) with a central notch at the primary

[7] Building 8 was originally constructed by architect Robert Ratcliff in 1957 in a modest expression of Midcentury Modern style. Walter H. Ratcliff Jr. (1881-1973) founded an architecture firm in 1906 which still exists today, making it one of the longest running architectural firms in in the Bay Area. Walter Ratcliff's son, Robert W. Ratcliff joined Walter Ratcliff as owner of the firm in 1945. Between 1953 and 1960, the father and son practiced as Ratcliff and Ratcliff, building housing for the University of California, as well as fraternity and sorority residences and private residences. The firm possesses a wide-ranging portfolio of buildings spanning 100 years, including the Anna Head Residence (1911) and eight buildings on the Anna Head School campus (1910s-20s), as well as numerous contemporary buildings. Although Robert Ratcliff appears to be a master architect, Building 8 does not appear to be one of the more notable, significant or distinctive examples of his work.

[8] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 34-40, 93-94, 118-120

entrance. The roof has wide, overhanging eaves with exposed rafters. The building features simple materials including wood board and batten and cement asbestos siding; plain wood fascia; tar and gravel roofing; and cement asbestos sheathing at the eaves. Typical windows are vertically oriented aluminum-sash sliding windows set in wood frames. Typical doors are wood slab doors with one vertical lite. Due to the sloped topography, the main volume of the building cantilevers over the concrete perimeter foundation which is exposed above the ground level on the primary (west) façade. Rectangular and circular skylights are located along the ridge of the roof.

Building 7 (Bushell Kitchen & Dining Hall) is physically and functionally connected to Building 6 to the west. Building 7 is an octagonal, wood frame building with wood board and batten siding and asphalt shingle roofing, set on a concrete slab foundation. At the peak of the pyramidal roof is an octagonal aluminum-frame skylight. The roof has shallow eaves and a metal gutter system around the perimeter of the roof. A variety of large vents and mechanical systems are located on the roof, particularly on the north-facing slopes. Typical windows are aluminum-sash single-hung windows with smaller lower lites. Typical exterior doors are hollow metal slab doors with one rectangular lite of various sizes. The primary exterior entrance to Building 7 is located on the southeast facing wall, and features a typical door flanked by typical windows. The primary entrance is accessed via a circular rough-aggregate concrete patio with square pavers with wood dividers.

Changes over Time

As originally constructed, Building 7 had an irregular plan composed of an outer and inner octagon plan; the north five walls were located at the outer octagon, and the south three fully glazed walls at the inner octagon. The roof extended to cover the outer octagon footprint, creating an outdoor covered concrete patio at the south side. In 2000, Building 7 was remodeled to be fully enclosed on all eight sides by demolishing the chimney, extending the roof, and constructing three new exterior walls to match the existing walls.

Historical Significance

Based on the conclusions of the HRE, Buildings 6 and 7 do not appear eligible for individual listing in the California Register under any of the four evaluative criteria.[9] The HRE assigns Buildings 6 and 7 a rating of D3, which means that these buildings are of minor importance and not located in an eligible district. Therefore, the HRE concludes that Buildings 6 and 7 are not individually eligible for listing in the California Register and do not qualify as a City of Oakland Potential Designated Historic Property, and do not qualify as historical resources under CEQA.

[9] Gerald M. McCue was the architect for Buildings 6 and 7, and appears to be a significant local architect for his contributions to industrial, commercial and residential design in various Modernist styles, including a residence at The Sea Ranch, Santa Teresa Lab for IBM in San Jose, and the Almaden Research Center for IBM in San Jose, Los Gatos Civic Center Project, Oakes College at University of California, Santa Cruz, among other projects. However, Buildings 6 and 7 are modest expressions of Midcentury Modern design, with limited character-defining features of the style and simple, inexpensive materials, and do not embody the same high artistic value as many of McCue's other projects, and thus cannot be said to be representative of his best work.

Building 6

Building 7

Building 5

Figure 7-6
Images of Buildings 6, 7 and 5

Source: Page & Turnbull, 2019

Building 5 (Maintenance Building)[10]

- Building 5 is a maintenance building constructed in 1967
- The Building 5 maintenance garage building was designed by Robert Goetz Associates

Description

Building 5 is a one-story wood frame maintenance building of 36-feet by 40-feet, set on a concrete slab foundation, and located at the northwest perimeter of the Project site, with a driveway off of Lincoln Avenue just northeast of Building 1. Building 5 is a vernacular, utilitarian building which was designed with several modest Spanish Colonial Revival style elements including stucco cladding and Spanish clay tile roofing (which has since been replaced). Building 5 has a gable roof with overhanging eaves and exposed rafters on the primary (northwest) and southeast façades. The roof is clad in rolled asphalt and a metal gutter system hides the exposed rafter tails. The building is clad in a highly textured stucco.

The primary (northwest) façade faces a concrete driveway accessed from Lincoln Avenue and has two garage openings with horizontal wood rollup doors. A lean-to addition with vertical wood siding and a shed roof clad in asphalt shingles is located at the north end of the primary façade. The majority of the primary façade is enclosed by a chain-link fence.

Historical Significance

Based on the conclusions of the HRE, Building 5 does not appear eligible for individual listing in the California Register under any of the four evaluative criteria. The HRE assigns Building 5 a rating of D3, which means that it is a building of minor importance and not located in an eligible district. Therefore, the HRE concludes that Building 5 is not individually eligible for listing in the California Register and does not qualify as a City of Oakland Potential Designated Historic Property, and does not qualify as a historical resource under CEQA.

Building 3 (Prefabricated Portable)

Building 3 is a two-classroom prefabricated portable (see **Figure 7-7**), installed in 1990. The building was not designed or constructed by an architect, is less than 45 years old, does not possess any characteristics that would make it potentially eligible for the California Register or qualify as a City of Oakland Potential Designated Historic Property, and is not an historic resource pursuant to CEQA.

Building 9 (Champlin House)

Building 9 is a one-story residential group home (see Figure 7-7) designed by David Wade Byrens of Byrens Associates, and completed in 2000. The building is less than 45 years old, does not possess any characteristics that would make it currently eligible for the California Register or qualify as a City of Oakland Potential Designated Historic Property, and is not an historic resource pursuant to CEQA.

Building 11 (Storage Sheds)

Building 11 is a series of four combined prefabricated storage sheds (see Figure 7-7) that were installed between 2005 and 2009. These storage sheds are prefabricated structures, do not possess any characteristics that would make them potentially eligible for the California Register or qualify as a City of Oakland Potential Designated Historic Property, and are not considered historic resources pursuant to CEQA.

[10] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 22-23, 116-118

Building 3

Building 9

Building 11

Figure 7-7
Images of Buildings 3, 9 and 11

Source: Page & Turnbull, 2019

Proposed South Campus Historic District Evaluation[11]

Description

In addition to the individual buildings described above, the proposed South Campus includes a variety of ancillary buildings, structures and landscape features. The following provides a description of the older and more substantial ancillary buildings, structures and landscape features, with a brief historic context for each.

- Landscape - Aerial photographs and the 1926 topographical survey indicate that the Project site contained numerous trees prior to the development of the site by West Oakland Home. None of the extant trees appear to be part of a designed landscape associated with West Oakland Home (Lincoln Child Center).
- Play Shelter - An existing play shelter is located between Building 1 and 6. This play shelter was created by Gerald M. McCue (architect) and installed in 1959. It is an open covered structure supported by metal pipe columns, wood rafter beams and wood roof sheathing. This simple, utilitarian structure was designed to cover a play area, and is not individually significant, but rather is a feature that is not uncommon of playgrounds or parks.
- Climbing Wall/Lookout - A climbing wall/lookout is located southeast of Building 4. The creator of this structure is unknown, as is the date of installation. The structure consists of a rectangular wood frame with a panel door and hung vinyl-sash window on the northwest façade. A sloped, plywood wall on the northeast façade has climbing holds. The structure appears to have been built to serve dual storage and recreational purposes, is unlikely to be age-eligible, and does not appear to be individually significant.
- Playground (near Buildings 1, 2, and 6) - There is a playground located between Buildings 1, 2, and 6. This playground was created by Robert Royston of Eckbo, Royston & Williams in 1958. The Royston design features a concrete yard with simple concrete retaining walls and geometric areas of landscaping dividing various sections and circulation areas. Extant playground features include a bench, a climbing feature and a sloped area which original featured a metal slide. The original design of the playground is characteristic of Modernist landscape design, and Royston's playground designs in particular. Although a characteristic Modernist landscape design by a master landscape architect, the playground lacks integrity of design, materials and workmanship. The majority of the original features indicated in original drawings and historic photographs have been removed or demolished, and the extant features have been significantly altered.
- Playground (near Buildings 2, 4, 5, and 9) - Other playground equipment exists between buildings 2, 5, 9, and 4. The creator and date of installation of this other equipment is unknown, and includes such features as a metal T-shape structure which appears to have been for swings, a metal slide, and metal pull-up bars. These various items of playground equipment do not appear in the available documentation for the Royston-designed playground area, are typical of an educational institution, and do not appear to be unique in design, character or age.
- Fencing - Between Buildings 1 and 2 is a metal fence with a metal gate (unknown creator or date). The arched portion at the top of the gate includes lettering that reads "Lincoln Child Center." The fabrication of the gate does not appear to be particular old, and was likely made and installed in the late 20th century or early 21st century, and does not appear to have any particular significance to the institution of Lincoln Child Center. Although located between the two oldest buildings, it does

[11] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue, Historic Resource Evaluation, April 19, 2019, pages 52-56, 125-130

not itself appear to be old, is not visible from the public right of way, and does not exhibit a particularly noteworthy design or craftsmanship.

- Circulation Features - Terraced landscaping separates Building 0 from Buildings 1 and 2. Two sets of concrete stairs lead down (southwest) from a path that runs parallel between Building 0, and Buildings 1 and 2. The concrete path features several types of concrete from different eras. It does not appear that the extant circulation pattern between Buildings 0, 1 and 2 is based on any early master planning or specific landscape design. The concrete stair between Buildings 0 and 1 is visible in a 1947 aerial photograph, but distinct paths are not evident and may have been unpaved at the time. A 1958 aerial photograph indicates the concrete steps by Building 2 and a path between Buildings 1 and 2. Based on the rough-aggregate concrete and wood divider materials (which are typical of mid-century hardscaping), the path was likely repaved circa 1958 when the playground was installed. The network of paths has been changed over the years and does not feature original materials, and thus does not appear to be significant or contributing to the significance of Buildings 0, 1, and/or 2. The concrete steps between Buildings 1 and 0 date to as early as 1947, but the steps to not substantially contribute to the significance of Buildings 0, 1 and/or 2.
- Basketball Court - A concrete basketball court is located between Buildings 1 and 2. The basketball court was constructed in 1971, when Building 2 was sustainably renovated.
- Pathway - A path leading from Lincoln Avenue to the secondary (northwest) entrance of Building 0 is of rough aggregate concrete with wood dividers. The path does not appear in the 1965 aerial, and was likely constructed when the Royce School for Boys leased the building, or at a later date.
- Site Lighting - A metal streetlight fixture is set on a square wood post near the bottom of the stairs at Building 2. The streetlight has a typical early 20th century style and may be from the period of original construction of Buildings 1 and 2 (1930), but the feature is not individually significant.

Historical Significance as an Historic District

Based on the conclusions of the HRE, the Project site, as a whole, does not appear to be significant under any of the applicable evaluative criteria for listing for historic districts in the California Register, and thus does not appear to qualify as a California Register historic district, and is not eligible for listing in the California Register or as a City of Oakland-designated Historic District. Therefore, the campus does not qualify as a historical district under CEQA.

- The campus does not appear to possess significance under California Register Criterion 1: Event. The buildings, structures and landscape elements of the campus represent eight decades of institutional development responding to changing needs and philosophies, and do not represent a cohesive plan or approach to the care of needy children. The disparate complex of buildings is not representative of the organization's earliest, most innovative and progressive work, and includes a majority of buildings constructed in the 1940s or later, when the organization moved away from its original mission.
- The campus does not appear to possess significance under California Register Criterion 2: Persons. Overall, there does not appear to be a significant association with the lives of any persons involved with West Oakland Home that would justify the entire campus's inclusion in the California Register as a historic district in association with any particular person
- The campus does not appear to possess significance under California Register Criterion 3: Architecture. The campus includes 12 buildings with construction dates ranging from 1930 to 2009, representing several different loose phases of physical development on campus and a range of architectural styles and construction. The three buildings designed by recognized Bay Area master architects (Buildings 0, 1 and 2) are recognized as individually significant, but do not qualify the

entire campus for significance under this criterion. An early campus master plan developed by Reed & Corlett was not executed beyond the construction of the first two buildings. The campus as a whole does not represent a particular type, period, or method of construction or represent high artistic values.

- The campus does not appear to be individually eligible under Criterion 4: Information Potential. It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information.

The Project site does not appear eligible for listing as a City of Oakland Designated Historic District, either as an Area of Primary Importance (API) or an Area of Secondary Importance (ASI). Of the eight buildings that are more than 45 years old, only three have been assigned an OCHS rating of C or higher, and only these three buildings are associated with the identified period of significance for the campus (1929 to 1935). The other properties do not reflect the specific significance of the campus during its era of significance, (i.e., the provision of housing to orphaned and needy children). Eight of twelve buildings on the campus (counting Buildings 6 and 7 separately) fall outside the identified period of significance, and the campus does not illustrate a unified significant architectural theme or master planned design. Therefore, the HRE concludes that the campus does not qualify as a City of Oakland Local Historic District.

Summary of Conclusion of the HRE

The HRE evaluated the proposed South Campus to arrive at two findings which determine whether the buildings on the campus or the campus as a whole are considered historic resources for the purposes of CEQA:

- Individual rating of A or B under the Oakland Designated Historic Property Criteria for Eligibility, and
- Eligibility for listing as an individual resource or historic district in the California Register

The HRE finds that three buildings on the campus qualify as individual historic resources for the purposes of CEQA. These include Building 0 (Junior Alliance Hall), Building 1 (Mary A. Crocker Cottage), and Building 2 (Grace L. Trevor Cottage). The campus as a whole was not found to qualify as a historic district for the purposes of CEQA. **Table 7-2** summarizes the HRE's findings for each building and the campus site as a whole, for both the California Register and as a City of Oakland local historic resource based on the Oakland Cultural Heritage Survey (OCHS) rating. The 1996 (pre-HRE) OCHS designations are also listed.

Table 7-2: Existing Historic Resource Status (per 2019 HRE)

	Existing (pre-HRE) Status	2019 HRE Findings		
Building/Resource	OCHS Rating (1996)	California Register Eligibility	OCHS Rating (per 2019 HRE)	CEQA Historic Resource
Building 0 (1935)	C3	Yes	Ba/3	**Yes**
Building 1 (1930)	C3	Yes	Ba/3	**Yes**
Building 2 (1930)	C3	Yes	Ca/3	**Yes**
Building 3 (1990)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Building 4 (c. 1938-46)	No rating assigned	No	D3	No
Building 5 (1967)	No rating assigned	No	D3	No
Buildings 6 & 7 (1958)	F	No	D3	No
Building 8 (1957)	No rating assigned	No	D3	No
Building 9 (1999)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Building 10 (1945)	No rating assigned	No	D3	No
Building 11 (c. 2005-9)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Campus as a Potential Historic District	PDHP	No	No	No

Source: Page & Turnbull, 2019 HRE (Appendix 7A), page 3

OCHS Rating B: Major importance - Especially fine architectural example or major historical importance

C: Secondary importance - Superior or visually important example or very early (pre-1906)

D: Minor importance - Representative example

3: Not in a Historic District

Individual properties can have dual ("existing" and "contingency") ratings if they have been remodeled. Contingency ratings are noted in lowercase letters.

Cultural Resources

Project Study Area

A literature review and records search were conducted by PaleoWest at the Northwest Information Center (NWIC), Sonoma State University on December 16, 2019. This inventory effort included a search of the Project area and a ¼-mile radius around the Project area, collectively termed the Project Study area. The objective of this records search was to identify any cultural resources that have been previously recorded within the study area during previous cultural resource investigations.

The records search results indicate that four previous investigations have been conducted and documented within the Project study area since 2001. None of the previous studies encompass the Project area, but that two cultural resources have been previously recorded within the Project Study area (within the 1/4-mile radius around the Project area). These resources include two historic buildings:

- Resource P-01-009395 is a 3-story single-family home located at 4300 Fruitvale Avenue that has not been evaluated for the National Register of Historic Places (NRHP) or the California Register of

Historical Resources (CRHR). This building is located just slightly inside the ¼-mile buffer Study Area and is not located in the Project area.

- Resource P-01-011379 is public utility building located at 2810 Mountain Boulevard that was built in 1965 and evaluated in 2012. This building is not eligible for listing in the NRHP or the CRHR and is outside of the Project area.

Native American Resources/Coordination

PaleoWest contacted the Native American Heritage Commission (NAHC) as part of their cultural resource assessment, on December 9, 2019, for a review of the Sacred Lands File. The objective of the Sacred lands File search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded with a letter dated December 12, 2019, stating "*a records search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed for the information you have submitted for the above referenced Project. The results were negative; however, the absence of specific site information in the SFL does not indicate the absence of cultural resources in any project area.*"

The NAHC requested that seven Native American tribal groups be contacted to elicit information regarding cultural resource related to the proposed Project. Seven tribal groups were contacted by email on December 13, 2019. Two tribal groups responded by email. Corrina Gould, Chairperson of The Confederated Villages of Lisjan responded on December 14, 2019 and asked what was plan for the project and if she could have a better description of the location of the project. A response to Ms. Gould's email was sent on December 16th with no response back. Katherine Perez, Chairperson of the North Valley Yokuts Tribe responded on December 26, 2019, and said that they are unaware of the project being culturally sensitive. Follow up emails were sent on January 2, 2020 to the tribes who did not response to the first round of emails. Copies of this correspondence are provided, and the results summarized, in **Appendix 7C**.

Cultural Resource Assessment – Project Site

PaleoWest Archaeologists conducted an intensive pedestrian survey of the Project area as part of their cultural resource investigations. The pedestrian survey was conducted to evaluate potential project impacts to cultural resources. The survey was conducted by a one-person crew, and the Project area was surveyed in 10 meter transect intervals. Photographs of the survey area were recorded and included general views of the survey area and existing ground conditions. A photo log was maintained to include the photo number, date, orientation, photo description, and the photographer's name (see Appendix 7C). Survey area maps were provided prior to the survey. A PaleoWest archaeologist used these maps, along with a handheld GPS receiver, to locate the survey areas while in the field. The Munsell Color System was used to classify soil colors.

Exposed ground surface within the survey areas was examined for the presence of historic or prehistoric site indicators. Historic site indicators include, but are not limited to foundations, fence lines, ditches, standing buildings, objects or structures such as sheds, or concentrations of materials at least 50 years in age, such as domestic refuse (glass bottles, ceramics, toys, buttons or leather shoes), or refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, horse shoes) or structural materials (e.g., nails, glass window panes, corrugated metal, wood posts or planks, metal pipes and fittings, etc.). Prehistoric site indicators include but are not limited to areas of darker soil with concentrations of ash, charcoal, bits of animal bone (burned or unburned), shell, flaked stone, ground stone, or human remains.

Field Results

On December 23, 2019, the PaleoWest archaeologist conducted the survey of the Project site, primarily located on the proposed South Campus, perpendicular to Lincoln Avenue, and the practice field associated

with the Ability Now Bay Area property. The majority of the survey area was paved, though one parking lot on the east side of campus was primarily gravel (Parking Lot D). Most of the south portion of the proposed South Campus was undeveloped, with the exception of the rectangular grass play field bounded by a fence. Ground visibility was roughly 90 percent with bushes and shrubs that were covering some of the ground visibility.

No cultural material was observed during the survey. It is recommended that no additional cultural resource management is needed because of the disturbance of the Project area from the prior development of the campus.

Regulatory Setting

The regulatory framework that mandates consideration of cultural and historic resources in project planning includes federal, state, and local governments. Cultural resources include prehistoric and historic period archaeological sites; buildings, structures, districts, and objects over 45 years old; and sites of traditional and/or cultural importance to various groups. Cultural resources may be determined significant by applying national, state, or local criteria, either individually or in combination. The regulations and criteria applicable to cultural and historic resources are discussed below.

Federal

National Register of Historic Places

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service, and includes buildings, structures, sites, objects and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Properties listed in or determined eligible for listing in the National Register of Historic Places (NRHP) are considered historical resources under CEQA. Eligibility for listing on the National Register is determined using the NRHP's four Criteria for Evaluation in 36 Code of Federal Regulations (CFR) 60.4, which state that a historic property is any district, site, building, structure, or object that is found significant under one or more of the following criteria:

- Criteria A: Resources associated with events that made a significant contribution to the broad patterns of our history
- Criteria B: Resources associated with the lives of persons significant to our past
- Criteria C: Resources that embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master; or that possesses high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction, and/or
- Criteria D: Resources that have yielded, or may be likely to yield, information important in prehistory or history

Archaeologists generally evaluate archaeological resources using Criterion D in order to determine their potential to yield information. Criterion D emphasizes the importance of the information encompassed in an archaeological site, rather than its inherent value as a surviving example of a particular architectural type or its historical association with an important person or event.

If the State Historic Preservation Office (SHPO) determines that a cultural resource is eligible for inclusion in the NRHP, then it is automatically also listed in the California Register of Historical Resources (CRHR). If a resource does not retain the level of integrity necessitated by the NRHP, it may still be eligible for the CRHR, which allows for a lower level of integrity (see below).

National Register of Historic Places Criteria for Historic Districts

A historic property can be listed in the NRHP both individually and as a contributor to a historic district. The NRHP defines a historic district as possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. Therefore, a resource can contribute to a historic district by belonging to a group of identifiably linked properties or features that collectively convey their significance under the NRHP criteria. A historic district can be eligible even if all the components lack individual distinction, provided that the grouping achieves significance as a whole within its historic context.

Resource Integrity

The concept of integrity is essential to identifying the important physical characteristics of historic resources and hence, evaluating adverse change. For the purposes of the California Register, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (California Code of Regulations Title 14, Chapter 11.5). A property is examined for seven variables, or aspects, that together comprise integrity. These aspects, which are based closely on the National Register, are location, design, setting, materials, workmanship, feeling and association. National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation defines these seven characteristics:

- Location is the place where the historic property was constructed
- Design is the combination of elements that create the form, plans, space, structure and style of the property
- Setting addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building/s
- Materials refer to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history
- Feeling is the property's expression of the aesthetic or historic sense of a particular period of time
- Association is the direct link between an important historic event or person and a historic property

State

California Environment Quality Act

The California Environment Quality Act (CEQA) Statutes and Guidelines (Title 14 of the California Code of Regulations 15064.5) include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the NRHP, the CRHR, or local registers. CEQA further defines a "historical resource" as a resource that meets any of the following criteria:

- A resource listed in, or determined to be eligible for listing in, the NRHP or CRHR.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- A resource identified as significant (e.g., rated 1-5) in a historical resource survey meeting the requirements of PRC Section 5024.1(g) (Department of Parks and Recreation [DPR] Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the CRHR.

California Register of Historical Resources

The California Register of Historical Resources (California Register, or CRHR) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. State Historical Landmarks and National Register-eligible properties (both listed and formal determinations of eligibility) are automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places. In order for a property to be eligible for listing in the California Register, it must be found significant at the local, state or national level under one or more of the following criteria:

- Criterion 1 (Event): Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States
- Criterion 2 (Person): Resources that are associated with the lives of persons important to local, California, or national history
- Criterion 3 (Architecture): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values
- Criterion 4 (Information Potential): Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California or the nation

Properties listed in or determined eligible for listing in CRHR are also considered to be historical resources under CEQA.

Historic Integrity

Cultural resources integrity is determined using the NRHP's aspects of integrity at 36 CFR 60.4, which state that a historic property must not only be shown to be significant under the NRHP criteria, but it also must retain integrity appropriate to its significance. The aspects of integrity include location, design, setting, materials, workmanship, feeling, and association. A property must meet one or more of the Criteria for Evaluation before a determination can be made about its integrity.

Historic District

Historic districts are made up of components which are significant when grouped together, defined by the National Park Service as possessing a "significant concentration, linkage, or continuity of sites, buildings, structures or objects united historically or aesthetically by a plan or physical development." Individual contributors must work together to tell the shared story of a district's significance, and must be defined as a group by distinguishable boundaries. Boundaries of a historic district are frequently defined by use, connection to an event, or architectural style. Historic districts will include both contributors and non-contributors, and not all contributing resources need to be of the same historical or architectural quality or

individually eligible for local, state, or national register listing. A district functions as a group, and may include both contextual buildings and exceptional contributors which help to anchor the district. Eligibility for listing for historic districts in the California Register, just as for individual resources, is based on two factors: significance and integrity.

California Historical Resource Status Code

Properties listed or under review by the State of California Office of Historic Preservation are assigned a California Historical Resource Status Code (Status Code) of "1" to "7" to establish their historical significance in relation to the National Register of Historic Places (National Register or NR) or California Register of Historical Resources (California Register or CR). Properties with a Status Code of "1" or "2" are either eligible for listing in the California Register or the National Register, or are already listed in one or both of the registers. Properties assigned Status Codes of "3" or "4" appear to be eligible for listing in either register, but normally require more research to support this rating. Properties assigned a Status Code of "5" have typically been determined to be locally significant or to have contextual importance. Properties with a Status Code of "6" are not eligible for listing in either register. Finally, a Status Code of "7" means that the resource has not been evaluated for the National Register or the California Register, or needs reevaluation.

Tribal Cultural Resources

Senate Bill 18 (Government Code Sections 65352.3, 65352.4, and 65562.5)

As approved into State law in 2004, this bill includes guidelines for consulting with California Native American tribes during the preparation of a General Plan for purposes of the preservation of, or the mitigation of impacts to specified Native American places, features and objects. The bill addresses procedures for identifying the appropriate California Native American tribes, for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features and objects, and for facilitating voluntary landowner participation to preserve and protect the specific identity, location, character, and use of those places, features and objects. The bill also requires that, prior to the adoption or amendment of a city or county General Plan, the city or county conduct consultations with California Native American tribes for the purpose of preserving specified places, features, and objects that are located within the city or county's jurisdiction. The Project is not a General Plan nor an amendment to the SSF General Plan, and this regulation is therefore not applicable to the Project.

Assembly Bill 52

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code (PRC) regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB52 requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archeological resources. As defined under AB52, a tribal cultural resource is, "a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe, and is either on or eligible for the CRHP or a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource." AB 52 also requires lead agencies to engage in consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3).

State Regulations Concerning Discovery of Human Remains

California Public Resources Code §5097.98 (notification of Native American human remains, descendants; disposition of human remains and associated grave goods) mandates that the lead agency adhere to regulations when a project results in the identification or disturbance of Native American human remains.

Whenever the Native American Heritage Commission (NAHC) receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Whenever the NAHC is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent, and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

Notwithstanding the provisions of Section 5097.9, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section and any action taken to implement an agreement developed pursuant to subdivision (l) of Section 5097.94, shall be exempt from the requirements of the California Environmental Quality Act [Division 13 (commencing with Section 21000)]. Notwithstanding the provisions of Section 30244, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (1) of Section 5097.94 shall be exempt from the requirements of the California Coastal Act of 1976 [Division 20 (commencing with Section 30000)].

Local Regulations

City of Oakland General Plan Historic Preservation Element

Adopted in 1994 and amended in 1998, the City of Oakland's Historic Preservation Element of the General Plan delineates a broad "Historic Preservation Strategy" to "provide a broad, multifaceted historic preservation strategy that addresses a wide variety of properties, and is intended to help revitalize Oakland's districts and neighborhoods and secure other preservation benefits" (City of Oakland 1998). The Historic Preservation Element establishes two broad goals:

Goal 1: To use historic preservation to foster the economic vitality and quality of life in Oakland by:

- Stressing the positive community attributes expressed by well-maintained older properties
- Maintaining and enhancing throughout the City the historic character, distinct charm, and special sense of place provided by older properties
- Establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future
- Stabilizing neighborhoods, enhancing property values, conserving housing stock, increasing public and private economic and financial benefits, and promoting tourist trade and interest through preservation and quality maintenance of significant older properties
- Preserving and encouraging a city of varied architectural styles and environmental character reflecting the distinct phases of Oakland's cultural, social, ethnic, economic, political, and architectural history, and

- Enriching the quality of human life in its educational, spiritual, social, and cultural dimensions through continued exposure to tangible reminders of the past

Goal 2: To preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural or aesthetic interest or value. Such properties or physical features include buildings, building components, structures, objects, districts, sites, natural features related to human presence, and activities taking place on or within such properties or physical features.

The Historic Preservation Element also describes policies for the identifying, designating, and preserving Oakland's cultural resources. These policies seek to minimize significant impacts to historical resources. Historic Preservation Element policies that are relevant to the proposed Project are listed below (see City of Oakland Planning Code discussion below for regulations implementing certain Historic Element policy recommendations).

- *Policy 3.1 Avoid or Minimize Adverse Historic Preservation Impacts Related to Discretionary City Actions:* This City will make reasonable efforts to avoid or minimize adverse effects on the Character-Defining Elements of existing or Potential Designated Historic Properties (PDHPs), which could result from private or public projects requiring discretionary actions.
- *Policy 3.5 Historic Preservation and Discretionary Permit Approvals:*
    - For additions or alterations to Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: 1) the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or 2) the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or 3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.
    - For any project involving complete demolition of Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: 1) the design quality of the proposed project is at least equal to that of the original structure and is compatible with the character of the neighborhood; or 2) the public benefits of the proposed project outweigh the benefit of retaining the original structure; or 3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.
- *Policy 3.8 Definition of "Local Register of Historical Resources" and the Historic Preservation "Significant Effects" for Environmental Review Purposes*: For purposes of environmental review under CEQA, the following types of properties will constitute the City of Oakland's Local Register of Historical Resources:
    - All Designated Historic Properties, and
    - Those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance.
    - Oakland Landmarks,
    - S-7 Preservation Combining Zone properties, and
    - Preservation Study List properties.
- *Action 3.8.1 Include Historic Preservation Impacts in City's Environmental Review Regulations:*
    - Include Policy 3.8's definitions of "Local Register of Historical Resources" and historic preservation "significant effect" in the City's Environmental Review Regulations.

- Amend the Regulations to include specific measures that may be considered to mitigate significant effects to a Historical Resource. Measures appropriate to mitigate significant effects to a Historical Resource may include one or more of the following measures depending on the extent of the proposed addition or alteration; 1) modification of those elements of the Project design adversely affecting the character elements of the property, or 2) relocation of the affected Historical Resource to a location consistent with its historical or architectural character. If the above measures are not found to be feasible, the following measures may be considered: a) modification of the Project design to include restoration of the remaining historic character of the property; b) modification of the Project design to incorporate or replicate elements of the building's original architectural design; c) salvage and preservation of significant features and materials of the structure in a local museum or within the new project, d) measures to protect the Historical Resource from effects of on-site or other construction activities, e) documentation in a Historic American Buildings Survey report or other appropriate format: photographs, oral history, video, etc.; f) placement of a plaque, commemorative marker, or artistic or interpretive display on the site providing information on the historical significance of the resource; and/or g) contribution to a Facade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.

- *Policy 4.1 Archaeological Resources:* To protect significant archaeological resources, the City will take special measures for those discretionary projects involving ground disturbances located in archaeologically sensitive areas.

City of Oakland Cultural Heritage Survey

The City of Oakland Planning Department maintains the Oakland Cultural Heritage Survey (OCHS), which is a citywide inventory of historic buildings and districts. The OCHS was established in 1981. In 1996/97, Planning Department staff completed a windshield survey of every street in Oakland and assigned buildings an estimated construction date and preliminary rating of historical or architectural interest. Additionally, approximately 20,000 properties have been researched and documented through intensive-level surveys.

The OCHS evaluates resources according to a system adapted from both the San Francisco Downtown Inventory and Harold Kalman's *The Evaluation of Historic Buildings* (Parks Canada, 1980). The categories, ratings, and guidelines for interpretation that are used by the OCHS closely parallel those presented in National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation, Section IV, "How to Identify the Type of Significance of a Property;"* and Section V, *"How to Determine if a Property has Integrity."* The ratings provide guidance to City staff and property owners in design review and compliance with the Planning Code. The ratings are based on the following criteria outlined in the Historic Preservation Element (City of Oakland 1998:

- Visual Quality/Design: Exterior and interior design; construction and materials; style and type; supporting elements (e.g., landscaping, ancillary structures, feeling and association, signs, long-term use); and importance of the architect, designer, or builder
- History/Association: Construction date and association with individuals, organizations, events, or patterns of neighborhood, citywide, state, or national importance
- Context: Familiarity and continuity of the building within a district, and
- Integrity/Reversibility: Condition, exterior and interior alterations, structural removals, and site

Survey ratings describe both the individual building (indicated by a letter rating) and the surrounding context or district (indicated by a number rating). The OCHS rates individual properties using letters A through E and * or F (City of Oakland 1998):

- A: Highest importance: Outstanding architectural example or extreme historical importance. These properties are clearly eligible for individual listing in the NRHP.
- B: Major importance: Especially fine architectural example or major historical importance. These properties may also be eligible for individual listing in the NRHP but are regarded as less important than those rated as A.
- C: Secondary importance: Superior or visually important example or very early (pre-1906). These properties may have historical, visual, or architectural value but do not appear to be eligible for individual listing in the NRHP.
- D: Minor importance: Representative example. These properties are not distinctive but rather a typical or representative example of an important style, type, convention, or historical pattern.
- E: Of no particular interest. These properties are not representative examples of an important style, type, convention, or historical pattern.
- * or F: Not rated: Less than 45 years old or modernized.

Properties may also be assigned a contingency rating indicated by a lowercase letter following the primary rating indicated by an uppercase letter (e.g., "Fa" or "Eb"), meaning they may receive the higher rating in certain situations (e.g., they are restored or reach a certain age or new research is uncovered).

In general, A and B ratings indicate outstanding or especially fine landmark-quality buildings, C ratings are given to superior or visually important examples, D ratings are for buildings of minor importance, E ratings indicate that the building is of no particular interest, and F or * ratings are for buildings that are less than 45 years old or that have been modernized.

Any property that has at least a contingency rating of C ("secondary importance") or contributes or potentially contributes to a primary or secondary district may "warrant consideration for possible preservation" according to the City of Oakland. All properties meeting these minimum significance thresholds (and have not already been designated) are called Potential Designated Historic Properties (PDHPs). "PDHP" is not a designation, but rather a category based on the OCHS ratings.

District status is indicated by the numbers 1 through 3:

- 1: In an Area of Primary Importance (API) or NRHP quality district. At least two-thirds of the properties located within the API must be contributors.
- 2: In an Area of Secondary Importance (ASI) or district of local interest. ASIs do not appear to be eligible for listing in the NRHP. At least two-thirds of the properties located within the ASI must be contributors.
- 3: Not in an identified district

For properties located in districts, a "+" after the number rating indicates a contributor, a "-" after the number rating indicates a non-contributor and a "*" after the number rating indicates a contingency contributor. Similar to individual properties, a contingency contributor may become a contributor if it is restored, or other conditions change.

City of Oakland Local Register of Historical Resources

The Historic Preservation Element Policy 3.8 defines the Local Register of Historical Resources as including all Designated Historic Properties (DHPs) and those PDHPs that have an OCHS rating of A or B or are located within an API (City of Oakland 1998). The City of Oakland considers resources listed in the Local Register of Historical Resources to be historical resources under CEQA.

- Designated Historic Properties (DHPs): DHPs include Oakland Landmarks, S-7 and S-20 Preservation Combining Zones (i.e., historic preservation zoning districts), and Preservation Study List and Heritage Properties. City of Oakland Historic Landmarks are the most prominent historic properties in the city. They may be designated for historical, cultural, educational, architectural, aesthetic, or environmental value. They are nominated by their owners, the City, or the public and are designated after public hearings by the Landmarks Board, Planning Commission, and City Council.
- Potential Designated Historic Properties (PDHPs): PDHPs are properties with an OCHS existing or contingency rating of C or higher or properties that are contributors or potential contributors to an API (rating of 1+ or 1*) or ASI (rating of 2+ or 2*). PDHPs warrant consideration for preservation but do not necessarily meet the threshold for historical resources under CEQA. Only those PDHPs with an OCHS rating of A or B or located within an API (i.e., those on the Local Register) are automatically considered historical resources under CEQA.

City of Oakland Planning Code

The City of Oakland's Planning Code contains the following regulations for certain types of projects involving historical resources, based on policies in the Historic Preservation Element:

Planning Code Section 17.136.075 Regulations for Demolition or Removal of Designated Historic Properties and PDHPs

This section codifies the Historic Preservation Element and other regulations for approval of demolition or removal permits. With the exception of structures declared to be a public nuisance by the Building Official or City Council, Regular Design Review of the demolition or removal of a Designated Historic Property or PDHP shall only be approved after the Regular Design Review of a replacement project at the subject site has been approved; however, demolition of nuisance structures must still undergo Regular Design Review for demolition. Regular Design Review approval for the demolition or removal of any Local Register property may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and additional criteria set forth in the chapter. Demolition findings and extensive documentation requirements are further spelled out in the Planning Department's "Demolition Findings for Category I/II/III Historic Properties." The Director of City Planning may postpone issuance of a demolition permit for up to 120 days from the date of permit application following Design Review approval.

Planning Code Section 17.136.075(B), Category I Historic Properties

This section requires Design Review for the demolition or removal of any Landmark, Heritage Property, structure rated A or B by the Oakland Cultural Heritage Survey, or structure on the City's Preservation Study List that is not in an S-7 or S-20 zone or API. Approval may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and the following additional criteria:

- The applicant demonstrates that: a) the existing property has no reasonable use or cannot generate a reasonable economic return and that the development replacing it will provide such use or generate such return, or b) the applicant demonstrates that the structure constitutes a hazard and is economically infeasible to rehabilitate on its present site. For this finding, a hazard constitutes a threat to health and safety that is not immediate
- The design quality of the replacement facility is equal or superior to that of the existing facility, and
- It is economically, functionally, architecturally, or structurally infeasible to incorporate the historic structure into the proposed development

Planning Code Section 17.136.075(C), Category II Historic Properties

This section requires Regular Design Review for the demolition or removal of any structure in an S-7 or S-20 zone or API. Approval may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and the following additional criteria:

- For the demolition of contributors to an S-7 or S-20 zone or API, the applicant demonstrates that: 1) the existing property has no reasonable use or cannot generate a reasonable economic return and that the development replacing it will provide such use or generates such return, or 2) the applicant demonstrates that the structure constitutes a hazard and is economically infeasible to rehabilitate on its present site. For this criterion, a hazard constitutes a threat to health and safety that is not immediate; and that it is economically, functionally architecturally, or structurally infeasible to incorporate the historic structure into the proposed development.
- For the demolition of non-contributors to an S-7 zone, S-20 zone, or API, the applicant demonstrates that the existing structure is either 1) seriously deteriorated or a hazard; or 2) the existing design is undistinguished and does not warrant retention. For this finding, a hazard constitutes a threat to health and safety that is not immediate
- For the demolition of any structure in an S-7 zone, S-20 zone or API, the applicant demonstrates that 1) the design quality of the replacement structure is equal or superior to that of the existing structure; and 2) the design of the replacement project is compatible with the character of the district, and there is no erosion of design quality at the replacement project site and in the surrounding area. Specific findings are spelled out

Planning Code Section 17.136.075(D), Category III Historic Properties

This section requires Design Review Approval for the demolition or removal of any structure that is rated C by the by the Oakland Cultural Heritage Survey or that contributes to an ASI as determined by OCHS. (Under Historic Preservation Element Policy 3.5, this requirement applies to all PDHPs, including those resources with a contingency C rating and those identified as a contingency contributor to an ASI.) Approval may be granted only if the proposal conforms to the following general design review criteria (based on Historic Preservation Element Policy 3.5), that:

- the design quality of the proposed replacement project is at least equal to that of the original structure and the proposed replacement project is compatible with the character of the neighborhood, or
- the public benefits of the proposed replacement project outweigh the benefit of retaining the original structure and the proposed replacement project is compatible with the character of the neighborhood, or
- the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood

City of Oakland Municipal Code Article III – Green Building Compliance Standards (Section 18.02.100)

This regulation requires all buildings or projects to comply with the requirements of the California Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code and includes special provisions for historic buildings. Applicants for any new construction projects resulting in removal of a historical resource or large additions and alterations to historical resources must consult with a Historic Preservation Planner and seek LEED and Green Building certification, in addition to other specific requirements. The code also offers various incentives, such as lowered green building requirements when avoiding demolition of historic buildings, and higher green building requirements when demolishing historic buildings.

City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to cultural and historic resources that would be impacted by implementation of the proposed Project are listed below. All applicable SCAs would be adopted as part of the proposed Project to eliminate significant impacts to cultural and historic resources.

SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction

***Applies to**: All projects that involve a grading permit*

1. Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.
2. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.
3. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

   When Required: During construction

   Initial Approval: N/A

   Monitoring/Inspection: Bureau of Building

SCA Cultural-2: Archaeologically Sensitive Areas – Pre-Construction Measures

***Applies to**: All projects that require a grading permit and are located in a sensitive archaeologically area. Archaeologically sensitive areas include areas in which previous CEQA documents or other information identified a higher likelihood of archaeological finds. This SCA further implements (and is in addition to) the SCA for Archeological Resources (above).*

The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources.

Provision A: Intensive Pre-Construction Study: The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include:

1. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources.
2. A report disseminating the results of this research.
3. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.

Provision B: Construction ALERT Sheet: The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site.

1. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.
2. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.

   When Required: Prior to approval of construction-related permit; during construction

   Initial Approval: Bureau of Building

   Monitoring/Inspection: Bureau of Building

SCA Cultural-3: Human Remains – Discovery during Construction

Applies to: *All projects involving construction*

Pursuant to CEQA Guidelines section 15064.5(e) (1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt, and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Cultural-4: Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities

***Applies to**: All projects that involve construction that is adjacent to a CEQA Historical Resource or a PDHP*

The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at adjacent historic resources within or near the project. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

When Required: Prior to construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

According to the City's Thresholds of Significance and CEQA Guidelines, Appendix G – Environmental Checklist Form, the Project would have a significant environmental impact if it were to:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the CEQA Guidelines
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
4. Disturb any human remains, including those interred outside of formal cemeteries
5. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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:
    a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Methodology for Historic Resource Analysis

In April of 2020, Page & Turnbull prepared a Project Analysis for the proposed South Campus (**Appendix 7B**). The 2020 Project Analysis includes a summary of the property's current historic status, significance, and a list of character-defining features that enable Buildings 0, 1, and 2 to convey their historic significance (as previously identified in the 2019 HRE). Based on these finding of historic significance, the 2020 Project Analysis evaluates the proposed Project using the Secretary of the Interior's Standards for Rehabilitation. The 2020 Project Analysis was prepared using:

- photographs taken during a March 2019 site visit,
- a site plan of the Project provided by architects Skidmore, Owings & Merrill, LLP (SOM) dated August 16, 2019,
- detailed drawings prepared by SOM for Buildings 0, 1, and 2 dated April 3, 2020, and
- the "Head-Royce School Preliminary Development Plan Application" (December 2018, Revised March 2019) as submitted to the City of Oakland

According to CEQA, a "project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment."[12] Substantial adverse change is defined as: "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired." The significance of an historical resource is materially impaired when a project "demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources." A project may cause a substantial change in a historic resource but still not have a significant adverse effect on the environment as defined by CEQA, as long as the impact of the change on the historic resource is determined to be less-than-significant, negligible, neutral, or even beneficial.

Secretary of the Interior's Standards

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings provides standards and guidance for reviewing proposed work on historic properties.[13] The Standards for the Treatment of Historic Properties are used by federal agencies in evaluating work on historic properties. They have also been adopted by local government bodies across the country for reviewing proposed rehabilitation work on historic properties under local preservation ordinances. The Standards for the Treatment of Historic Properties are a useful analytic tool for understanding and describing the potential impacts of substantial changes to historic resources. Projects that comply with the Standards for the Treatment of Historic Properties benefit from a regulatory presumption that they would have a less than significant adverse impact on a historic resource. Projects that do not comply with the Standards for the Treatment of Historic Properties may cause either a

[12] CEQA Guidelines subsection 15064.5(b).

[13] Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*, (U.S. Department of the Interior National Park Service Technical Preservation Services, Washington, D.C.: 2017), accessed February 21, 2020, https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf

substantial or less than substantial adverse change in the significance of a historic resource. The Secretary of the Interior offers four sets of standards to guide the treatment of historic properties:

- *Preservation*: The Standards for Preservation "require retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time."
- *Rehabilitation*: The Standards for Rehabilitation "acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.
- *Restoration*: The Standards for Restoration "allow for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods."
- *Reconstruction*: The Standards for Reconstruction "establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes."

Whereas the Project proposes alteration of three historic buildings, and construction of new buildings and landscape features on the site, the 2020 Project Analysis (Appendix 7B) applies the Standards for Rehabilitation to assess the Project's potential impacts. These Standards for Rehabilitation include the following:

- *Rehabilitation Standard 1*: A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- *Rehabilitation Standard 2*: The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.
- *Rehabilitation Standard 3*: Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.
- *Rehabilitation Standard 4*: Changes to a property that have acquired significance in their own right will be retained and preserved.
- *Rehabilitation Standard 5*: Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- *Rehabilitation Standard 6*: Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- *Rehabilitation Standard 7*: Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- *Rehabilitation Standard 8*: Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- *Rehabilitation Standard 9*: New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.
- *Rehabilitation Standard 10*: New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Historic Resources

Cultural 1: Future development pursuant to the Project is not anticipated to cause a substantial adverse change in the significance of any individual historical resource. (**Less than Significant)**

As part of the Project, Head-Royce School proposes to rehabilitate and reuse four of the existing buildings on the proposed South Campus (Buildings 0, 1, 2 and 9) and to remove eight existing buildings. The eight existing buildings to be removed (Buildings 3, 4, 5, 6, 7, 8, 10 and 11) are not identified as historic resources, and their removal would not constitute a significant effect. Similarly, Building 9 is not identified as an historic resource, and reuse of this building would also not constitute a potentially significant impact.

Three buildings on the campus qualify as individual historic resources for the purposes of CEQA. These include Building 0 (Junior Alliance Hall), Building 1 (Mary A. Crocker Cottage), and Building 2 (Grace L. Trevor Cottage).

- Building 0 is significant under Criterion 1 (Events) as one of three purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus that represented a new phase in the development of the organization. The period of significance under Criterion 1 is 1929-1935. It is also significant under Criterion 3 (Architecture) for its association with local master architect William G. Corlett, Jr., and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 3 is 1935, the year of construction. Building 0 retains historic integrity for eligibility under both Criteria 1 and 3.
- Building 1 is significant under Criterion 1 (Events) as one of the first two purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. The period of significance under Criterion 1 is 1929 to 1935. It is also significant under Criterion 3 (Architecture) for its association with local master architects Reed & Corlett, and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 3 is 1930, the year of construction. Building 1 retains historic integrity for eligibility under Criteria 1 and 3.
- Building 2 is significant under Criterion 1 (Events) as one of the first two purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. The period of significance under Criterion 1 is 1929 to 1935. It is also significant under Criterion 3 (Architecture) for its association with local master architects Reed & Corlett, and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 3 is 1930, the year of construction. While Building 2 retains integrity of location, setting, feeling and association, it no longer retains sufficient integrity of design, materials or workmanship. As Building 2 no longer retains sufficient integrity to convey its historic significance under Criterion 3 (Architecture), but retains sufficient integrity to convey its historic significance under Criterion 1.

No other buildings on the Project site were found to be individually eligible historic resources. Additionally, the Project site as a whole is not eligible for listing in the California Register as a district, nor locally as a City of Oakland Area of Primary Importance (API) or Area of Secondary Importance (ASI).

Historic Character

For a property to be eligible for national or state designation under criteria related to type, period or method of construction, the essential physical features (or character-defining features) that enable the property to convey its historic identity must be evident. To be eligible as an historic resources, a property must clearly contain enough of its characteristics to be considered a true representative of a particular type, period, or method of construction, and these features must also retain a sufficient degree of integrity. Characteristics can be expressed in terms such as form, proportion, structure, plan, style or materials.

Whereas the Secretary of the Interior Standards for Rehabilitation "acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character", both the 2019 HRE (Appendix 7A) and the 2010 Project Analysis (Appendix 7B) identify the specific character-defining features of the three historic buildings on the Project site, as listed below:[14]

Building 0 (Junior Alliance Hall):

- Mass, including double-height and single-height wings, and L-shaped footprint of the building
- Fenestration pattern and original steel-sash and wood-sash windows
- Stucco cladding including arched recessed areas at northeast façade
- Gable and flat roof forms with terra cotta clay tiles
- Three covered entry porches at the southwest, northwest and southeast façades, including roof, supporting columns, and concrete and terra cotta clay tile floors
- Pilasters framing the windows at the northwest and southeast façades
- Terra cotta tile vents, and
- Double-height interior volume of the gable-roof wing

Building 1 (Mary A. Crocker Cottage):

- Two-story over basement massing and rectangular footprint of the building
- Gable roof form with terra cotta clay tiles and wood brackets
- Original fenestration pattern
- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters
- Open front entry porch
- Stucco cladding including arched recessed areas at primary and northeast façade
- Two chimneys tops with decorative roof caps
- Balconettes at primary and northeast façades
- Original arched wood door at northeast façade
- Decorative wood and plaster grilles
- Decorative leader heads
- Wall-mounted metal pot-holders, and
- Terra cotta tile vents.

Building 2 (Grace L. Trevor Cottage):

- Two-story over basement massing and rectangular footprint of the building
- Gable roof form with terra cotta clay tiles and wood brackets
- Original fenestration pattern at primary façade

[14] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue - Proposed Project Analysis, April 16, 2020, page 4

- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters
- Stucco cladding
- Open front entry stairs
- Balconettes at primary façade
- Decorative wood and plaster grilles
- Decorative leader heads
- Wall-mounted metal pot-holders, and
- Terra cotta tile vents

Proposed Alterations Pursuant to the Project

As part of Project, Head-Royce School proposes to rehabilitate and reuse four of the existing buildings on the proposed South Campus (Buildings 0, 1, 2 and 9) and to remove eight existing buildings. The eight existing buildings to be removed (Buildings 3, 4, 5, 6, 7, 8, 10 and 11) are not identified as historic resources, and their removal would not constitute a significant impact. Similarly, Building 9 is not identified as an historic resource, and reuse of this building would also not constitute a potentially significant impact.

Rehabilitation and reuse of the three historic buildings on the Project site (Buildings 0, 1 and 2) would not result in significant impacts, based on the rehabilitation and reuse of these buildings as proposed. The following provides a summary of the proposed alterations to these historic buildings.[15]

Proposed Building 0 Alterations

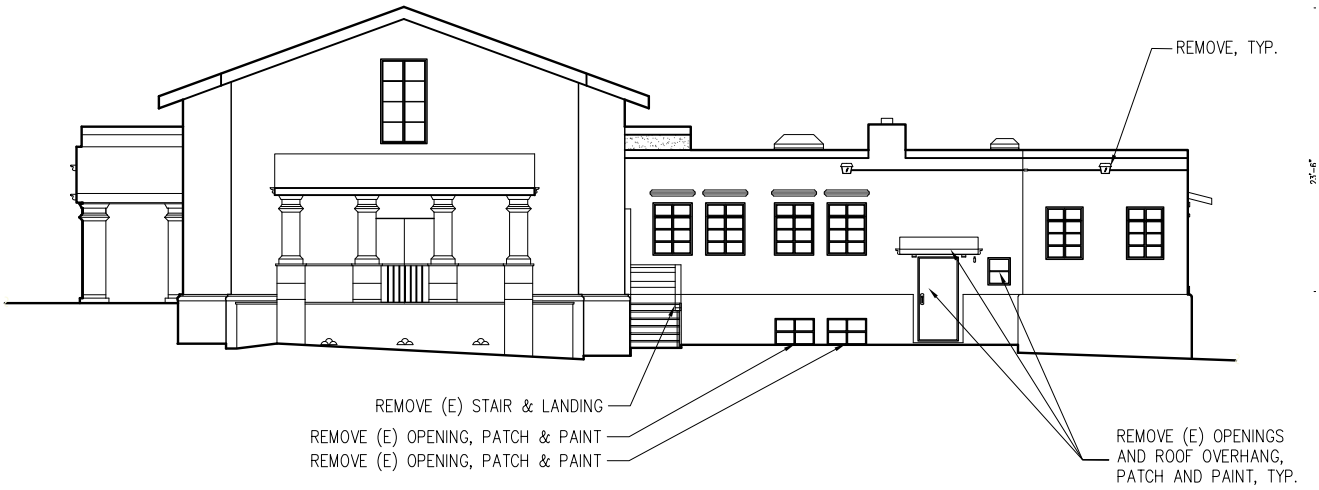
The overall footprint and massing of Building 0 would be unchanged by the proposed Project. Rehabilitation work would include stucco patching and repair as needed, and restoration work would include the installation of wood shutters to replicate historic shutters, and molded plaster caps at locations where the historic shutters and caps have previously been removed. Other typical alterations would include the removal of existing non-historic scuppers and downspouts. A new terrace with a wood trellis is proposed at the southwest corner of the building, between the north and east wings, and would feature solid stucco perimeter walls and handrails. Original plaster-coated wood grilles and clay tile vents would be retained in place.

As is proposed for each of the three historic buildings (Building 0, 1, and 2), the types and treatment of windows fall into three general types:

- Type 1: Repair and re-glazing of existing steel sash windows in existing frames
- Type 2: New steel sash windows with divided lites, double glazed, with profiles to replicate historic window profiles
- Type 3: New aluminum frame, full lite, double glazed windows in new openings.

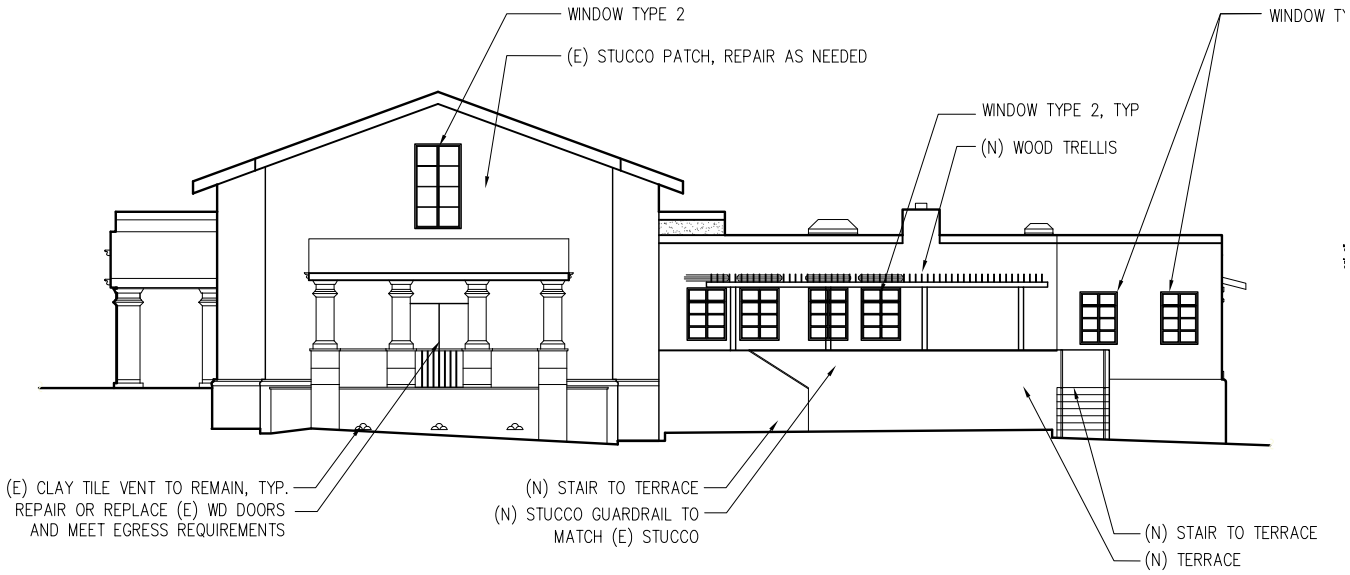
Proposed alterations to the primary (west) façade of Building 0 (see **Figure 7-8**) include replacement or modifications of the non-original double hollow metal doors at the covered portico entrance to meet egress requirements.

[15] Page & Turnbull, Head-Royce School South Campus, 4368 Lincoln Avenue - Proposed Project Analysis, April 16, 2020, pages 5-14



West Elevation - Existing

West Elevation - Original



West Elevation - Proposed

Figure 7-8
Building 0 Proposed Rehabilitation Plans

Source: Skidmore, Owings and Merrill, April 2020

A non-original stairway at the south façade of the north wing would be removed in order to construct the proposed new terrace, which would extend most of the length of the west side of the east wing, with two stairways with solid stucco handrails. An existing doorway at ground level of the primary façade of the east wing would be removed and infilled with stucco cladding, and the original terra cotta-clad awning would be removed. A small original window opening to the south (right) of the door, and two windows at the basement level, on the east wing would also be removed and infilled. All windows at the primary (west) façade would be Type 2 (new steel sash windows with divided lites, double-glazed, with profiles to replicate historic window profiles).

The interior spaces of Building 0 would be reconfigured, and the existing double-height space would be reconfigured to accommodate a community performance center space, four "huddle rooms", an open meeting room, an office, a scullery, and bathrooms. Original and non-original partition walls would be removed.

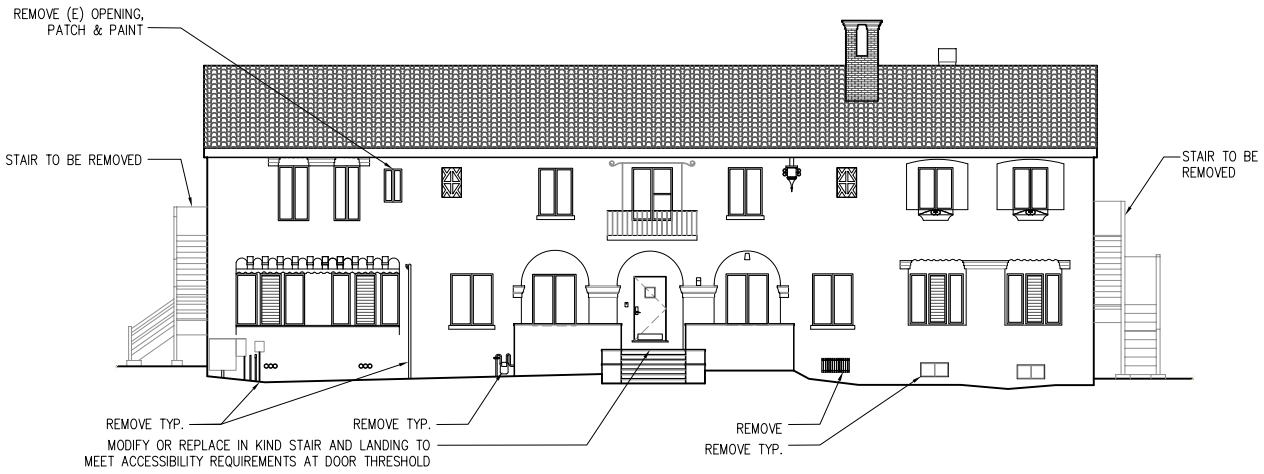
Proposed Building 1 Alterations

The overall footprint and massing of Building 1 would be unchanged by the Project, except for the addition of an accessible ramp along the primary (west) façade accessing the entry porch. The ramp would be located at the south end of the primary façade and feature stucco-clad walls. Rehabilitation work would include stucco patching and repair as needed and patching and painting as needed at the metal railings and brackets. Restoration work would include the installation of wood shutters to replicate historic shutter locations where the historic shutters have been removed; repair, paint, and patching as needed at the historic plaster brackets and wood lintel details; and the removal of non-original exterior stairs at the north and south facades. Original plaster-coated wood grilles and clay tile vents would be retained in place. Other typical alterations would include the removal of existing non-historic downspouts. The exterior portions of the unreinforced brick chimney and stucco roof vent are proposed to be reinforced and repaired as needed.

Treatment of windows at Building 1 fall into the same three types as described above in the Proposed Building 0 Alterations section (see above).

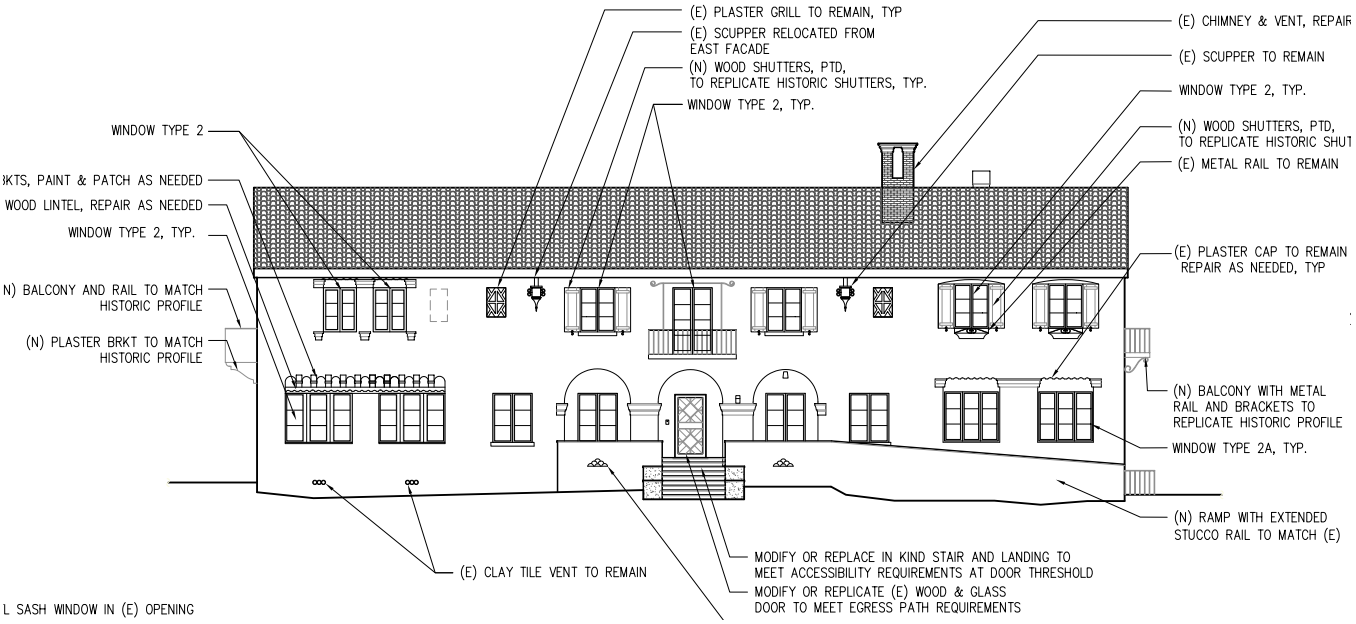
Proposed alterations to the primary (west) façade of Building 1 (see **Figure 7-9**) include the modification of the non-original primary entry door or replacement with a wood and glass door to match the design of the historic door. All non-original aluminum-sash windows would be replaced with Type 2 windows (replacement of the existing windows with new steel sash windows with divided lites, double-glazed, with profiles to replicate historic window profiles). The non-original window at the second-story central balconette would be replaced with new double-glazed doors to match the profile of the original doors. A non-original window and opening at the second floor would be removed and infilled with stucco. An original bronze scupper would be relocated from the east façade to the primary façade, to replace a missing scupper. Replica wood shutters would be installed in locations that originally had shutters. An accessible ramp with a stucco-clad wall would be constructed at the south end of the entry porch, along the primary façade. The front stairs may be modified to meet egress requirements.

The interior spaces of Building 1 would be reconfigured to accommodate new classrooms, offices, and an elevator. Although the stairs would be relocated, the floor plan would still be organized around a central double-loaded corridor.



West Elevation - Existing

West Elevation - Original



West Elevation - Proposed

Figure 7-9
Building 1 Proposed Rehabilitation Plans

Source: Skidmore, Owings and Merrill, April 2020

Propose Building 2 Alterations

The overall footprint and massing of Building 2 would remain unchanged under the Project, except for the addition of an accessible ramp along the primary (west) façade accessing the entry porch. The ramp would be located at the north end of the primary façade and feature stucco-clad walls. Rehabilitation work would include stucco patching and repair as needed and patching and painting as needed at the metal railings and brackets. Restoration work would include the installation of wood shutters to replicate historic shutter locations where the historic shutters have been removed; and the removal of non-original exterior stairs and a projecting bay supported by wood posts at the east façade. Original plaster-coated wood grilles and clay tile vents would be retained in place. Other typical alterations would include the removal of existing non-historic downspouts.

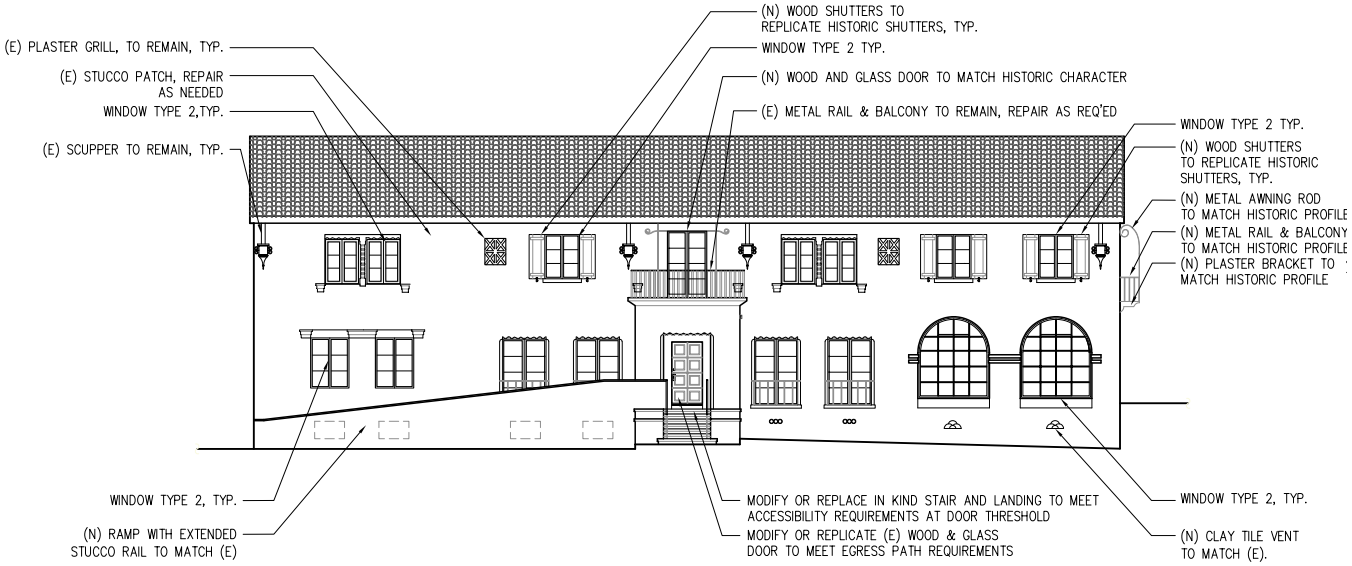
Treatment of windows at Building 2 fall into the same three types as described above in the Proposed Building 0 Alterations section.

Proposed alterations to the primary (west) façade of Building 2 (see **Figure 7-10)** include the modification of the non-original primary entry door or replacement with a wood and glass door to match the design of the historic door. All non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double-glazed, with profiles to replicate historic window profiles). The non-original window at the second-story central balconette would be replaced with new double-glazed doors to match the profile of the original doors. Replica wood shutters would be installed in locations that originally had shutters. A non-original grate at the basement level of the primary façade would be removed and the clay tile vents restored or reconstructed. An accessible ramp with a stucco-clad wall would be constructed at the north end of the entry porch, along the primary façade. The construction of the ramp would result in the removal of four original small basement windows. The original primary entry stair would be replaced with a new stair and larger landing to meet ADA requirements, in keeping with the orientation and style of the original stair.

The interior spaces of Building 2 would be reconfigured to accommodate new classrooms, maker space, and a central gallery space, flexible space, an elevator and removal of a portion of ceiling to create a double height theater scene shop.

West Elevation - Existing

West Elevation - Original



West Elevation - Proposed

Figure 7-10
Building 2 Proposed Rehabilitation Plans

Source: Skidmore, Owings and Merrill, April 2020

Compliance with Secretary of the Interior's Standards

The following analysis applies each of the ten Secretary of the Interior's Standards for Rehabilitation to the proposed South Campus. This analysis is based upon the Project's site plan and Project drawings for Buildings 0, 1 and 2 (see also Appendix 7B, pages 17 – 22).

Rehabilitation Standard 1

> *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships*

The Project would substantially retain the historic use of the buildings which have always functioned as institutional buildings.

- Building 0 will be used as a community performance center, which is consistent with its original use as an auditorium.
- Although Buildings 1 and 2 were originally constructed as residences, they were also used for office, classroom and educational spaces during the tenure of Lincoln Child Center. Under the Project, Buildings 1 and 2 would serve as offices and classrooms, and the changes required to accommodate these uses are primarily interior alterations.

The Project complies with Rehabilitation Standard 1.

Rehabilitation Standard 2

> *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.*

The historic character of the property, as expressed by Buildings 0, 1 and 2, will be retained and preserved, as the majority of character-defining features of these buildings will be either retained or restored. Their mass, fenestration, stucco cladding, roof forms and clay tile roofing, and decorative features will generally be retained and rehabilitated where extant.

- An exterior terrace will be constructed at the southeast corner of Building 0, replacing an asphalt parking area, but will not significantly alter any of the historic character, materials, features or spatial relationships of the building.
- Accessible entry ramps will be constructed at the primary facades of both Buildings 1 and 2, but their original entry sequence will be retained with the central staircase, and the ramps will feature compatible stucco-clad walls.

The spatial relationship between the historic Buildings 0, 1 and 2, and the other non-historic buildings, is not a character-defining feature of the property (demolition of other buildings and site features and related new construction as these changes relate to the historic character of the site are discussed in greater detail under Rehabilitation Standard 9).

As designed, the Project complies with Rehabilitation Standard 2.

Rehabilitation Standard 3

> *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.*

No conjectural features or elements from other historic properties are proposed to be added. All incompatible, non-original aluminum sash windows would be replaced (Type 2 window treatment). Replacement wood shutters, and replacement balconettes will be designed based on available historical

design drawings, and are therefore not conjectural. No features that are not documented in historical architectural drawings are proposed to be added. In cases where new windows or doors are proposed at Buildings 0, 1 and 2, they would be clearly contemporary in style and material, with undivided lites and slim aluminum frames, which avoids any potential for a false sense of historical development.

As designed, the Project complies with Rehabilitation Standard 3.

Rehabilitation Standard 4

> *Changes to a property that have acquired significance in their own right will be retained and preserved.*

A number of alterations to Buildings 0, 1 and 2 have occurred over time, including extensive alterations to the windows and fenestration patterns at Buildings 1 and 2 and addition of exterior stairs. However, none of these changes is known to have occurred in the period of significance (1929 to 1935) and the changes have not acquired significance in their own right.

Other buildings and site features on the Project site were constructed after the period of significance for Buildings 0, 1 and 2, and do not contribute to the significance of the historic buildings. A number of features added outside the period of significance that detract from the integrity of the buildings are proposed to be removed. These features include exterior stairways, aluminum-sash windows with incompatible design (operability and pattern of lites), and added doorways.

As designed, the Project complies with Rehabilitation Standard 4.

Rehabilitation Standard 5

> *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

Most extant character-defining features will be fully retained or minimally altered at Buildings 0, 1 and 2, including distinctive materials, features, finishes and examples of craftsmanship. Specifically:

- At Building 0, the large steel sash windows along the north (Lincoln Avenue) façade will be retained, as will the stucco cladding, gable roof with terra cotta clay tiles, three covered entry porches, pilasters, and terra cotta tile vents.
- At both Buildings 1 and 2, the stucco cladding, gable roof with terra cotta clay tiles, decorative features surrounding the windows and doors, chimney tops, balconettes, plastered-wood grilles, decorative leader heads, and terra cotta tile vents will all be retained.
- The arched partially glazed wood panel door at the east façade of Building 1 (one of only two doors that appears to be original at any of the three historic buildings, and which is a good example of 1930s era craftsmanship), is proposed to be repaired or replicated to meet egress path requirements.
- Several smaller steel sash windows at Building 0 are proposed to be replaced with compatible double-glaze steel sash windows (Type 2).
- The front entry porches at Buildings 1 and 2 will be altered to incorporate new accessible entry ramps, but a portion of the original materials and finishes will be retained, and the original design will remain legible.

Most of the original windows and doors at Buildings 0, 1 and 2 have previously been replaced. Therefore, the remaining decorative features such as chimney tops, details around windows and doors (brackets, lintels, corbelling, colonettes, shutters, etc.), the plastered-wood grilles, and tile vents are the distinctive materials and features that convey the Spanish Colonial Revival style design and 1930s craftsmanship. The majority of these character-defining features will be fully retained or minimally altered at all three historic buildings.

As designed, the Project complies with Rehabilitation Standard 5.

Rehabilitation Standard 6

> *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

Most of the extant historic features and materials at Buildings 0, 1 and 2 will be retained in place, including siding, roofing, decorative details around the windows, clay tile vents, and plastered wood grilles. As noted in the discussion of Rehabilitation Standard 3, all missing features, including windows, shutters, and balconettes, will be reconstructed based on documentary evidence provided by the original architectural drawings for Buildings 0, 1 and 2. However, a number of original steel sash windows at Building 0 are proposed to be replaced in-kind with new steel sash windows with divided lites, double-glazed, with profiles to replicate historic window profiles, rather than repaired in place. The replacement windows, with double-glazed glass, would provide greater thermal insulation for the building.

As designed, the Project is partially in compliance with Rehabilitation Standard 6 (see Recommendation for Retaining and Rehabilitating All Historic Steel Sash Windows, below).

Rehabilitation Standard 7

> *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

Several extant original windows, metal balcony railings and brackets, and lintel details that have become weathered or damaged over time, are proposed to be repaired and repainted in place. If it is necessary to propose chemical or physical treatments, these methods would not involve the use of harmful treatments (no sandblasting or power washing) that would damage the historic elements. As planned, the Project does not involve chemical or physical treatments.

The Project will comply with Rehabilitation Standard 7.

Rehabilitation Standard 8

> *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

The Project will involve limited excavation work to build a new Performing Arts Center building, new landscape features and a new pedestrian tunnel and "link pavilion." If any archaeological material is discovered during this process, standard discovery procedures of the City of Oakland would be followed (see Impact Cultural 3, below).

The Project will adhere to Rehabilitation Standard 8.

Rehabilitation Standard 9

> *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.*

A new exterior terrace will be constructed at the southeast corner of Building 0 (see prior Figure 7-8), and accessible entry ramps will be constructed at the primary facades of Buildings 1 and 2 (see prior Figures 7-9 and 7-10). The construction of the terrace at Building 0 requires the removal of several original basement windows and an original doorway and decorative awning. The loss of these features does not diminish the

overall integrity of design and materials of Building 0. The terrace and entry ramps all have low stucco-clad walls that are compatible with the material and design of Buildings 0, 1 and 2. The new features have clearly contemporary functions and uses that differentiate them from historic features, and the new ramps are located and designed to comply with current ADA standards.

The proposed exterior alterations include the removal of a number of non-contributing features added outside the period of significance, including exterior stairways, aluminum-sash windows with incompatible design (operability and pattern of lites), and added doorways.

- The original fenestration pattern at the primary (west) facades of Buildings 1 and 2 would be restored, and compatible steel sash windows with profiles to match the historic windows would be installed.
- The fenestration pattern of the north façade of Building 1, which fronts Lincoln Avenue and is visible from the public right-of-way, will also be fully restored with Type 2 windows.
- The south façade of Building 1 and north and south façades of Building 2 will be largely restored to the original fenestration pattern with Type 2 windows, and a limited number of new contemporary Type 3 windows.
- The rear (east) facades of Buildings 1 and 2 would have more extensive changes under the Project, and are also the facades that have been the most substantially altered in the past. At the rear facades, Type 2 windows would be installed at locations where original window openings would remain, but contemporary Type 3 windows would be installed at locations where new openings are created or the openings are altered in size, which creates a clear differentiation between the historic fenestration pattern and contemporary interventions.

The removal of development that occurred outside of the period of significance for historic Buildings 0, 1 and 2 would not impact the historic character of these buildings. The Project includes the demolition of Buildings 3, 4, 5, 6, 7, 8, 10 and 11, none of which are individually eligible historic resources. The demolition of these buildings and adjacent site features would not have a negative impact on the historic character of Buildings 0, 1 or 2. The buildings and site features proposed for demolition were all constructed after the period of significance of the historic buildings (1929-1935).

New construction pursuant to the Project, including construction of a new Performing Arts Center building to the south of Building 2, and a new Link Pavilion and Link Tunnel to the east of Building 1, would not impact the spatial relationships between Buildings 0, 1, and 2.

- The Link Pavilion is proposed to be located at the current location of Building 5, which is not a historic resource. The Link Pavilion will be to the west of Building 1 and will not obscure the view of the primary façade of Building 1. Like the current Building 5, the Link Pavilion would be one story (16 feet) in height and has an appropriate setback, scale and siting relative to Building 1, such that it will not impair the integrity of the historic building. The Link Tunnel is primarily underground, except for the uncovered steps that rise up to ground level south of the Link Pavilion, will generally not be visible, and thus will not have a negative effect on the integrity of Building 1 or its environment.
- The Performing Arts Center is proposed to be located south of Building 2, in approximately the current location of Buildings 3, 4 and 10 (none of which are historic resources). The proposed Performing Arts Center would be two-stories (approximately 32-feet) tall, which is approximately the height of the top of the gable roof of Building 2. The Performing Arts Center is located behind the historic resources and will not obscure views of the historic resources from the public right-of-way along Lincoln Avenue. The Performing Arts Center is approximately the same height Building 2, so the scale and massing will not overwhelm the historic resources, and is sited such that it will not affect the spatial relationships between the three historic buildings or negatively affect their

environment. It will be contemporary in style and materials, and so will be differentiated from the historic Buildings 0, 1 and 2.

- The construction of a new vehicle drop-off at the west end of the site, a new parking lot at the east end of the site, and a new Play Field at the south end of the site are consistent with the educational/institutional character of the site and do not impact the historic character or spatial relationships of Buildings 0, 1 and 2.

As designed, the Project complies with Rehabilitation Standard 9.

Rehabilitation Standard 10

> *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

The Project includes minor additions of a terrace at Building 0 and accessible entry ramps at Buildings 1 and 2. If these additions were removed in the future, the essential form and integrity of the buildings would remain intact, and the buildings would still be able to convey their significance for inclusion on the California Register under the Criterion 1: Events and/or Criterion 3: Architecture.

The proposed adjacent new buildings and site features, including the Performing Arts Center, Link Pavilion, and Link Tunnel, are physically separated from the historic Buildings 0, 1, and 2. If any of the adjacent new buildings or features were demolished in the future, there would be no detrimental effects on Buildings 0, 1 or 2.

As designed, the Project complies with Rehabilitation Standard 10.

Summary of Standards for Rehabilitation Analysis

Based on the evaluation of the Project (as presented Appendix 7B), the Project fully complies with nine of the ten Secretary of the Interior's Standards for Rehabilitation, and partially complies with one of the Standards (Standard 6).

- The exterior alterations to Buildings 0, 1, and 2 include rehabilitation and restoration work that will improve historic integrity of design, particularly at the primary southwest facades of Buildings 1 and 2, and at the north (Lincoln Avenue) façades of Buildings 0 and 1.
- Other exterior alterations (such as the terrace at Building 0 and accessible entry ramps at Buildings 1 and 2) will not have a negative effect on the buildings' ability to convey their historic significance, and are appropriately sited and designed to be compatible with the continuing educational uses of the buildings.
- The addition of new Type 3 windows (i.e., new aluminum frame, full lite, double glazed windows in new openings, rather than new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles) at Buildings 1 and 2 is limited to the rear and least publicly visible east and west side facades, which are also the facades that had previous been extensively altered from their original design.
- The proposed new windows and doors are clearly contemporary and differentiated, but are compatible in their simplicity and slim metal frames painted to match the color of the historic window frames and do not detract or overwhelm the historic design or historic features.
- The proposed demolition of non-historic buildings and site features would not have a negative effect on the historic resources, their spatial relationships, or their environment.

- The proposed new Link Pavilion, Link Tunnel and Performing Arts Center are separate buildings or structures from the historic buildings, and are sited such that they will not impair existing views of the historic buildings from the public right-of-way. The scale of the proposed Link Pavilion and Performing Arts Center are compatible and will not overwhelm the existing historic buildings.

The Project as designed is in overall compliance with the Secretary of the Interior's Standards for Rehabilitation, and would not negatively affect the ability of Buildings 0, 1 and/or 2 to be listed on the California Register.

According to Section 15126.4(b) (1) of the Public Resources Code (CEQA), if a project complies with the Standards, the project's impact "will generally be considered mitigated below a level of significance and thus is not significant." Since the Project is in overall compliance with the Standards for Rehabilitation, it does not appear that the Project will cause a substantial adverse change in the significance of the resource as defined by CEQA.

Project Improvement Recommendations

The Project as proposed is in overall compliance with the Standards for Rehabilitation and would not cause a substantial adverse change in the significance of the resource as defined by CEQA. The following recommendation is provided to further improve compliance with individual Rehabilitation Standard 6.

Project Improvement Recommendation - Retain and Rehabilitate All Historic Steel Sash Windows: The large historic steel sash windows at the north façade of Building 0, which are visible from the public right-of-way along Lincoln Avenue, are proposed to be retained and repaired as necessary. It is recommended that, except in demonstrated cases of severe deterioration beyond repair, all other historic steel windows at Building 0 be retained and rehabilitated in order to fully comply with Rehabilitation Standard 6. Per Rehabilitation Standard 6, repair, rehabilitation, and thermal upgrading should be pursed as primary strategy before considering replacement with compatible, in-kind replacement windows (such as the Type 2 windows as indicated in the Project). While double-glazed windows have increased thermal performance, there are other ways to improve thermal performance of existing historic steel sash windows. Furthermore, overall thermal performance of the building may be accomplished through improved insulation of wall and roof assemblies, while retaining all historic steel sash windows.

Retaining and rehabilitating all historic steel windows at Building 0 as described above would improve compliance with Rehabilitation Standard 6, and bring the Project into full compliance with Rehabilitation Standard 6.

Mitigation Measures

None required

Vibratory Damage to Historic Buildings

Cultural 2: The Project's construction activity does have the potential to cause a substantial adverse change in the significance of a historical resource as a result of groundborne vibration associated with the proposed pedestrian tunnel excavation. (**Less than Significant with SCAs**)

Regulatory Requirement

Pursuant to ***SCA Cultural-4: Vibration Impacts on Adjacent Historic Structures*** (see Regulatory Setting, above), the Project applicant must prepare and submit a Vibration Analysis for City review and approval. The Vibration Analysis shall establish a pre-construction baseline condition, and threshold levels of vibration that

could damage the structure. The Vibration Analysis shall identify design means and methods of either tunnel excavation or building protection to be used to prevent damage to on-site historic Buildings 0, 1 and 2.

Mitigation Measures

None required

Cultural Resources

Cultural 3: The Project site contains no known cultural resources that might be disturbed or adversely affected by the Project. However, during ground disturbing activities associated within the Project, it is possible that currently unidentified historic-period archaeological or cultural resources could be discovered and disturbed. (**Less than Significant with SCAs**)

As indicated in the Cultural Setting section, no cultural material was observed during the site survey, and no cultural resource management mitigation measures were recommended because of the disturbance of the Project site from prior development of the campus.

Regulatory Requirements

Pursuant to ***SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction***, in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. If any find is determined to be significant, appropriate avoidance measures as recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the Project site while measures for the cultural resources are implemented.

The cultural resources report does not indicate that the Project site is located in a sensitive archaeologically area previously documented in other CEQA documents, and no other information identifies the site as having a higher likelihood of cultural or archaeological finds. Therefore, SCA Cultural-2: Archaeologically Sensitive Areas – Pre-Construction Measures, does not apply to the Project.

Mitigation Measures

None needed.

Tribal Cultural Resources

Cultural 4: The Project site contains no known Tribal cultural resources, and the Project would not cause a substantial adverse change in the significance of a known tribal cultural resource. However, it is possible that, during ground disturbing activities associated within the Project, currently unidentified Tribal cultural resources could be discovered and disturbed. (**Less than Significant with SCAs**)

Based on the Cultural Resources Report (PaleoWest, 2020), the records search of the NAHC Sacred Lands File was completed, and the results were negative. Seven Native American tribal groups were contacted to elicit information regarding Tribal cultural resource, and representatives of two of the seven Tribes responded. The representative of the North Valley Yokuts Tribe responded that they are unaware of the Project site being culturally sensitive, and the representative of The Confederated Villages of Lisjan was provided with additional information, but did not respond back. The absence of specific site information does not indicate

the absence of cultural resources, and it is possible that ground-disturbing activities associated within the Project may discover currently unidentified and unknown Tribal cultural resources.

Regulatory Requirements

In the event that Native American Tribal cultural resources are discovered during ground disturbing activities, ***SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction*** will require that all work within 50 feet of the resource be halted, and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. A tribal representative shall be consulted to determine an appropriate mitigation plan (including monitoring and data recovery), with specific steps and timeframe to be stipulated. Work near the found tribal cultural resource may only resume upon completion of a mitigation plan and/or recovery of the tribal cultural resource.

Mitigation Measures

None required

Discovery of Human Remains

Cultural 5: It is possible that, during ground disturbing activities associated within the Project, human skeletal remains may be uncovered. (**Less than Significant with SCAs**)

Although there is no reason to expect a discovery of human remains at the site, there is a remote possibility of such an occurrence. If such an event does occur, the following regulatory requirements would be implemented, in accordance with existing laws and City requirements.

Regulatory Requirements

In the event that Native American human remains, or any funerary objects are discovered, the provisions of the California Health and Safety Code (and ***SCA Cultural-3: Human Remains***) should be followed. Section 7050.5(b) of the California Health and Safety Code states:

> "*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.*"

If any such remains are recognized as being of Native American origin, the County Coroner is responsible for contacting the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant.

Sections 5097.98 and 5097.99 of the Public Resources Code also call for "protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction." A combination of preconstruction worker training and intermittent construction monitoring by a qualified archaeologist will

serve to achieve compliance with this requirement for protection of human remains. Worker training typically instructs workers as to the potential for discovery of cultural or human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof.

Mitigation Measures

None required

Cumulative Historic and Cultural Resource Effects

The City is unaware of any other past, present or future reasonably foreseeable projects in the general vicinity of the Project that have, or may, result in significant cumulative impacts on historic resources. Compliance with regulatory requirements and mitigation measures identified for the Project would ensure the Project would not make a cumulatively considerable contribution to any other potential future cumulative historic resource impacts. The Project will have no impact on historic resources, and thus will not contribute to any such potential future cumulative effects on historic resources.

Historic archaeological resources associated with the city's historic development may exist throughout the City. Similar to the Project, ground-disturbing activities associated with past, present and reasonably foreseeable future projects have the potential to disturb historic archaeological resources and tribal cultural resources. These cumulative construction activities could cause a substantial adverse change in the significance of archaeological or tribal cultural resources. As with the Project, regulatory requirements and mitigation measures will be required of all present and reasonably foreseeable future projects in areas where such resources are likely to be present. With implementation of applicable regulatory requirements and mitigation measures, the Project in combination with other past, present, and future reasonably foreseeable projects would not result in significant cumulative impacts on archaeological or tribal cultural resources, and the Project would not make a cumulatively considerable contribution to significant cumulative cultural resource impacts.

8

Geology and Soils

This chapter of the EIR evaluates the potential impacts of the Project related to geology and soils. This chapter also describes the existing geology and soil conditions in and near the Project, and evaluates the extent to which geology and soil conditions may affect development of the Project as proposed.

Information for this chapter of the EIR has been derived from the following primary sources:

- Rockridge Geotechnical, *Geotechnical Investigation to Support Due Diligence Evaluation*, Lincoln Child Center at 4368 Lincoln Avenue, Oakland, California, May 2012 (**Appendix 8A**)
- Rockridge Geotechnical, *Geotechnical Data Report, Proposed Pedestrian Tunnel*, May 31, 2017 (**Appendix 8B**)
- Rockridge Geotechnical, *Response to Geotechnical Peer Review Comments*, January 6, 2020 (**Appendix 8C)**
- McMillen Jacobs Associates, *Head-Royce School Pedestrian Undercrossing Conceptual Design and Constructability Evaluation*, April 23, 2019 (**Appendix 8D**)
- McMillen Jacobs Associates, *Responses to Geotechnical and Tunnel Peer Review Comments on Conceptual Design Evaluation*, December 6, 2019 (**Appendix 8E**)
- Rockridge Geotechnical, *Geotechnical And Geological Evaluation Stability Of Slope Below Building 9*, August 5, 2020 (**Appendix 8F**)

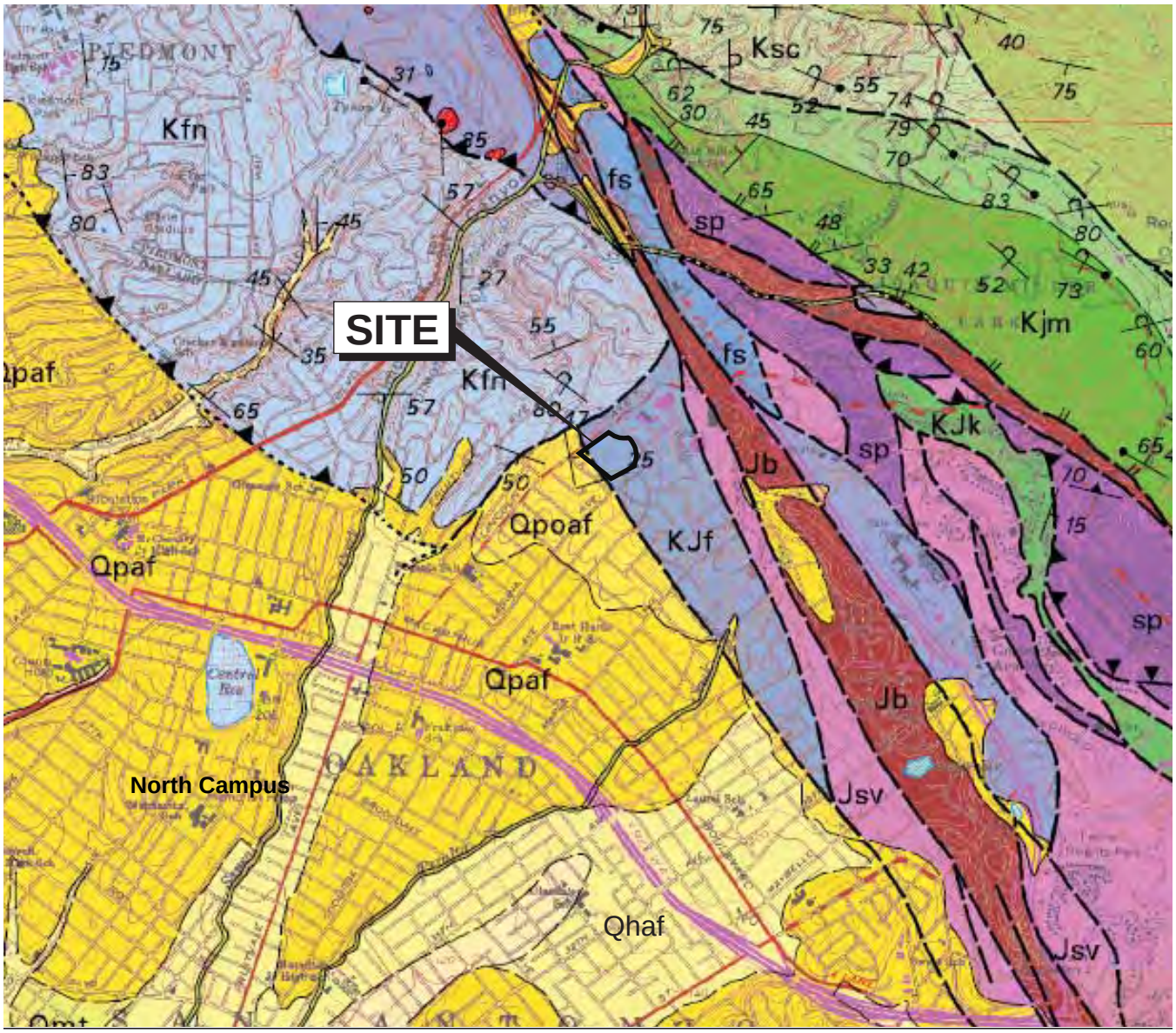
Environmental Setting

Regional Geology

The Project site is located within the Coast Ranges Geomorphic Province of California, which is characterized by northwest-southeast trending series of folded and faulted mountain ranges and valleys. Folding, faulting and tectonic uplift of the region is the result of movement between the Pacific and North American tectonic plates, which has deformed the region for the past several million years. The San Andreas Fault is the generally accepted boundary between these plates.

The Project site is situated on the west flank of the Oakland-Berkeley hills, which is a northwest-trending band of uplifted bedrock units forming steep hillsides bordering the east side of the San Francisco Bay plain. According to regional geologic maps prepared by the U.S. Geological Survey,[1] several bedrock units have been tectonically juxtaposed against each other. In general, sedimentary bedrock units of the Franciscan Complex are located on the west side of the Hayward fault, while several slivers of volcanic, metamorphic and sedimentary rocks are located to the east of the fault. A portion of the Regional Geologic Map (Graymer, 2000) is provided on **Figure 8-1**.

[1] Graymer, 2000; Graymer et al, 1995, and Radbruch, 1969



Base map: USGS MF 2342, Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California (Graymer, 2000).

EXPLANATION

- Contact - Depositional or intrusive contact, dashed where approximately located, dotted where concealed
- Fault - Dashed where approximately located, small dashed where inferred, dotted where concealed, queried where locations is uncertain
- Reverse or thrust fault - Dotted where concealed
- Anticline -Shows fold axis, dotted where concealed
- Syncline
- Strike and dip of bedding
- Overturned bedding
- Flat bedding
- Vertical bedding
- Strike and dip of foliation
- Vertical foliation
- Strike and dip of joints in plutonic rocks
- Vertical joint

0 1/4 1/2 Mile

Approximate scale

Qhaf	Alluvial fan and fluvial deposits (Holocene)
Qpaf	Alluvial fan and fluvial deposits
Qpaf1	Alluvial terrace deposits (Pleistocene)
Qpoaf	Older alluvial fan deposits (Pleistocene)
Ksc	Shephard Creek Formation (Late Cretaceous, Cenomanian)
Kjm	Joaquin Miller Formation (Late Cretaceous, Cenomanian)
Jsv	Keratophyre and quartz keratophyre (Late Jurassic)
Jb	Massive basalt and diabase
KJf	Undivided Franciscan complex rocks (Cretaceous and Jurassic)
Kfn	Sandstone of the Novato Quarry terrane of Blake and others (1984) (Late Cretaceous)
KJfm	Franciscan complex, melange (Cretaceous Late Jurassic), includes mapped locally:
fs	Graywacke and meta-graywacke blocks
sp	Chert blocks

Figure 8-1
Regional Geologic Map

Source: Rockridge Geotechnical 2020, from CGS (Graymer) 2000

Bedrock underlying the Project site is part of an undivided portion of the Franciscan Complex, which is generally composed of a series of sea floor sediments deposited during the Jurassic and Cretaceous periods of geologic time, roughly 65 to 205 million years before present. Regional geologic maps depict a northwest trend and variable dip of the bedrock layers that have been distorted by folding. Locally, based on observations of several bedrock outcrops in the site vicinity, this portion of the Franciscan Complex consists of thinly bedded layers of sandstone, siltstone and shale that dip to the southwest at inclinations between about 45 to 65 degrees. These observations are generally consistent with regional geologic maps.

Seismicity

The Project site is located in a region of relatively high seismicity, given the close proximity to several active faults. In the San Francisco Bay Area, strain and fault motions are distributed across a network of subparallel right-lateral strike slip faults. Active traces of the Hayward Fault are located about 1,500 feet east from the eastern site boundary. Other major faults in the area include the 1906 rupture segment of the San Andreas Fault (about 18 miles to the west), the northern section of the Calaveras Fault (about 11 miles southwest), the Greenville-Marsh Creek section of the Greenville fault (about 21 miles to the northeast) and the Rodgers Creek fault (about 28 miles to the north of the site). These and other major active faults within the Bay Area are shown on **Figure 8-2**.

The Working Group on California Earthquake Probabilities has compiled earthquake fault research for the San Francisco Bay area in order to estimate the probability of fault segment rupture. They have determined that the overall probability of a moment magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Region during the next 30 years (starting in 2014) is 72 percent. The highest probabilities are assigned to the Hayward/Rodgers Creek Fault, the Calaveras Fault and the northern segment of the San Andreas Fault. These probabilities are 14.3 percent, 7.4 percent and 6.4 percent, respectively.[2]

Seismic Hazards

The potential for earthquake-induced geologic hazards to occur at the Project site has been evaluated, including an assessment of ground shaking, ground surface rupture, liquefaction, lateral spreading, and cyclic densification, as well as the potential for landsliding under static and seismic conditions.[3] A summary of the results of that evaluation are presented below.

Fault Rupture

The State of California considers a fault to be "active" if it has demonstrated movement within Holocene time (within the past about 11,000 years). The closest fault considered active by the State of California is the northern segment of the Hayward Fault, which is located about 1,500 feet east of the Project site. The Project site is not within an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act (see Regulatory Setting, below), and no known active faults exist on the Project site. A portion of the State of California's Earthquake Fault Zone Map is provided on **Figure 8-3**.

[2] USGS, Working Group on California Earthquake Probabilities, *A New Earthquake Forecast for California's Complex Fault System*, Fact Sheet 2015-3009, March 2015, accessed at: https://pubs.usgs.gov/fs/2015/3009/, November 2019

[3] Rockridge Geotechnical, *Geotechnical Investigation to Support Due Diligence Evaluation, Lincoln Child Center at 4368 Lincoln Avenue*, May 2012

Base Map: U.S. Geological Survey (USGS), National Seismic Hazards Maps - Fault Sources, 2014.

EXPLANATION

Strike slip

Thrust (Reverse)

0 5 10 Miles

Approximate scale

Figure 8-2
Major Faults in the Region

Source: Rockridge Geotechnical, August 2020, based on USGS 2014

MAP EXPLANATION

Potentially Active Faults

1906 C

Faults considered to have been active during Holocene time and to have a relatively high potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by creep or possible creep.

Special Studies Zone Boundaries

These are delineated as straight-line segments that connect encircled turning points so as to define special studies zone segments.

Seaward projection of zone boundary.

N

0 2,000 4,000 Feet

Approximate scale

Reference:
State of California "Special Studies Zones"
Oakland East Quadrangle.
Revised Official Map
Released on January 1, 1982

Figure 8-3
Alquist-Priolo Earthquake Fault Zone

Source: Rockridge Geotechnical, 2012, from Cal. Geologic Survey, 1982

Regional geologic maps show a fault passing the western boundary of the Project site.[4] This fault trace has been considered a possible Pleistocene-active feature, has not demonstrated Holocene activity, and is not considered active by the State of California and not zoned in accordance with the Alquist-Priolo Act. Geologic maps focused on identifying features indicative of active faulting along the Hayward Fault do not indicate activity along this trace. Additionally, a prior geotechnical report for the Project site (Kleinfelder, 1978) references discussions with the State Geologist at that time, confirming that the fault trace along the western site boundary was not considered active.[5]

The Rockridge Geotechnical Report concludes the risk of fault offset at the site from a known active fault is low. This Report notes that, in a seismically active area the remote possibility exists for future faulting in areas where no faults previously existed, but concludes that the risk of surface faulting and consequent secondary ground failure from previously unknown faults is low.

Groundshaking

The seismicity of the Project site is governed by the activity of the Hayward Fault, although ground shaking from future earthquakes on other faults, including the Calaveras, San Andreas and Mt. Diablo Faults, will be felt at the site. The intensity of earthquake ground motion at the site will depend upon the characteristics of the generating fault, distance to the earthquake epicenter, and magnitude and duration of the earthquake. The Rockridge Geotechnical Report judges that very-strong to violent shaking could occur at the site during a large earthquake on one of the nearby faults.

Liquefaction

Liquefaction is a phenomenon where loose, saturated and cohesion-less soil experiences temporary reduction in strength during cyclic loading, such as that produced by earthquakes. When a saturated, cohesion-less soil liquefies, it experiences a temporary loss of shear strength created by a transient rise in excess pore pressure generated by strong ground motion. Soils susceptible to liquefaction include loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction.

The Project site is not within an area that has been mapped as a Designated Liquefaction Hazard Zone, as shown on the Seismic Hazards maps prepared by the California Geological Survey (see **Figure 8-4**).[6] These CGS maps were prepared in accordance with the Seismic Hazards Mapping Act of 1990. The on-line interactive liquefaction susceptibility maps provided by the Association of Bay Area governments (ABAG) show the site to have a “low” susceptibility to liquefaction.[7]

The majority of borings performed at the Project site, most of which extended to bedrock, did not encounter groundwater. Soils encountered in boring B-1 at the Project site, which extended to below groundwater, were generally found to be sufficiently cohesive (containing substantial amounts of clay), and the Rockridge Geotechnical Report concludes the potential for liquefaction and associated hazards is low.[8]

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4 Graymer (2000, 1995), Herd (1978), Radbruch-Hall (1974), and Radbruch (1969, 1967a)

5 Kleinfelder, *Geotechnical Feasibility Investigation for the Proposed Lincoln Child Center Congregate Housing*, October 19, 1987

6 California Geological Survey (CGS), State of California Seismic Hazard Zones, Oakland East and part of the Las Trampas Ridge Quadrangles, dated 14 February 2003

7 Association of Bay Area Governments (ABAG), accessed at , November 2019

8 Rockridge Geotechnical, 2012

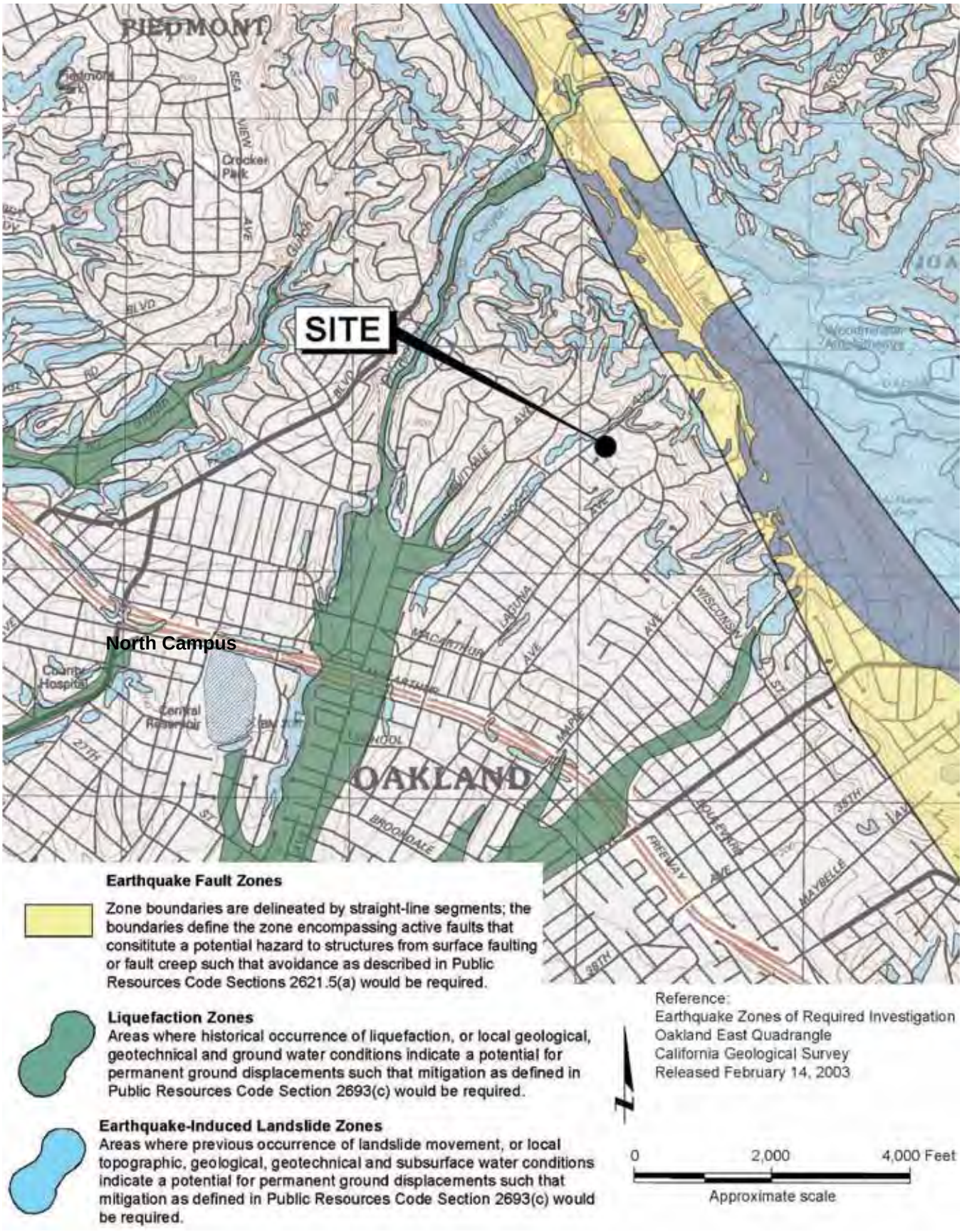


Figure 8-4
Seismic Hazards Map

Source: Rockridge Geotechnical, August 2020, from CGS 2003

Seismically Induced Settlement

Cyclic densification is a phenomenon in which non-saturated, cohesion-less soil is compacted by earthquake vibrations, causing ground surface settlement. Cyclic densification (also referred to as seismically induced differential settlement) can result in settlement of the ground surface and overlying improvements. Loose, clean sand was not encountered above the water table in the soil borings as documented in the Rockridge Geotechnical Report, which concludes that the likelihood of cyclic densification affecting structures at the Project site is very-low.[9]

Landsliding

The Project site is not within an area that has been mapped by the California Geological Survey as a designated Earthquake-Induced Landslide Hazard Zone (see also Figure 8-4).[10] A cut slope above the north/northeastern boundary of the Project site is mapped as potentially susceptible to earthquake-induced landsliding by the State of California, but this slope is not within the Project site boundary.

Geologic Conditions Specific to the Project Site

Methodology

Site-specific geological investigations performed for use this EIR included a review of historical aerial photographs for evidence of past grading and landslides; a limited geologic reconnaissance of the site for evidence of slope instability, significant settlement-related damage, drainage issues and other geotechnical issues; prior field investigations that included soil borings and laboratory analysis; and review of prior site-specific studies, including:

- *Geotechnical Investigation for Parking Lot Expansion at Lincoln Child Center*, prepared by Kleinfelder, dated March 25, 2003 – which included eight borings near the northwest corner northerly edge of the site
- *Drilled Pier Installation Observation and Reinforcement and Concrete Placement Inspection for Group Home at Lincoln Child Center*, prepared by Consolidated Engineering Laboratories, dated December 9, 1999 – which included five borings within the approximate footprint of existing Building 9
- *Geotechnical Engineering Study for Residential Home Building at Lincoln Child Center*, prepared by Consolidated Engineering Laboratories, dated October 9, 1998
- *Geotechnical Feasibility Investigation of Proposed Lincoln Child Center Congregate Housing*, prepared by Kleinfelder, dated October 19, 1987
- *Drainage Study for Lincoln Home for Children*, prepared by Woodward-Clyde and Associates, dated July 12, 1957
- *Drainage Study for Lincoln Home for Children*, prepared by Woodward-Clyde and Associates, dated June 20, 1957, and
- S*oil investigation for the proposed Bushel Cottage at Lincoln Home for Children*, prepared by Woodward-Clyde and Associates, dated October 7, 1957 – which included three borings drilled in the approximate location of existing Buildings 6 and 7

[9] Ibid, 2012

[10] CGS, February 2003

The 2012 field investigations included seven test borings performed for the Rockridge Geotechnical Report, at the approximate locations shown on **Figure 8-5**. The test borings were drilled to bedrock at depths ranging from 2.5 to 19 feet below the ground surface. Soil and rock encountered during these borings was recorded and retained for laboratory testing. Laboratory measurements included moisture content, dry density, fines content and Atterberg limits (plasticity index, measuring the expansion potential of soil). The results of the laboratory tests and the boring logs are presented in **Appendix 9A**. Conclusions for this site-specific research are presented below.

Surface Conditions

The Project Site is an approximately seven-acre site that slopes gently down to the south/southwest, with approximately 55 feet of vertical relief over a horizontal distance of approximately 500 feet along the site's Lincoln Avenue frontage. The site consists of a series of cut-and-fill building pads, occupied by nine buildings that were constructed between 1929 and 1999. Aerial photographs indicate the progressive site development throughout the years.

- Buildings 0, 1 and 2 had been constructed on the northwest portion of the site prior to available aerial photographs.
- The oldest set of photographs, from 1947, show pad grading and fill placed on the south side of a spur ridge (currently the upper parking lot) and in the swale along the southerly boundary of the site. A south-facing fill slope was constructed on the south side of the spur ridge, in the current location of Building 9.
- The 1950 photo set shows two broad landslide scars on the south-facing fill slope noted above. The landslide scars extended behind the top of slope and were not visible in the 1957 set, suggesting the slope had been reworked. At that time, the area was used as a play field, and therefore the landslide repair may not have been engineered. The landslides were located on the slope at about the current location of Building 9.
- Only minor site modifications, parking lot construction and building construction were observed in subsequent photo sets. These include construction of Building 6 between 1957 and 1959, construction of a previous building in the location of Building 8 prior to 1971, parking lot improvements performed prior to 1996, and construction of Building 9 prior to 2002.

Site Subsurface Conditions

Artificial Fill

The site is underlain by artificial fill placed over native soils and bedrock of the Franciscan Complex. Artificial fill at the site includes aggregate base rock beneath the existing parking areas and driveways. In general, this fill was found to be moderate to well compacted. Because prior site development was constructed on a series of cut/fill terraces, the fill thickness varies substantially from one location to another. At the parking lot area in the northwesterly corner of the site, fill thickness ranged from 2.5 feet to 16.5 feet. The deeper fill is likely part of older fill placed during original construction of the site. At the upper parking lot in the northerly portion of the site, borings indicates that this portion of the parking lot was constructed over a cut into a spur ridge that was removed during previous site grading.

A significant amount of artificial fill was placed along the southern side of the former spur ridge and in a former swale along the southern boundary of the site. The area of fill placed in the swale is now the grassy play field and orchard area. The fill placed along the south side of the spur ridge created a south-facing fill slope. The fill was investigated by Consolidated Engineering Laboratories (CEL) in their 1998 study for Building 9. The 1998 CEL report indicates that the fill is composed of soft to very stiff clay with varying sand and gravel content and is underlain by native colluvium overlying bedrock.

Figure 8-5
Prior Soil Boring Locations

Source: Rockridge Geotechnical, 2012

Colluvial Soils

Colluvial soils are generated by the downslope accumulation of soil and weathered bedrock materials. Typical colluvial soils at this site consist of brown to dark brown clayey soils with a moderate to high expansion potential. Colluvium forms relatively thick soil deposits in swales and along the toes of slopes. A review of regional geologic maps and previous geotechnical reports for the site indicate there are two main areas of colluvium at the site: 1) a broad swale along the southerly site boundary that was partially buried by artificial fill, and 2) colluvial soil that underlies the fill slope below existing Building 9.

Bedrock

Bedrock materials encountered in borings drilled as part of the investigation include sandstone, siltstone and shale of the Franciscan Complex. The siltstone and sandstone were found to be fine-to medium-grained, weak to moderately strong, moderately to deeply weathered and highly fractured. The shale is thinly laminated and highly weathered. Based on observations of several outcrops in the neighborhood surrounding the site, bedrock structure generally trends to the northwest and dips to the southwest (downslope) at inclinations between about 45 and 65 degrees.

Groundwater

Groundwater was only encountered in one of the borings drilled as part of the investigation (boring B1 located near existing Building 9), likely due to the relatively shallow depth of investigation. At boring B-1, water was encountered at about 6.5 feet bgs, likely a localized perched wet layer within the fill. No groundwater was encountered in the borings drilled by CEL in September 1998 and by Kleinfelder in December 2002. Groundwater levels are expected to undergo seasonal changes due to rainfall and local irrigation practices. There likely are seasonal springs in portions of the property but none was observed during the site reconnaissance.

Slope Stability

No evidence of past slope instability was observed during the site reconnaissance or in the historic aerial photo review. The prior 2003 Kleinfelder report addressed earthquake-induced landslide potential for the cut slope above the north/northeastern boundary of the site, concluding this slope is composed of bedrock at shallow depths and that the potential for earthquake-induced landsliding of this slope is low.

The fill slope along the south side of Building 9 was constructed on native soils, and previously shown signs of shallow instability. The fill was likely placed without engineering controls, and the fill may not meet current geotechnical engineering standards. Therefore, the fill prism on the slope may be prone to earthquake-induced landsliding or deformation during a strong earthquake event. However, Building 9 is supported on drilled piers extending into bedrock to account for possible downslope movement of the fill, as noted in the 1998 CEL report. There is evidence of past erosion and shallow slope failures on this slope face, which appear to be associated with inadequate drainage.

Regulatory Setting

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The California Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture, and does not address other earthquake hazards. Local agencies must regulate most development in fault zones established by the State Geologist. Before a project can be

permitted in a designated Alquist-Priolo Earthquake Fault Zone, the city or county with jurisdiction must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active or potentially active faults.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and seismically induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Code

The 2019 California Building Code (CBC) is the official compilation and publication of the adoption, amendment and repeal of prior 2016 building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. The 2019 CBC incorporates by adoption the 2018 International Building Code of the International Code Council with necessary California amendments. The purpose of the CBC is to establish minimum requirements pertaining to structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation and energy conservation; safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to fire fighters and emergency responders during emergency operations. The provisions of the CBC apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout the State of California.[11]

Seismic Design

The earthquake design requirements of the CBC consider the occupancy category of the structure, site class, soil classifications and various seismic coefficients that are used to determine a Seismic Design Category (SDC) for a project, as described in Chapter 16 of the CBC. The SDC is a classification system assigned to structures based on their risk category, and the severity of the earthquake ground motion at the site. SDC ratings range from SDC A (very-small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault) as well as SDC F (Hospitals, Police Stations Emergency control centers etc. in areas near major active faults). Design specifications are then determined according to the SDC in accordance with Chapter 16 of the CBC, which provides earthquake loading specifications for every type of structure to resist the effects of earthquake motions. An integral part of CBC is the Minimum Design Loads and Associated Criteria for Buildings and Other Structures (American Society of Civil Engineers [ASCE/SEI] 7-16), which describes the means for determining dead, live, soil, flood, tsunami, snow, rain, atmospheric ice, earthquake, and wind loads, and their combinations for general structural design.

Required Geotechnical Investigations

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), damp proofing and waterproofing (1805), load bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. For SDC D, E and F, Chapter 18 requires analysis of slope instability, liquefaction and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include

[11] Accessed at: https://up.codes/viewer/california/ibc-2018/chapter/new_1/scope-and-administration#new_1.1

ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground-acceleration magnitudes, and source characteristics consistent with the ground motions of the design earthquake.

Retaining Walls

According to Section 105.2 of the CBC, retaining walls that are not over 4 feet in height measured from the bottom of the footing to the top of the wall are exempt from building permit requirements, unless they support a surcharge or impound Class I, II or IIIA liquids. The City of Oakland's Permit Inspection Manual for Residential Repairs and Replacements provides that walls with 3 feet maximum retained earth and a back-slope of not more than 6:1 (15% slope), not surcharged and not attached to a fence or adjoining foundation do not require a building permit.

CALGreen

California Code of Regulations Title 24 also includes the California Residential Code and California Green Building Standards Code, have been adopted as separate documents (California Code of Regulations Title 24, Part 2.5 and 11, respectively).

Construction General Permit

The California Construction Stormwater Permit (Construction General Permit)[12], adopted by the State Water Resources Control Board, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations (CFR) 117.3 or 40 CFR 302.4, unless a separate National Pollutant Discharge Elimination System (NPDES) Permit has been issued to regulate those discharges.

The Construction General Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the General Permit
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the Nation
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards
- Perform inspections and maintenance of all best management practices (BMPs)

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

[12] General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ, National Pollutant Discharge Elimination System No. CAS000002.

Local Regulations and Policies

City of Oakland General Plan

The Safety Element of the City of Oakland General Plan enumerates the following policies and actions, designed to reduce risks associated with earthquakes that may affect the City of Oakland and that are relevant to the Project:

Geologic Hazards, Policy GE-1: Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.

- Action GE-1.2: Enact regulations requiring the preparation of site-specific geologic or geotechnical reports for development proposals in areas subject to earthquake-induced liquefaction, settlement or severe ground shaking, and conditioning project approval on the incorporation of necessary mitigation measures.

Geologic Hazards, Policy GE-2: Continue to enforce ordinances and implement programs that seek specifically to reduce landslide and erosion hazards.

- Action GE-2.1: Continue to enforce provisions under the subdivision ordinance requiring that, under certain conditions, geotechnical reports be filed and soil hazards investigations be made to prevent grading from creating unstable slopes, and that any necessary corrective actions be taken.
- Action GE-2.2: Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.
- Action GE-2.6: Design fire-preventive vegetation-management techniques and practices for creek sides and high-slope areas that do not contribute to the landslide and erosion hazard.

Geologic Hazards, Policy GE-3: Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.

- Action GE-3.1: Adopt and amend as needed updated versions of the California Building Code so that optimal earthquake-protection standards are used in construction and renovation projects.
- Action GE-3.2: Continue to enforce the unreinforced masonry ordinance to require that potentially hazardous unreinforced masonry buildings be retrofitted or be otherwise made to reduce the risk of death and injury from their collapse during an earthquake.
- Action GE-3.3: Continue to enforce the earthquake-damaged structures ordinance to ensure that buildings damaged by earthquakes are repaired to the extent practicable.

Geologic Hazards, Policy GE-4: Work to reduce potential damage from earthquakes to "lifeline" utility and transportation systems.

- Action GE-4.2: As knowledge about the mitigation of geologic hazards increases, encourage public and private utility providers to develop additional measures to further strengthen utility systems against damage from earthquakes, and review and comment on proposed mitigation measures.

City of Oakland Municipal Code

The Safety Element of the City of Oakland's General Plan identifies policies and actions that apply to geologic hazards. The City implements these pertinent sections of the General Plan through enforcement of ordinances. Among these are ordinances that are applicable to the Project to minimize soil hazards, reduce soil erosion and protect stream quality, prevent grading from creating unstable slopes, and mitigate fault rupture hazards.

Grading Ordinance (Chapter 15.04.660)

The Grading Ordinance requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During the Project construction, the volume of excavated fill material will exceed 50 cubic yards and may result in a 20 percent slope onsite, and the depth of excavations may exceed five feet at any location. If the proposed Project is approved by the City, the Project sponsor will be required to apply for a grading permit(s). The Project's application(s) for grading permits must include, but is not limited to all of the following information:

- *Grading Plan:* Grading plans shall be prepared by a Civil Engineer and are subject to approval by the City Engineer. Grading plans are required to include proposed limits of cuts and fills, proposed retaining structures, a Drainage Plan, a detailed Soils Report, and corrective actions proposed to be taken to alleviate existing site conditions detrimental to the improvements proposed including expansive soils, land stability problems and seismic liquefaction and landslides.
- *Erosion and Sedimentation Control Plan*: Erosion Control and Sedimentation Control Plans shall be prepared by a Civil Engineer, and are subject to approval of the City Engineer. Erosion Control Plans shall include interim erosion and sedimentation control measures to be taken during wet seasons until permanent erosion and sedimentation control measures can adequately minimize erosion, and permanent erosion and sedimentation control measures that are primarily oriented towards prevention of erosion.
- *Soils Report*: All Soils Reports shall be based, at least in part, on information obtained from on-site testing. The minimum contents of a Soils Report include logs of borings and/or profiles of test pits and trenches, and copies of all data generated by field and/or laboratory testing. The Soils Report must also include proposed corrective actions at locations where land stability problems exist; and conclusions and recommendations for foundations and retaining structures, resistance to lateral loading, slopes and specifications for fills and pavement design.
- *Dust Control Measures:* "Best Management Practices" as developed by the City Engineer, or an appropriate reference approved by the City Engineer, shall be used throughout all phases of construction. This includes any suspension of work, alleviation or prevention of any fugitive dust nuisance, and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any City of Oakland or regional air pollution rules, regulations, ordinances or statutes.

In granting any permit under this chapter, the City Engineer may attach conditions reasonably necessary to safeguard life, public and private property, and to ensure that the work will be carried out in an orderly manner in conformance with all regulations and without creating a public nuisance. All applicable grading permit requirements would be required as conditions of approval of such a permit to help ensure less-than-significant impacts from geologic and seismic conditions. These grading permit requirements are incorporated and required as part of the proposed Project, so they are not listed as mitigation measures.

<u>Building Services Division</u>

In addition to compliance with building standards set forth by the most currently applicable International Building Code and 2010 California Building Code, all project applicants are required to submit to the Oakland Building Services Division an engineering analysis accompanied by detailed engineering drawings for review and approval prior to excavation, grading, or construction activities on a project site. Specifically, an engineering analysis report and drawings of relevant grading or construction activities on a project site would be required to address constraints and incorporate recommendations identified in geotechnical investigations. These required submittals and City reviews ensure that the buildings are designed and constructed in conformance with the seismic and other requirements of all applicable building code regulations, pursuant to standard City of Oakland procedures.

Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to geology and soils and associated with implementation of the Project are listed below. All applicable SCAs would be adopted as part of the Project's conditions of approval to reduce or eliminate significant geological hazards or soils conditions.

SCA Geo-1: Construction-Related Permit(s)

***Applies to**: All projects requiring a construction-related permit*

The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Geo-2: Soils Report

***Applies to**: All projects involving a subdivision (except condominium subdivisions and subdivisions between existing buildings with no new structures per OMC sections 16.20.060 and 16.24.090), or a grading permit (per OMC section 15.04.660). This SCA does not apply to projects located in an Earthquake Fault Zone or a Seismic Hazards Zone.*

The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Geo-3: Erosion and Sedimentation Control Plan for Construction

***Applies to**: All projects involving construction activities that require a grading permit per OMC sec. 15.04.660 or are located on a hillside property (20% or greater slope), except projects requiring a category III or IV creek protection permit (see other conditions for creek protection permits).*

1. Erosion and Sedimentation Control Plan Required. The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

2. Erosion and Sedimentation Control during Construction. The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

   When Required: Part a) required prior to approval of construction-related permit. Part b) required during construction

   Initial Approval, Part a): Bureau of Building

   Monitoring/Inspection, Part b): Bureau of Building

SCA Standard-1: Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with Engineering Services and/or the Bureau of Building, if directed by the Director of Public Works, Building Official, Director of City Planning, Director of Transportation, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

Based on the CEQA Guidelines, the Project would have a significant environmental impact if it were to:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
   a) 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)
   b) Strong seismic ground shaking
   c) Seismic-related ground failure, including liquefaction
   d) Landslides
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable because of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. 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.

Fault Rupture, Liquefaction and Seismically Induced Landslides and/or Settlement

Geology-1: The Project would not directly or indirectly cause potential substantial adverse effects (including the risk of loss, injury or death), involving the rupture of a known earthquake fault or seismic-related ground failure, including liquefaction or seismically induced settlement. **(Less than Significant)**

Fault Rupture

As indicated in the Existing Setting, the closest fault considered active is the northern segment of the Hayward Fault, which is located about 1,500 feet northeasterly of the Project site (see prior Figure 8-3). The Project site is not located within an Earthquake Fault Zone as designated by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active faults exist on the Project site. A trace fault passing the western boundary of the Project site had been identified in prior geologic mapping as having features indicative of active trace faulting, but more recent geological mapping and investigations of this trace fault have concluded it to be inactive. The 2012 Rockridge Geotechnical Report concludes that the risk of fault offset at the Project site from a known active fault is low and that, while there is a remote possibility of future faulting in areas where no faults previously existed, the risk of surface faulting and consequent secondary ground failure is low.

Liquefaction and Landslides

The Project site is not within an area identified on the CGS Seismic Hazards Map as being in a designated Liquefaction Hazard Zone (see prior Figure 8-4), and liquefaction susceptibility maps prepared by ABAG show the site to have a "low" susceptibility to liquefaction. The Project site is also not within an area identified on the CGS Seismic Hazards Map as being in a designated Earthquake-Induced Landslide Area, where previous occurrence of landslide movement or other factors indicate a potential for permanent ground displacement. The 2012 Rockridge Geotechnical Report concludes that the potential for liquefaction and associated hazards at the Project site is low.

The off-site slope above the north/northeastern boundary of the site and adjacent to the former Perkins Road (on the adjacent property) is mapped on the CGS Seismic Hazards Map as a designated Earthquake-Induced Landslide Area. This slope is not within the Project site boundary, but the Project site is downhill of this slope. The 2012 Rockridge Geotechnical Report does not find any observed evidence of past slope instability at this location. The prior 2003 Kleinfelder concluded that the slope is composed of bedrock at shallow depths and that the potential for earthquake-induced landsliding of this slope is low.

Seismically Induced Settlement

Cyclic densification generally occurs when non-saturated, cohesion-less soil (sand) is compacted by earthquake vibrations, causing ground surface settlement. Loose, clean sand was not encountered above the water table in the soil borings as documented in the Rockridge Geotechnical Report, which concludes that the likelihood of cyclic densification affecting the Project site is very low.

Mitigation Measures

No mitigation measures are required. Risks related to the Project directly or indirectly causing potential substantial adverse effects related to fault rupture, liquefaction and seismically induced landslides and settlement are less than significant.

Seismic Ground Shaking

Geology-2: With implementation of all applicable regulatory requirements and SCAs, the Project would not, directly or indirectly, potential cause substantial adverse effects involving strong seismic ground shaking. (**Less than Significant with SCAs**)

According to a study completed by the Working Group on California Earthquake Probabilities (WGCEP), there is a 72% probability that an earthquake of magnitude 6.7 or greater will strike within the next 30 years.[13] The

[13] Working Group On California Earthquake Probabilities (WGCEP), 2015, The Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3), U.S. Geological Survey Open-File Report 07-1437.

intensity of such an event at the Project site will depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. The closest active fault to the site (approximately 1,500 feet) is the Hayward fault, although a number of other active faults are found in the region. The 2012 Rockridge Geotechnical Report judges that very-strong to violent shaking could occur at the site during a large earthquake on the Hayward Fault or one of the other active regional faults, potentially causing significant damage in structures that are not adequately engineered.

The proposed pedestrian tunnel is in close proximity to the Hayward Fault and therefore will also be susceptible to strong ground shaking generated during earthquakes on this fault, as well as nearby faults.

Regulatory Requirements

New Construction and Renovation

Pursuant to ***SCA Geo-1: Construction-Related Permits***, all new construction and renovations to existing structures will require construction-related permits and approvals issued by the City of Oakland. All new construction and renovations will be required to comply with all standards, requirements and conditions contained in the City's construction-related codes, including but not limited to the CBC, the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. Current industry standards for geotechnical practices and seismic structural design as included in the most recent version of the CBC incorporate design measures to reduce the potential for catastrophic damage during strong to violent seismic-related groundshaking. All new construction and renovation pursuant to the Project will occur in accordance with the CBC and local City requirements, and would reasonably reduce the potential damage and personal injury from groundshaking to less than significant levels.

Pursuant to ***SCA Geo-2: Soils Report***, a design-level geotechnical investigation will be performed for each new building and site improvement. The soils report must be prepared by a registered geotechnical engineer, and be reviewed and approved by the City prior to approval of construction-related permits. The soils report is required to include field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The investigations conducted pursuant to these soil reports will determine final design parameters for earthwork, foundations, foundation slabs and any surrounding related improvements (including utilities, parking lots, roadways and sidewalks). These regulatory requirements, which require structural designs that can accommodate ground accelerations expected from known active faults consistent with the CBC and local building code requirements, will would reduce the potential impacts associated with groundshaking during a major seismic event to less than significant.

As indicated in the Existing Setting section and demonstrated on prior Figure 8-4, the Project site is not located in a Seismic Hazards Zone for seismically induced liquefaction or landslides. The City's SCA Geo-3: Seismic Hazards Zone or SCA Geo-4: Oakland Area Geologic Hazard Abatement District do not apply, and are not required to reduce potential impacts associated with groundshaking during a major seismic event to less than significant.

Tunnel Design

Ground motions induced by a seismic event are typically characterized by a value of peak ground acceleration (PGA) which is expressed as a fraction (or multiple) of the acceleration of gravity (g). Either deterministic or probabilistic methods are typically used to estimate the level of shaking that can be expected at a project site. Pursuant to ***SCA Geo-1: Construction-Related Permits***, the proposed tunnel will be designed in accordance with the requirements of California Building Code (CBC) Section 1613 and ASCE 7-16. Based on the probabilistic hazard model, the PGA for the Project is anticipated to be on the order of 1.0g. This ground acceleration is calculated for a Site Class D, or 'Stiff Soil' site. The proposed tunnel will therefore need to be designed to withstand seismic shaking and temporary increases in lateral earth pressure (earthquake load). Development of seismic loading will be determined as part of the project final design evaluations.

Mitigation Measures

No mitigation measures are required.

Implementation of the City's SCA Geo-1 (Construction-Related Permits) and SCA Geo-2 (Soils Report) fully address the substantial adverse effects involving strong seismic ground shaking, requiring site-specific design-level investigations be developed for each new and/or renovated building and other site improvements, including the proposed pedestrian tunnel. Implementation of these SCAs would reduce potential impact from groundshaking to less than significant because they require preparation, review and approval of site-specific and design-level investigations consistent with applicable regulations (e.g., CBC) that ensure construction methods that minimize seismic exposure risk.

Slope Instability

Geology-3: Portions of the Project site include geologic units or soils that are unstable or that may become unstable because of the Project. With implementation of all applicable regulatory requirements and SCAs, and additional mitigation measures, the Project would not result in on- or off-site landslides, lateral spreading, subsidence or collapse. **(Less than Significant with SCAs and Mitigation)**

The Project site is not within an area that has been mapped as a designated earthquake-induced landslide hazard zone.[14] A cut slope above the north/northeastern boundary of the Project site, adjacent to the former Perkins Road, is mapped as potentially susceptible to earthquake-induced landsliding by the State of California, but this slope is not within the Project site boundary. No evidence of past slope instability in this location has been observed during site reconnaissance efforts or reviews of historic aerial photos. A prior report (Kleinfelder, 2003) addressed the potential for earthquake-induced landslides at this off-site slope and concluded that the slope is composed of bedrock at shallow depth, and that the potential for earthquake-induced landsliding of this off-site slope is low.

Fill Slope Below Building 9

An on-site fill slope on the southern side of Building 9 has displayed indications of minor instability since its construction (see **Figure 8-6**). The fill was placed in the mid to late 1940's and was likely placed without engineering control such as ground preparation, adequate compaction, subdrainage and a proper keyway. Photographs from 1950 appear to show two broad landslide scars on this slope, which appear to have occurred just after fill placement. A prior report for construction of Building 9 (CEL, 1998) indicates that this fill prism may be subject to downslope movement during earthquake events, and piers were extend into bedrock to protect the building from distress-related to slope movement. Currently, the slope is slightly hummocky and shows signs of settlement, erosion and shallow surface landsliding. Surface water around Building 9 and from roof gutter downspouts is currently allowed to free-flow onto the ground surface and down the slope face. Small erosion gullies on the slope can be traced directly to surface water around Building 9. Additionally, there are shallow landslide scars on the slope at about the same location as observed in the 1950 aerial photographs, which may indicate a failure of fill placed in the larger 1950 scars.

[14] California Geological Survey (CGS), *State of California Seismic Hazard Zones, Oakland East and Part of the Las Trampas Ridge Quadrangles*, February 2003

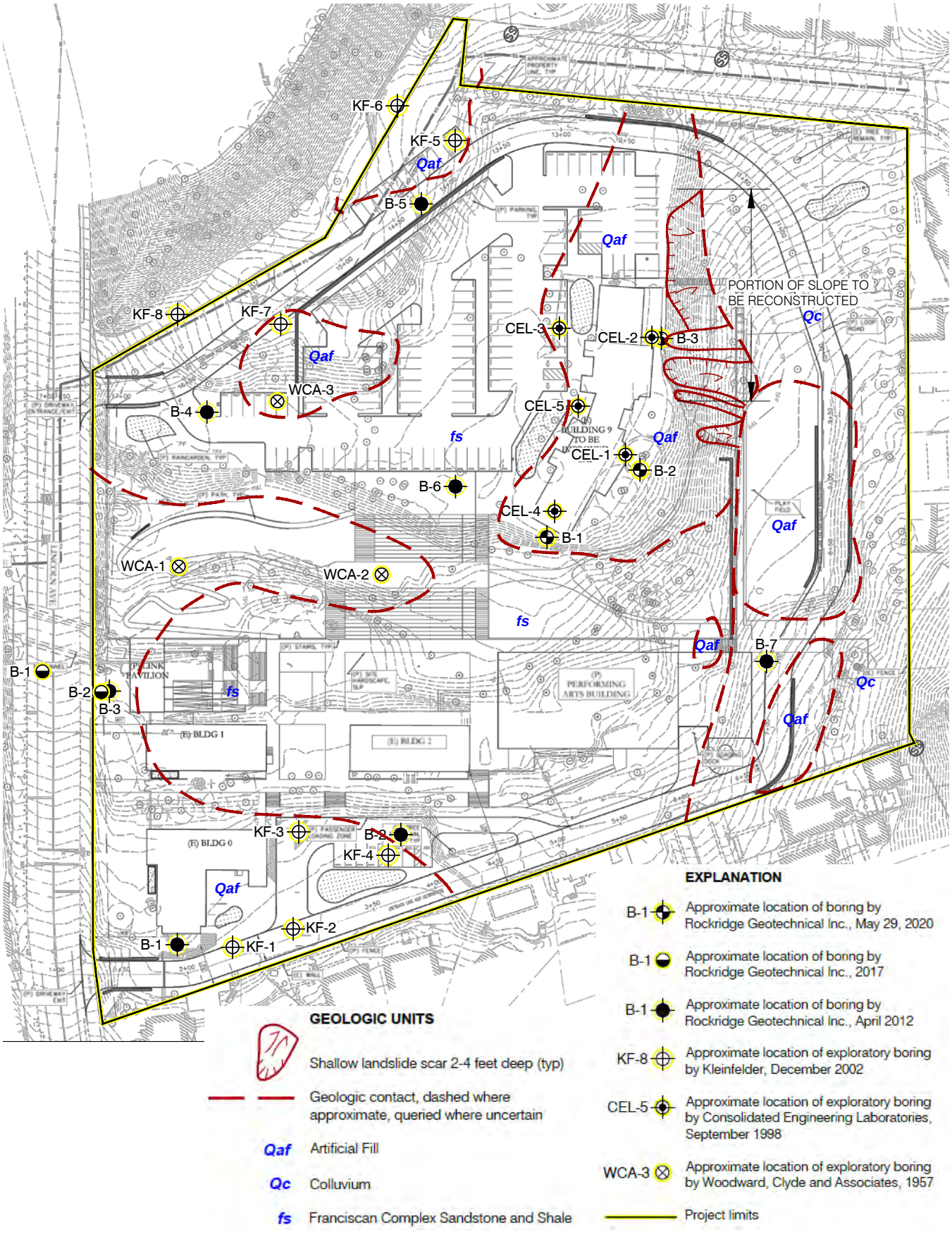


Figure 8-6
Fill Slopes throughout Former Lincoln Site

Source: Rockridge Geotechnical, August 2020

Based on the geotechnical investigation of this slope, Rockridge Geotechnical has concluded that the fill prism on this slope may be prone to earthquake-induced deformation during a strong earthquake. Further, there is potential for additional localized shallow slope instability near the top of the slope due to discharge of roof water onto the top of the slope and the presence of locally over-steepened slope areas. Because available documents indicate that the southern end of Building 9 is supported on drilled piers extending at least 10 feet into bedrock, Rockridge concludes it is unlikely that static or seismically induced slope instability will adversely impact Building 9. However, it is possible that future shallow sliding will gradually reduce the relatively level area between the Building 9 and the top of the slope. Slope instability may also impact future improvements constructed on and at the base of the slope.

Regulatory Requirements

SCA Geology-2: Soils Report, the Project applicant is required to submit a soils report prepared by a registered geotechnical engineer for City review and approval, prior to approval of any construction-related permits. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

Recommendations Geo-3A: Stability of Slope below Building 9. In furtherance of SCA Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the August 2020 *Rockridge Geotechnical and Geological Evaluation, Stability of Slope Below Building 9 Report* (**Appendix 8F**), as recommended pursuant to peer-review by the City's geotechnical engineering consultants, recommends that surface drainage at the rear of Building 9 be improved, and that the slope below Building 9 be partially reconstructed to mitigate the potential for future slope instability under static and seismic conditions. Further detailed recommendations are presented below.

Surface Drainage Improvements

- Four roof drain downspouts at the rear of Building 9 currently discharge onto the ground surface adjacent to the building. The two easternmost roof drains may have contributed to slope instability and should be connected to solid buried pipes that discharge near the base of the reconstructed slope. The end of the discharge pipes should be designed with a "T" and a gravel pad to mitigate the potential for ground-surface erosion.
- The ground surface behind the eastern-most 80 feet of Building 9 is currently uneven with some areas sloping toward the building, some areas being relatively level, and some areas sloping away from the building. To reduce the potential for ponding and concentrated surface flow onto the slope face, this area should be re-graded so that the ground surface slopes down away from Building 9 and towards the top of the slope at a consistent gradient of five percent.
- Much of the slope below Building 9 has been recently cleared and is covered with wood chips. To mitigate the potential for surface erosion after construction of the Project's proposed improvements, the final graded slopes (where not already currently covered with erosion-resistant vegetation (should be planted with deep-rooted vegetation to reduce the potential for surface erosion.
- The slopes should be covered with an erosion control blanket to minimize surface erosion until the vegetation matures.

Slope Reconstruction

- The fill slope below the eastern-most 80 feet of Building 9, as well as the 80-foot long section of fill slope east of Building 9, should be reconstructed as an engineered fill slope during construction of the proposed future site improvements.

- The inclination of the final slope should not exceed 2:1 (horizontal: vertical) unless reinforced with geogrid. A geogrid-reinforced slope as steep as 1.5:1 is feasible; however, installation of geogrid reinforcement would require significantly more cutting into the existing slope than for reconstruction of an unreinforced slope.
- It should be assumed that the outer 10 feet of the current slope consists of non-engineered fill that should be excavated and then replaced as engineered fill after installation of a keyway and subdrains. Several test pits should be excavated into this slope face prior to site grading to further investigate the existing fill thickness.
- Reconstruction of the slope should consist of excavating the existing fill from the slope face (if the fill extends behind a line inclined at 1:1 from the top of the slope, it may be left in place since it will be buttressed with the engineered fill). The excavation at the top of the slope should extend no closer than 10 horizontal feet from the rear of Building 9 and should be inclined no steeper than 1:1. A keyway that is at least 10 feet wide and extends at least four feet into competent bedrock or very stiff/dense native soil should be excavated as the projected toe of the engineered fill slope. The base of the keyway should be sloped back into the hillside at an inclination of at least two percent.
- Below Building 9, subdrains should be installed at the back of the keyway, within 10 feet (vertically) from the top of the slope, and at approximately mid slope. East of Building 9, subdrains should be installed in the keyway and within 10 feet (vertically) from the top of the slope. Subdrains should discharge water via solid pipe to a suitable downslope discharge point protected from erosion with a gravel blanket.
- The engineered fill placed to repair the slope should be keyed and benched into competent native soil and/or bedrock with benches being about eight feet wide. The soil and bedrock materials encountered at the site are suitable for reuse as engineered fill, provided they are free of significant organics, rocks or lumps larger than four inches in greatest dimension, and organic material. If imported fill is required, it should consist of material that is free of hazardous substances, contain no rocks larger than four inches in greatest dimension, and have a plasticity index (PI) not exceeding 12. Fill should be placed in horizontal lifts not exceeding eight inches in uncompacted thickness, moisture-conditioned to above optimum moisture content, and compacted to at least 90 percent relative compaction.
- The finished surface of the slope should be track-walked and protected from erosion by deep-rooted, fast-growing vegetation prior to winter. The surface should be covered with appropriate erosion control material to minimize surface erosion prior to maturation of the plants.

Retaining Walls

Current plans call for installation of low retaining walls as part of the site improvements.

- Permanent retaining walls should be designed to resist lateral earth pressure imposed by the retained soil and surcharge pressure, where appropriate. Where permanent walls will be restrained from movement at the top and/or sides, they should be designed for at-rest conditions.
- Walls that retain soil and are not restrained from rotation may be designed for appropriate active pressures (as presented in Appendix 8F). The recommended design pressures are appropriate for walls that are fully drained.
- Walls that retain more than six feet of soil should be designed for the more critical loading condition of static or seismic conditions.

Mitigation Measures

No additional mitigation measures needed.

Pursuant to ***SCA Geo-2***, the Rockridge Geotechnical Report will be reviewed in detail by the City Bureau of Building, and must be approved prior to issuance of any construction-related permits. Once approved, all recommendations for appropriate grading practices and project design that are included in that Report are required to be implemented during the Project design and construction. Pursuant to final grading plans, the Oakland Building Services Division will also review the engineering analysis for the Project's grading plan, and accompanying detailed engineering drawings. These detailed engineering plans must incorporate the recommendations identified in the Geotechnical Report, and be approved by Building Services prior to any excavation, grading, or construction activities on the Project site. All grading and other construction-related permits are subject to ongoing City monitoring and inspection throughout the construction period (and post-construction monitoring as may be required) to ensure compliance.

With implementation of all recommendations listed above, Rockridge concludes the potential for future slope instability at the Project site would be low.[15] Implementation of these site-specific recommendations for the fill slope south of (below) Building 9 would reduce the risk of slope failure, and potential impacts would be reduced to a less than significant level.

Surface Settlement and Ground Movement – Tunneling

Geology-4: Surface settlement commonly occurs as a result of tunnel excavation, primarily due to migration of ground (ground loss) towards the tunnel opening. Ground loss during tunnel excavation and construction operations could result in settlement of overlying road and/or utilities. With implementation of all applicable regulatory requirements and SCAs, the Project would not, directly or indirectly create a substantial risk to life or property due to the surface settlement or ground loss. (**Less than Significant with SCAs**)

As part of the Project, Head-Royce School proposes to construct a tunnel below Lincoln Avenue, linking the proposed South Campus) to the existing school. The proposed tunnel alignment relative to the existing campus and the Project site is shown in **Figure 8-7**. The conceptual design for this tunnel assumes invert elevations (i.e., the floor of the tunnel) of approximately 396 feet at the south portal, and 388 feet at the north portal. The tunnel would cross below Lincoln Avenue at an approximate slope of 4.8 percent. The alignment would terminate approximately 15 feet below existing grade within the Project site. The anticipated internal dimensions of the tunnel are 12 feet tall by 18 feet wide, and the minimum anticipated cover below Lincoln Avenue is approximately 7 feet (see Figure **8-8**).

Geologic Conditions of Proposed Tunnel Location

As part of conceptual design study for the tunnel, two borings were performed (Rockridge Geotechnical, 2017). Based on these borings and other available geotechnical information, the tunnel site is generally underlain by variable artificial fill consisting of fine- to coarse-grained material, gravel pieces and organic matters; stiff to very stiff clay fills with varying amounts of sand and native rock fragments; and bedrock consisting of sandstone, siltstone, and shale mélange and shale of the Franciscan Complex. The bedrock is noted to be extremely weak to medium strong, moderately to deeply weathered, and highly fractured. Areas of colluvial deposits of varying thicknesses and consisting of dark brown clayey soils with high expansive potential were also noted, although none appeared to be present in the borings closest to the tunnel alignment. Groundwater was encountered in the borings along the tunnel alignment and in borings performed at nearby locations, and is anticipated to be above the proposed tunnel invert elevation. Based on the borings, it is anticipated that bedrock could be encountered between 5 feet and 15 feet below existing grade in the areas around the proposed tunnel alignment.

[15] Rockridge Geotechnical, *Geotechnical and Geological Evaluation, Stability of Slope Below Building*, August 2020 (Appendix 8F)

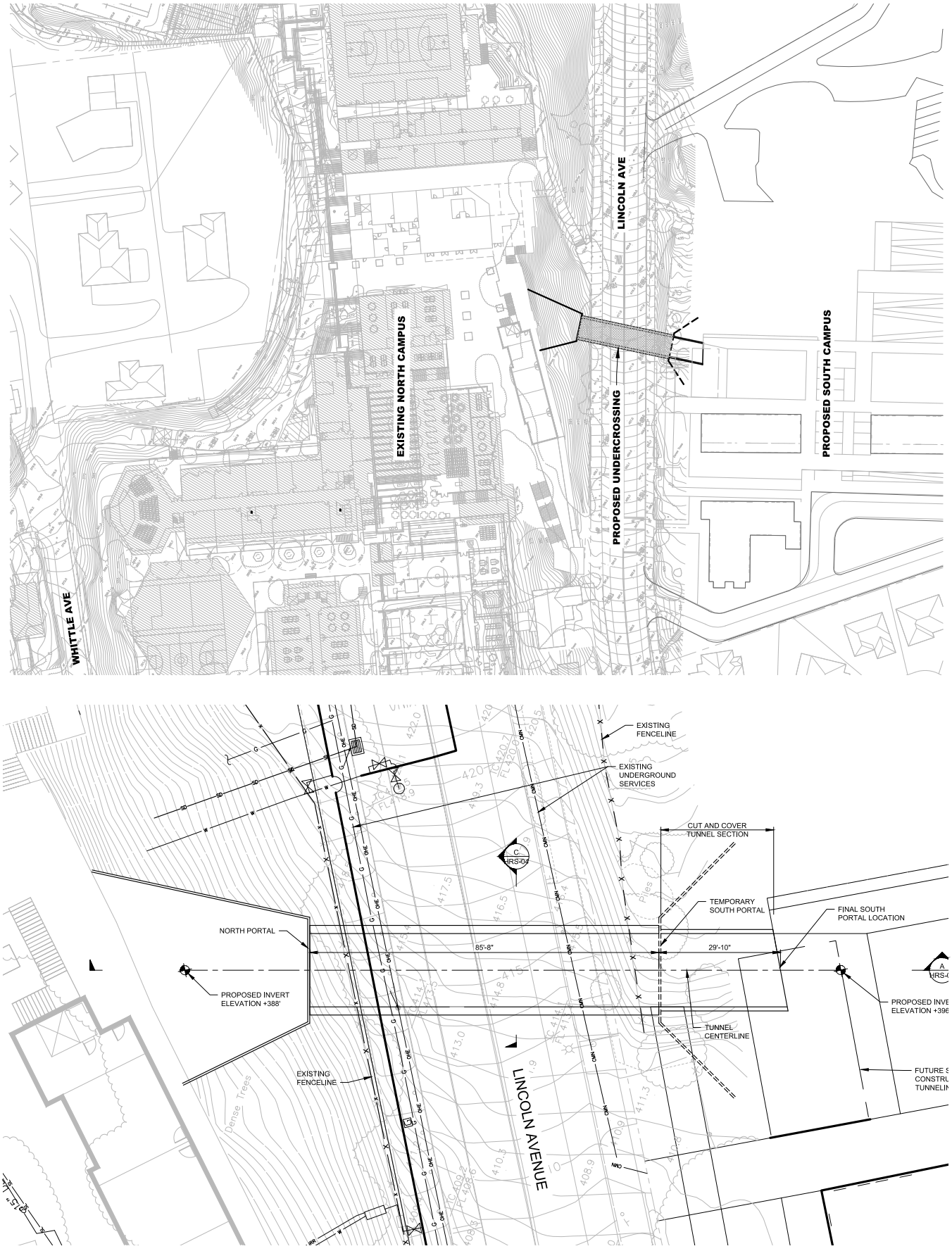
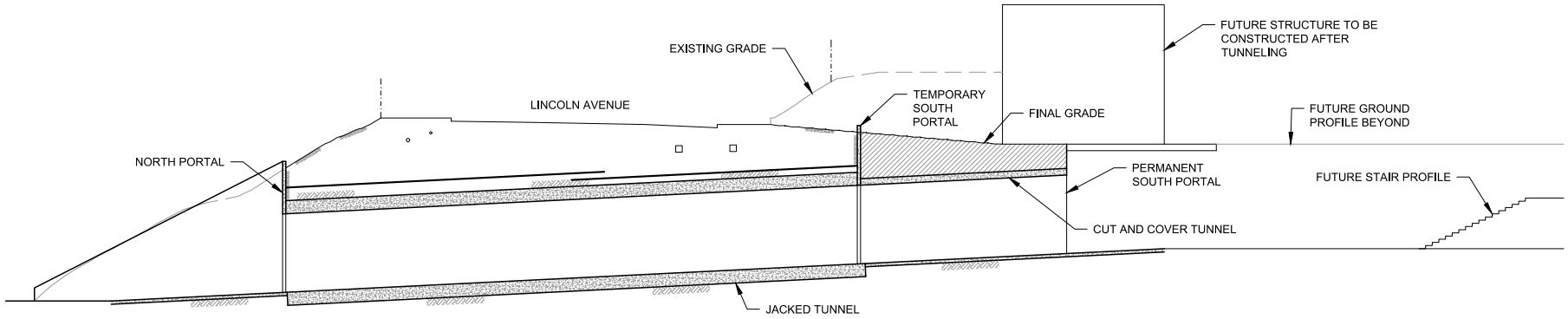
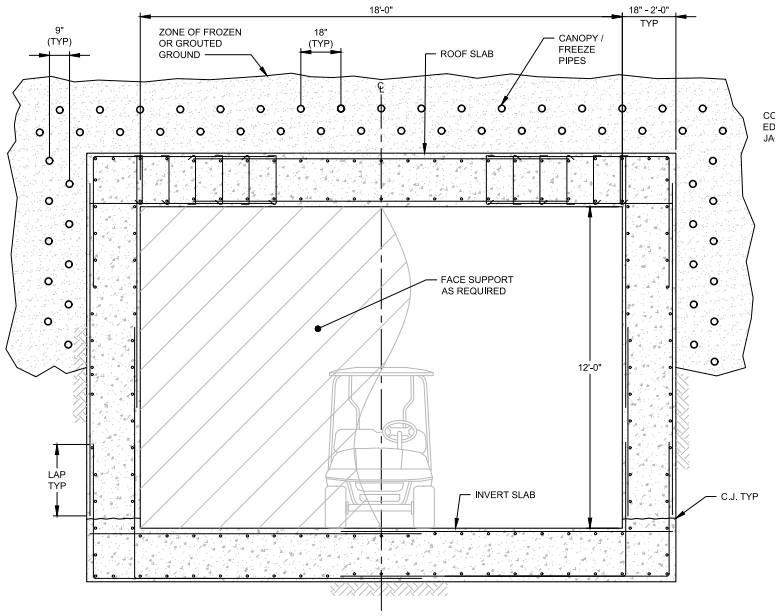


Figure 8-7
Proposed Pedestrian Tunnel Location

Source: McMillen Jacobs Associates, April 23, 2019



SECTION A
SCALE: 1" = 10' HRS-02



SECTION C
SCALE: 1/2" = 1'-0" HRS-02

Figure 8-8
Proposed Pedestrian Tunnel Design

Source: McMillen Jacobs Associates, April 23, 2019

Tunnel Design and Construction Methods

According to conceptual tunnel designs (Cahill and McMillan Jacobs, 2019), the length of the tunnel would be approximately 115 feet from the north to south portal locations. The tunnel's north portal would daylight within an existing courtyard space at the current Head-Royce campus. Temporary shoring would be provided at the north portal to provide a smooth transition from existing grade to the invert elevation of the tunnel, but no significant excavation at the north portal is anticipated. The invert elevation of the south portal is approximately 15 feet below the Project's proposed final grade, and a deep excavation will be required for portal construction. The amount of excavation at the south portal will be controlled by the final grading plan and access requirements for the undercrossing.

It is anticipated that tunnel construction will be accomplished using a "jacked box" method, which involves advancing a precast/cast-on-site concrete box along the tunnel alignment by pushing it into the ground with hydraulic jacks (see **Figure 8-9**). The box structure is typically open faced with a beveled steel cutting shield at the front end. As the box is advanced into the ground, excavated material is removed from inside the box. If large blocks or boulders are encountered, overcutting ahead of the box can be implemented to remove potential obstructions and aid in reducing jacking loads. The box jacking method requires an area for storage and construction operations. Because there is limited space around the north portal, it is anticipated that jacking operations will be carried out from the south end of the tunnel alignment. The actual construction sequence will be determined by the design engineer-of-record (EOR) and construction contractor, but construction will generally be sequence as listed below:

- Excavate and support both portals to the proposed tunnel invert elevation
- Construct a concrete launch pad and a backstop capable of mobilizing enough passive resistance to the required jacking loads
- Pre-support the ground along the alignment to control potential ground settlements and ground loss. Soil freezing, and/or a grouted pipe canopy are considered two feasible options
- Construct box structure on a greased concrete launch slab
- Advance the box into the ground using hydraulic jacks placed along the backstop
- For each push, excavate material from inside the box using a small excavator with a hoe ram or road-header
- Continue these steps until the tunnel/box terminus is reached
- Install tunnel finishes, including waterproofing, utilities, etc.

During tunnel excavation, it is common for ground settlement to occur, primarily due to migration of soil (ground loss) towards the tunnel opening. Ground loss during excavation and jacking operations could result in settlement of the overlying road (Lincoln Avenue) and/or utilities located below the road right-of-way that are placed within a layer of artificial fill below the ground surface.

Construction of a jacked box is not anticipated to produce vibration levels that would adversely affect nearby residential or Head-Royce School structures. The jacking processes would involve slow advancement of the tunnel using hydraulic equipment. Excavation of the ground in front of the advancing box will be by hydraulic excavator-type equipment. Vibrations from this equipment would be similar to those generated from typical roadway construction.

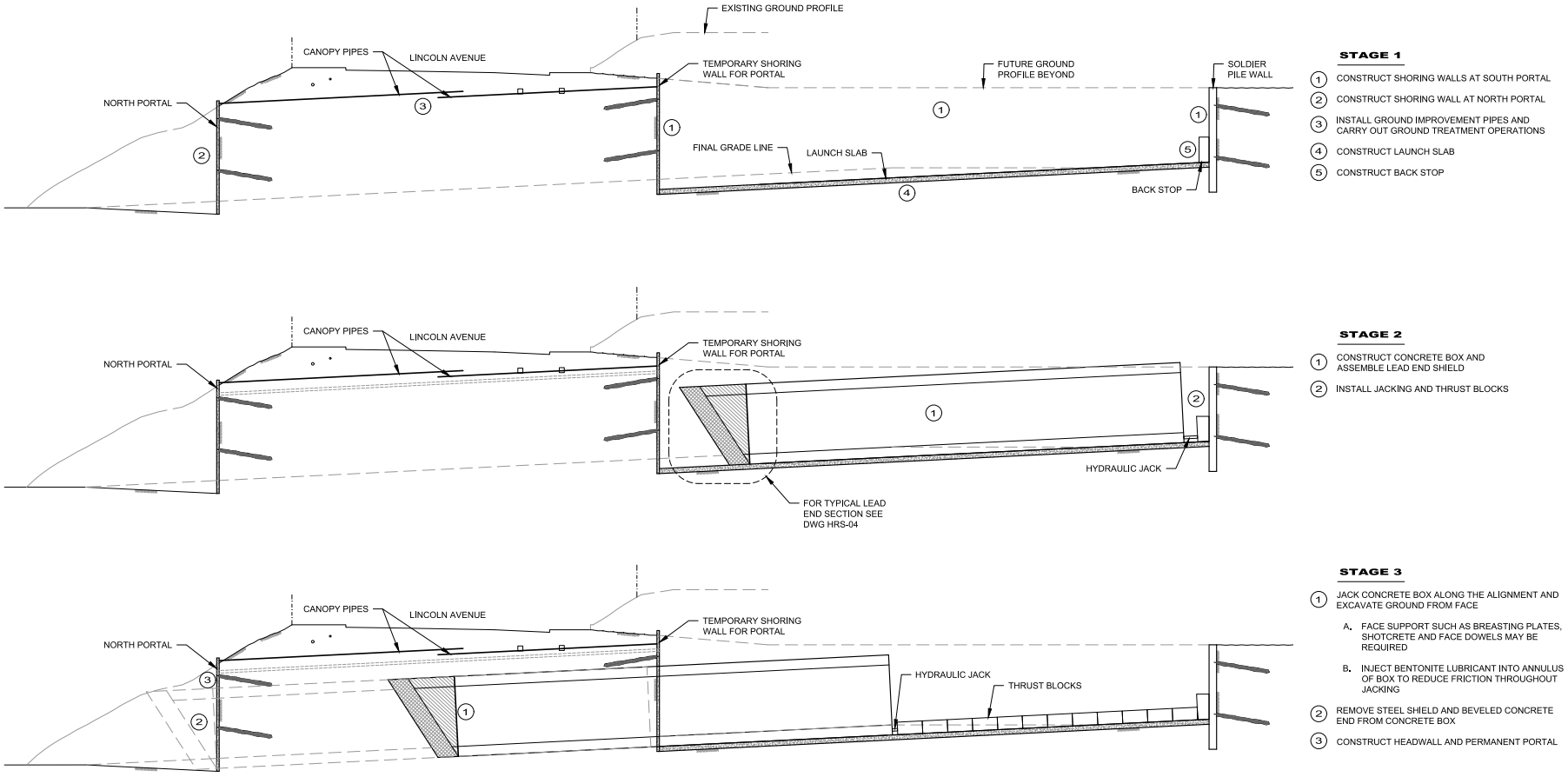


Figure 8-9
Proposed Tunnel Construction Method

Source: McMillen Jacobs Associates, April 23, 2019

De-Watering

According to groundwater monitoring records (Rockridge, May 2017), groundwater was encountered at depths of between 10 and 17 feet below ground surface, with the depth of groundwater relative to recent rainfall. The proposed tunnel would cross below Lincoln Avenue at approximately 15 feet below existing grade, and groundwater is likely to be encountered during construction. Localized drainage measures such as drainage holes and removal of groundwater collected at the heading of the tunnel excavation will be required during tunnel construction. Detailed groundwater considerations including estimates of groundwater quantities to be encountered will be further evaluated during final design evaluations. Specific measures to be implemented during construction will be established by the construction contractor and pursuant to obtaining dewatering discharge permits, as needed, from the City and the RWQCB.

Regulatory Requirements

Pursuant to ***SCA Geo-1: Construction-Related Permits***, tunnel construction will require applicable permit approvals issued by the City of Oakland. Tunnel construction will be required to comply with all standards, requirements and conditions contained in the City's construction-related codes, including but not limited to the CBC, the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction, including industry standards for seismic structural design as included in the most recent version of the CBC. Construction of the tunnel will occur in accordance with the CBC and local City requirements, and would reasonably reduce potential damage from surface settlement and ground movement to less than significant levels. ***Pursuant to SCA Geo-2: Soils Report,*** a design-level geotechnical investigation will be performed prior to construction of the tunnel. The soils report must be prepared by a registered geotechnical engineer, and reviewed and approved by the City prior to approval of construction-related permits. The soils report is required to include field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading and tunneling practices and project design. The investigations conducted pursuant to these soils reports will determine final design parameters for the tunnel and its construction methods. These regulatory requirements, which require structural designs consistent with the CBC and local building code requirements, will also reduce the potential impacts associated with surface settlement and ground movement to less than significant levels.

As more fully addressed in the Hydrology chapter of this EIR, different regulatory requirements may apply to the tunnel's potential de-watering process, depending on the volume and pollutant loads of non-stormwater discharges associated with dewatering.

- Pursuant to **SCA Hydro-2: State Construction General Permit**, the Project applicant will be required to comply with all regulations and requirements of a Construction General Permit issued by the SWRCB. De-watering may be discharged to the stormdrain system pursuant to a Construction General Permit, provided that a permit from the City (as the local sewer agency) is obtained prior to such discharge.
- If dewatering is not permitted pursuant to the Construction General Permit, then a statewide low-threat discharge Waste Discharge Requirements (WDR) or a site-specific NPDES permit may be required. Best Management Practices (BMPs) will be required and incorporated into individual SWPPPs and other permits prior to approval of grading permits, providing an acceptable level of water quality protection.

Recommendations Geo-4A: Concept Design and Constructability Recommendations for Pedestrian Tunnel. In furtherance of SCA Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the following design and construction considerations are recommended in the 2019 Cahill and McMillen Jacobs Conceptual Design and Constructability Evaluation (as also peer-reviewed by the City's geotechnical engineering consultants, EnGeo):

- The final alignment of the tunnel should be selected such that the length of the jacked box is minimized to reduce required jacking loads as much as possible. This can be accomplished by constructing the portals as close to the property lines as feasible.
- The jacked box will require construction of a soldier pile wall to aid in mobilizing passive reaction forces for jacking.
- Due to the size of the tunnel, design of a jacked box will have to assume a relatively simple geometry and an internal clear width not to exceed 18 feet (this clearance does not include any internal finishes, such as lighting, architectural finishes, waterproofing, etc.)
- For stiff/dense soil and rock conditions, overcut may be needed ahead of the box to facilitate advancing the box. Steel sheeting on the box roof and bentonite slurry lubricant will be required to minimize friction and maintain jacking forces.
- Depending on rock strength and the presence of soil and mixed face ground within the tunnel profile, temporary face support measures may be required to prevent ground loss. Options for face support will likely consist of sloping of the face, and installation of fiberglass face bolts, face shotcrete, or breasting.
- The jacked box construction of the tunnel will require pre-support of the ground prior to commencing excavation. Settlement of existing utilities overlying the tunnel can likely be addressed through exposing and providing structural strengthening, or by providing temporary bypass across the tunnel zone of influence. During final design, a detailed evaluation of overcutting, advance lengths, and settlement should be carried out once the construction approach is finalized. Specific measures anticipated for this project to address settlement include installation of pre-support measures such as a grouted pipe canopy or ground freezing prior to excavation, application of face support measures, and monitoring of overlying structures during construction to confirm no unanticipated ground movements develop as a result of tunnel excavation.
- Vertically shored excavations will be required at the portal locations. The actual extent of shoring will be dependent on the presence of nearby utilities, structures, construction methods/sequencing, and final grading requirements. An anchored shotcrete wall is likely the most economical means of supporting vertical cuts for both temporary and permanent conditions.
- If rock conditions are encountered, tieback lengths are anticipated to be approximately 25 to 35 feet in length. Tiebacks would be drilled in 3 to 4-inch holes, fully grouted, and staggered at a pattern spacing of about 6-foot vertical by 6-foot horizontal. For soil conditions, anchor lengths/loads will be larger with a tighter spacing. Shotcrete facing will also be required for temporary and permanent shoring. For permanent walls, anchors will need to be double corrosion protected (DCP) and designed for seismic conditions.
- If encroachment limitations prevent the use of anchors for temporary walls, the system can be internally braced using steel struts and soldier piles. If the shored material consists of soil in this case, soldier piles may be required.
- In all cases, shoring walls should be designed for drained conditions and incorporate weep holes, or strip/mat drains behind the facing.
- To protect existing facilities from the effects of tunnel and portal construction, installation of monitoring instruments along Lincoln Avenue will be required to monitor ground/utility movements and surface settlement. Prior to commencing excavation, utility monitoring points and surface settlement arrays should be installed within the influence zone of the tunnel and portal excavations. Monitoring of these points should be performed on a regular basis during construction (daily or

more frequently). Baseline readings will need to be taken to establish elevations prior to construction.

- Following completion of tunneling, monitoring should continue until readings stabilize or until such time that construction activities no longer warrant active monitoring. Actual monitoring locations will need to be determined after utility locations have been verified.
- Settlement thresholds and corrective actions will need to be established as part of the final design and prior to starting construction.

While a certain amount of ground settlement is common in shallow tunnels such as that proposed, the 2019 McMillen Jacobs Conceptual Design and Constructability Evaluation anticipates that total settlement above the tunnel should be limited to 1 to 2 inches, provided that all design and construction considerations and specific protection measures, as itemized above, are implemented. At 1 to 2 inches of total settlement, the overlying roadway can be repaired with an equivalent level of complexity as routine pavement repair.

Mitigation Measures

None needed.

Pursuant to ***SCA Geo-2***, the 2019 McMillen Jacobs Conceptual Design and Constructability Evaluation Report (which has been peer-reviewed by the City's geotechnical engineering consultants, EnGeo) will be reviewed in detail by the City Bureau of Building, and must be approved prior to issuance of any construction-related permits. Once approved, all recommendations for appropriate tunnel design, construction methods and dewatering practices that are included in the McMillen Jacobs Report are required to be implemented during the Project design and construction. Pursuant to final grading plans, the Oakland Building Services Division will also review the engineering analysis for the Project's tunneling plans and accompanying detailed engineering drawings. These detailed engineering plans must demonstrate implementation of all recommendations from the 2019 McMillen Jacobs Conceptual Design and Constructability Evaluation Report, and those engineering documents must be approved by Building Services prior to any excavation, grading, or construction activities associated with the pedestrian tunnel.

All grading and other construction-related permits for the tunnel will be subject to ongoing City monitoring and inspection throughout the construction period (and post-construction monitoring as may be required) to ensure compliance. Pursuant to **SCA Standard-1**, special inspectors, independent technical reviews and monitoring expertise of independent third-party technical and special inspectors may be needed during times of extensive or specialized plan-check review or construction, and the Project applicant will be required to pay for those specialized services if needed.

With implementation of all recommendations listed above, McMillen Jacobs concludes that, whereas surface settlements are unavoidable for any tunnel project, the magnitude and extent of settlements are highly dependent on the ability for construction contractors to control ground losses. Lowering the tunnel invert and providing face support and continuous pre-support measures as recommended in the 2019 Cahill and McMillen Jacobs Conceptual Design and Constructability Evaluation will help reduce the impact of ground losses and potential settlement to a degree that repairs will be similar to routine pavement repair – i.e., less than significant.

Additional consideration may be needed for addressing settlement impacts to the existing utilities beneath the road, but this work is also anticipated to be similar to routine utility construction. Close monitoring of existing facilities carried out to monitor ground movements and settlements will minimize impacts to surface structures and utilities. The recommended design and construction considerations listed above are considered typical for a tunnel constructed in an urban area, such that a jacked box approach to construction of the tunnel can be implemented successfully and without significant ground loss or land settlement.

With implementation of all applicable regulatory requirements, SCAs and recommendations from the 2019 Cahill and McMillen Jacobs Conceptual Design and Constructability Evaluation, the Project would not create a substantial risk to life or property due to surface settlement or ground loss, and impacts would be less than significant.

No additional mitigation measures are needed.

Expansive Soils

Geology-5: With implementation of all applicable regulatory requirements and SCAs, the Project would not create substantial direct or indirect risks to life or property due to the presence of expansive soil. **(Less than Significant with SCAs)**

Expansive soils are soils that swell and contract depending on the amount of water that is present.[16] Pursuant to the 2016 California Building Code, soils meeting all four of the following provisions are considered expansive:

- Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D4318.
- More than 10 percent of the soil particles pass a No. 200 sieve (75 µm), determined in accordance with ASTM D422.
- More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D422.
- Expansion index greater than 20, determined in accordance with ASTM D4829.

Laboratory test results for a limited number of soil samples from recent and prior test borings indicate a plasticity index ranging of from 18 to 30, indicating the presence of highly plastic soils. Evidence of expansive soil was also indicated in field observations of distressed pavements and concrete flatwork at this site (Rockridge Geotechnical, 2012).

Expansive soils are is subject to high volume changes resulting from changes in moisture content, and these volume changes can cause cracking of slabs, pavements, below-grade walls and foundations supported on these soils. Both long-term and seasonal shrinking and/or swelling of the underlying soil can potentially cause distress to future improvements constructed at the site. Near the edges of pavement or building pads, an expansive clay subgrade may be subjected to seasonal fluctuations in moisture content that could result in cyclic shrinking and swelling. Shrinking and swelling soils can be exacerbated near slope faces and can result soil creep.

Regulatory Requirements

Pursuant to ***SCA Geo-2: Soils Report***, a design-level geotechnical investigation will be performed for each new building and site improvement. The soils report must be prepared by a registered geotechnical engineer, and reviewed and approved by the City prior to approval of construction-related permits. The soils report is required to include field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The investigations conducted pursuant to these soil reports will determine final design parameters for earthwork, foundations,

[16] The CEQA threshold makes specific reference to Table 18-1-B of the Uniform Building Code (1994) to define expansive soils. The 2015 edition of the Uniform Building Code no longer contains Table 18-1-B, which has been superseded by Chapter 18A of the 2016 California Building Code, which states: In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist."

foundation slabs and any surrounding related improvements (including utilities, parking lots, roadways and sidewalks).

In furtherance of SCA Geo-2, the 2012 Rockridge Geotechnical Report has made general recommendations for appropriate grading practices to be implemented as part of the Project's overall design. The 2012 Rockridge Geotechnical Report indicates that the effects of expansive soil can generally be mitigated by moisture-conditioning the expansive soil subgrade, providing select and non-expansive fill below pavements and concrete flatwork and behind retaining walls, and by properly managing surface and subsurface drainage to prevent water from collecting beneath pavement or behind below-grade walls. Proper management of surface and subsurface water will help improve the future performance of existing facilities to remain as part of the Project, as well as new improvements pursuant to the Project.

Recommendations Geo-5A: Grading Practices for Expansive Soils. In furtherance of SCA Geo-2 and pursuant to the grading permit requirements found in the Oakland Municipal Code, the following grading practices are recommended in the 2012 Rockridge Geotechnical Report:

- Positive surface drainage should be provided around all buildings to direct surface water away from foundations and below-grade walls. To reduce the potential for water ponding adjacent to buildings, the ground surface within a horizontal distance of five feet from the buildings should slope down away from the buildings with a surface gradient of at least two percent in unpaved areas, and one percent in paved areas.
- Roof downspouts should be discharged into controlled drainage facilities to keep the water away from the foundations, below-grade walls, pavements, and concrete flatwork.
- Water-intensive landscaping around the perimeter of buildings should be avoided to reduce the amount of water introduced to the expansive clay subgrade.
- Aggregate base (AB) courses beneath any new pavements and pedestrian walkways located adjacent to landscape beds should be constructed with thickened concrete edges that extend though the AB and into the underlying clay subgrade.
- Systems for storm water treatment (infiltration basins, rain gardens, bio-retention systems, vegetated swales, flow-through planters, etc.) should be provided with underdrains and impermeable liners, and not designed for filtration into the subgrade. All such systems shall be designed in accordance with the Alameda County Clean Water Program - C3 Technical Guide.

The requirements of SCA Geo-2 require detailed soils reports and recommendations for appropriate grading practices and project design parameters for earthwork, foundations, foundation slabs and any surrounding related improvements. Consistent with CBC and local building code requirements, these measures will reduce the potential impacts associated with expansive soils to less than significant.

Mitigation Measures

No mitigation measures are required.

Implementation of the City's SCA Geo-2 (Soils Report) fully addresses the adverse effects associated with expansive soils by requiring site-specific design-level investigations for each new and/or renovated building and other site improvements. Implementation of these SCAs would reduce potential impact from expansive soils to a less than significant level.

Substantial Soil Erosion or Loss of Topsoil

Geology-6: With implementation of all applicable regulatory requirements, future development pursuant to the Project would not result in substantial soil erosion or the loss of topsoil. (**Less than Significant with SCAs**)

Of the approximately 8-acre proposed South Campus property, the Project would entail grading activities that would occur on approximately 5.1 acres, or 221,100 square feet (approximately 64% of the site), as shown on **Figure 8-10**. As indicated in **Figure 8-10**, the most substantial cut grading activities would be conducted for excavation of the proposed pedestrian tunnel entrance near Lincoln Avenue, with excavation to depths of 20 to 27 feet. Other substantial cut grading would occur near the upper entrance to the Loop Road to create additional level parking surfaces, and cuts into the slope uphill from the proposed Performing Arts building to accommodate a terraced Commons area and staircase that connects the upper parking lot with the lower academic buildings. Excavations of 6 to 10 feet would occur in these areas. The upper parking lot cut would be retained with an 8-foot retaining wall, and the cut grading at the Commons area would be "feathered" to match existing grade to the north and south. As also indicated in Figure 8-10, fill would occur along the lower westerly boundary of the site to create a level base for the Loop Road. Fills of 6 to 10 feet would occur in this area, retained by a sloping retaining wall of 3 to 8 feet in height. The majority of other grading activity across the site would consist of minor cuts and fills to create more level and moderately sloped parking areas, road base and building sites.

Overall, the Earthwork Plan shown in **Figure 8-11** would result in total cuts of approximately 13,800 cubic yards (CY) of soil, fills of approximately 8,100 CYs, and a net export of approximately 5,700 CY of soil. These cut and fill numbers do not include excavation for the tunnel, addressed separately below.

During and after the grading operation, exposure of newly excavated and newly placed soil could be subject to substantial wind and water erosion if not properly controlled. Vegetation removal could reduce soil cohesion and remove buffers from wind, water and surface disturbance, potentially rendering exposed soils susceptible to erosive forces. Construction-period earth-disturbing activities would be temporary, and erosion effects would depend largely on the length of time soils are subject to conditions that affect erosion processes.

Whereas substantial erosion is unlikely to occur on an operational (i.e., post-construction) basis and is not considered significant, please refer to the Hydrology chapter of this EIR for a more detailed discussion of post-construction stormwater runoff.

Tunnel Excavation

The quantity of tunneled material to be removed and hauled off-site is approximately 1,300 CY. This quantity assumes a tunnel dimension of 100-feet long by 22-feet wide by 16-feet high. Actual quantities will depend on the final tunnel alignment and excavation dimensions.

Regulatory Requirements

Pursuant to ***SCA Geo-3: Erosion and Sedimentation Control Plan for Construction***, the project applicant is required to prepare and submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan must include all necessary measures that will be taken to prevent excessive stormwater runoff or eroded soils onto adjacent properties, public streets or creeks as a result of conditions created by grading and/or construction operations. The Erosion and Sedimentation Control Plan must include measures such as short-term erosion control planting, waterproofing of slopes with covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap and filter sediment, and stormwater retention basins to be implemented during construction. If off-site work is necessary, the project applicant must obtain permission or easements as necessary for that off-site work. Pursuant to the Erosion and Sedimentation Control Plan, no grading may occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

The requirements of SCA Geo-3, which require all reasonable and feasible erosion control measures, will would reduce the potential impacts associated with substantial soil erosion or the loss of topsoil to less than significant.

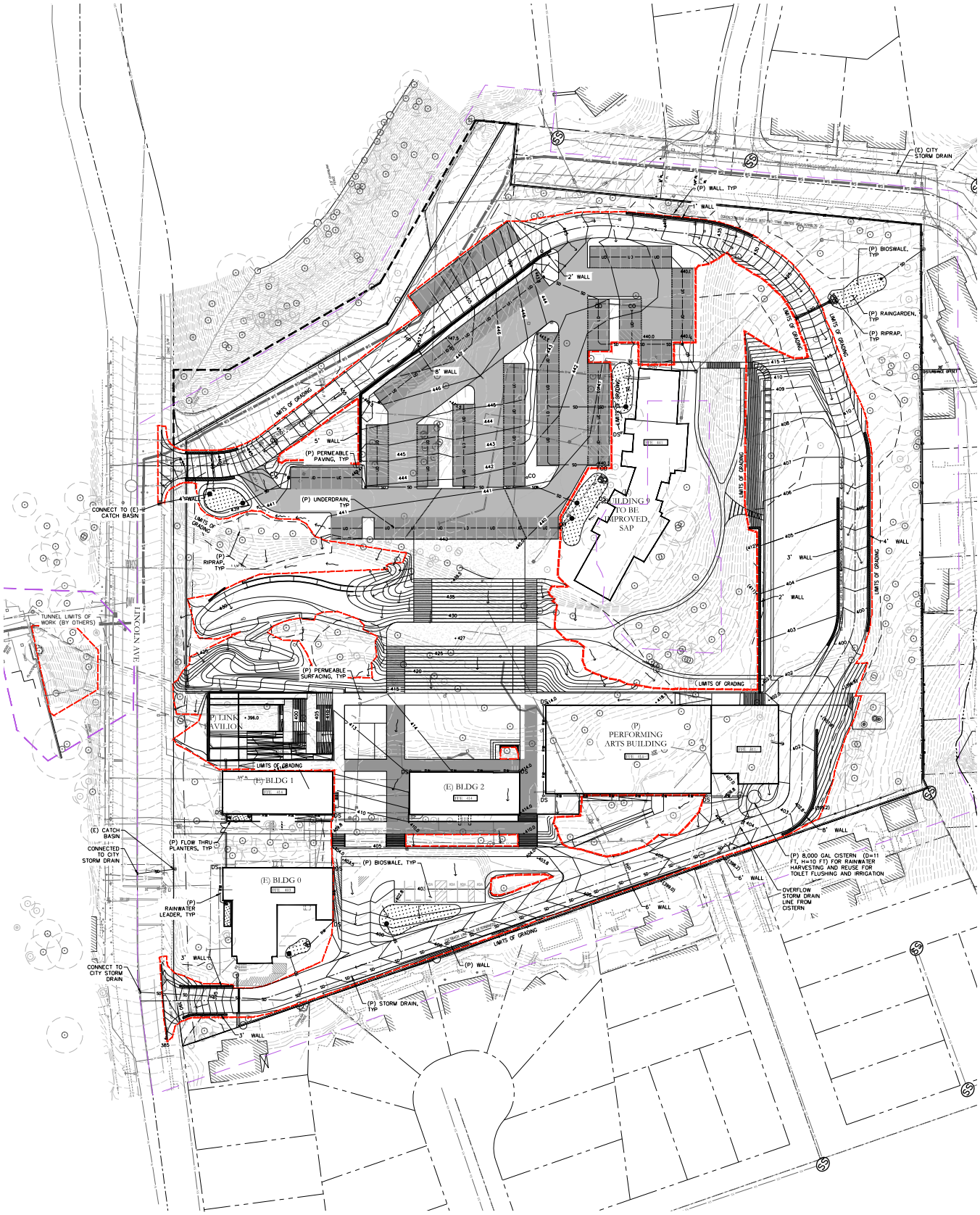


Figure 8-10
Limits of Proposed Grading

Source: Sherwood Design Engineers, August 2019

ELEVATIONS TABLE

NUMBER	MIN ELEV	MAX ELEV	COLOR
1	−27.000	−20.000	
2	−20.000	−15.000	
3	−15.000	−10.000	
4	−10.000	−8.000	
5	−8.000	−6.000	
6	−6.000	−4.000	
7	−4.000	−2.000	
8	−2.000	0.000	
9	0.000	2.000	
10	2.000	4.000	
11	4.000	6.000	
12	6.000	8.000	
13	8.000	10.000	
14	10.000	14.000	

Figure 8-11
Proposed Earthwork

Source: Sherwood Design Engineers, August 2019

Mitigation Measures

No mitigation measures are required.

Implementation of the City's SCA Geo-3 (Erosion and Sedimentation Control Plan) fully addresses the adverse effects associated with soil erosion or the loss of topsoil by requiring approval and implementation of specific measures to be implemented during grading and construction activity. Implementation of this SCA would reduce potential impact associated with substantial soil erosion or the loss of topsoil to a less than significant level.

Septic Tanks

Geology-7: Future development pursuant to the Project would be served by the existing municipal sewer system. No septic tanks or alternate waste disposal systems are proposed for development. (**No Impact**)

Wastewater generated within the Project will be collected through the City's sewer system and is disposed of and treated at the East Bay Municipal Utility District's treatment plant. Existing infrastructure is located within and adjacent to the Project site, and new development will connect to or expand existing wastewater lines. No septic tanks or alternative wastewater systems are proposed, and there would be no impact.

Cumulative Geologic Effects

The geographic context for the analysis of impacts resulting from geologic hazards is generally site-specific rather than cumulative in nature. Each development site has a different set of geologic considerations that would be subject to specific site development and construction standards. As such, the potential for cumulative geologic impacts to occur is limited.

Construction associated with all cumulative development is required to conform to the provisions of applicable federal, State, county and city laws and ordinances, including but limited to the California Building Code and City building codes. With adherence to all relevant plans, codes and regulations pertaining to building design and construction, cumulative development would provide adequate levels of safety, cumulative geologic impacts would be less than significant. The Project would not present a cumulatively considerable contribution to cumulative geologic impacts.

9

Greenhouse Gas Emissions and Global Climate Change

This chapter of the EIR evaluates the potential impacts of the Project related to greenhouse gas emissions and global climate change. This chapter describes the existing setting relative to climate change, and evaluates the extent to which the Project may generate significant new greenhouse gas emissions that adversely affect climate change.

Information for this chapter of the EIR has been derived from the following primary source:

- Illingworth & Rodkin, Inc., *Head-Royce School Expansion Air Quality and Greenhouse Gas Emissions Assessment*, August 6, 2020 (**Appendix 5)**

Existing Setting

Greenhouse gases (GHGs) that trap heat in the atmosphere regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor, but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These GHGs are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion
- N_2O is associated with agricultural operations such as fertilization of crops
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty
- HFCs are now used as a substitute for CFCs in refrigeration and cooling
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1, and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or

loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO2e).[1] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007.

The California Air Resources Board (CARB) updates the statewide GHG emission inventory on an annual basis. The latest inventory includes years 2000 through 2017 emissions.[2] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004, and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a peak in 2001 of 14.1 MT per person to 10.7 MT per person in 2017.

The most recent Bay Area emission inventory was computed for the year 2011.[3] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011.

Regulatory Setting

Recent Statewide Regulations and Policies

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, CARB, the California Energy Commission (CEC), California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020, down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any

[1] United States Environmental Protection Agency, 2020. Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018. April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf

[2] CARB. 2019. 2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

[3] BAAQMD. 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf, accessed Nov. 26, 2019

GHG reduction measures. The Scoping Plan has a range of GHG reduction actions including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO2e as the total 1990 statewide GHG emissions level, and 2020 emissions limit. This limit is a cumulative statewide limit, not a sector or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast in light of the economic downturn, to 545 MMT of CO2e. Two GHG emissions reduction measures enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO2e. Thus, an estimated reduction of 80 MMT of CO2e was found necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts

California enacted legislation (SB 375) in 2008 to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued California's 2017 Climate Change Scoping Plan.[4] While the State was on track to exceed the AB 32 scoping plan targets for year 2020, this plan was an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB, on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

[4] California Air Resource Board, 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets. November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide)
- Increase energy efficiency in existing buildings
- Develop fuels with an 18-percent reduction in carbon intensity
- Develop more high-density, transit-oriented housing
- Develop walkable and bike-able communities
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else, and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO2e per capita (statewide) by 2030, and no more than 2 metric tons CO2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[5] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1, 2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.

City of Oakland

City of Oakland 2030 Equitable Climate Action Plan

In 2018 and early 2019, the Oakland City Council adopted several resolutions that formed the mandate and basis for the current 2030 Equitable Climate Action Plan (ECAP), which replaced the city's 2020 Energy and Climate Action Plan, and added an Equity lens to the measures and actions.

- The first Resolution, 87183 C.M.S, adopted on May 15, 2018, revised and increased the City's GHG emissions reduction target to 56% below Oakland's 2005 Emissions by 2030, while maintaining the 2050 target. In establishing a 2030 GHG emissions reduction target, Resolution 87183 C.M.S. also fulfilled the City's final obligations under the Under 2 Memorandum of Understanding, signed by Mayor Schaaf in Paris at the United Nations (U.N.) Climate Change Conference of Parties on December 6, 2015. The 2030 GHG emissions reduction target was based on an analysis of the most cost-effective methods for Oakland to achieve its 2050 GHG reduction target.
- The second Resolution, 87292 C.M.S., adopted July 19, 2018, established the 13-member ECAP ad-hoc Community Advisory Committee to "provide expert and community-based input on the development of the new ECAP, and to advise and assist City staff with the community engagement process for the new ECAP."
- In the third Resolution, 87397 C.M.S., adopted November 2, 2018, the Oakland City Council declared a climate emergency. The Resolution called for regional collaboration and a "citywide just transition and urgent climate mobilization effort to reverse global warming ... as quickly as possible towards zero net emissions," as well as efforts to "safely draw down carbon from the atmosphere" and accelerate "adaptation and resilience strategies in preparation for intensifying climate impacts." This Resolution also committed the City to conduct public education and engage in partnerships supporting climate action and a just transition.

[5] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

- In January 2019, the City Council unanimously adopted Resolution 87511 C.M.S., supporting a Green New Deal, and directing the City Administrator to incorporate principles of the Green New Deal into the City's new 10-year climate action strategy.

After extensive analysis and public input, on July 28, 2020, the Oakland City Council adopted the 2030 ECAP with the intention that additional policies and Ordinances would be adopted to implement some of the 2030 ECAP strategies. The 2030 ECAP sets forth a detailed, equitable path toward cost-effectively reducing Oakland's local GHG emissions by a minimum of 56% below baseline 2005 GHG emissions levels by 2030, transitioning away from fossil fuel dependence, removing carbon from the atmosphere through local projects, and ensuring that all of Oakland's communities are resilient to the foreseeable impacts of climate change, by 2030. The current statewide goal pursuant to SB 32 is to reduce California's GHG emissions to 40 percent below 1990 levels by 2030, aligning with recommendations from the Intergovernmental Panel on Climate Change to achieve a level of climate stabilization that results in relatively minor consequences. Oakland's adopted 2030 reductions target of 56% below Oakland's 2005 GHG emission reaches beyond that of the State's 40% target

Concurrent with its adoption of the 2030 ECAP, Oakland City Council also adopted Resolution 88268 C.M.S. committing the city to achieve carbon neutrality by 2045. Achieving carbon neutrality by this date will require de-carbonization of the building and transportation sectors, including successful completion of all related Actions in the 2030 ECAP.

The 2030 ECAP contains not only deeper targets, but also qualitatively different and more focused Actions than those contained in the 2020 Energy and Climate Action Plan. Whereas the 2020 Plan included a heavy focus on energy efficiency and solar energy, the 2030 ECAP includes a major focus on building de-carbonization and energy resilience- fully removing natural gas from the built environment and installing energy storage systems where appropriate and feasible. The City's 2030 ECAP does not have a specific metric ton GHG threshold for individual projects, either for construction emissions or operational emissions. Instead, in December 2020, the City Planning Commission adopted an ECAP Checklist that every project applicant must complete to show consistency with the ECAP. The Project's ECAP Checklist is presented below under Impact GHG-1.

Oakland Municipal Code Chapter 15.37: Building Electrification Ordinance

On December 15, 2020, the Oakland City Council adopted an Ordinance, adding to the Oakland Municipal Code Chapter 15.37, "All-Electric Construction in Newly Constructed Buildings." These new regulations require all newly constructed buildings to meet the definition of an All-Electric Building, as defined therein. As a result, newly constructed buildings pursuant to the Project will be required to be designed to use a permanent supply of electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances, and will be prohibited from having natural gas or propane plumbing installed in the building. Designing the new building to use a permanent supply of electricity will reduce the estimated annual operational greenhouse gas emissions from energy emission sources of the Project.

City of Oakland Standard Conditions of Approval - GHG

As part of its December 2020 actions to implement the 2030 ECAP, the City of Oakland Planning Commission adopted new SCAs related to GHG emissions from land use development projects. If a development project completes the ECAP Checklist and qualitatively demonstrates compliance with the Checklist items as part of the project's design (or alternatively, demonstrates to the City's satisfaction why the item is not applicable), then the project will be considered in compliance with the City's CEQA GHG Threshold of Significance. If a development project cannot meet all of the Checklist items, the project will alternatively need to demonstrate consistency with the 2030 ECAP by complying with the City of Oakland GHG Reduction Plan Condition of Approval. If the project cannot demonstrate consistency with the 2030 ECAP in either of those

two ways, the City will consider the project to have a significant effect on the environment related to GHG emissions.

SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist

Applies to*: All projects that submitted an Equitable Climate Action Plan (ECAP) Consistency Checklist, and that also committed to all the measures in the ECAP Consistency Checklist.*

The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase.

a. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.

When Required: Prior to approval of construction-related permit.

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Planning

b. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction.

When Required: During construction

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

c. For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents.

When Required: Ongoing

Monitoring/Inspection: Bureau of Planning

SCA GHG-2: Greenhouse Gas (GHG) Reduction Plan

Applies to: *Projects that require a consistency analysis or greenhouse gas (GHG) analysis under CEQA, and that either:*

a. involve a land use development and does not commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist, or

b. involve a stationary source of GHG and, after a GHG analysis is prepared, would produce total GHG emissions of more than 10,000 metric tons of CO2e annually)

No GHG Reduction Plan is needed if a project is found to be consistent with the 2030 ECAP by demonstrating consistency with all ECAP Checklist criteria, per SCA GHG-1 (above)

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential GHG emissions impacts that could result from the Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance[6]

The project would have a significant impact on the environment if it would:

1. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO2e annually (stationary sources are projects that require a BAAQMD permit to operate).
2. For a project involving a land use development, fail to demonstrate consistency with the 2030 Equitable Climate Action Plan adopted by the City Council on July 28, 2020 (land use developments are projects that do not require a BAAQMD permit to operate). Consistency with the 2030 ECAP can be shown by either:
    a. Commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist,[7] or
    b. Comply with the GHG Reduction Standard Condition of Approval that requires a project-level GHG Reduction Plan quantifying how alternative reduction measures will achieve the same or greater emissions than would be achieved by meeting the ECAP Consistency Checklist.
3. For projects that involve both a stationary source and a land use development, calculate each component separately and compare to the applicable threshold.

Consistency with the 2030 Equitable Climate Action Plan

GHG-1: The Project applicant commits to implementation of all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist, thereby demonstrating consistency with the 2030 Equitable Climate Action Plan and reducing its GHG emissions to a level of less than significant (**Less than Significant**)

GHG emissions, consisting primarily of emissions from equipment exhaust and worker and vendor trips, would occur over the short-term as a result of Project construction activities. In the longer term, the Project would generate operational GHG emissions associated with vehicular traffic, energy and water usage, and solid waste disposal.

The Project applicants have completed an ECAP Consistency Checklist (see **Appendix x**), which answers affirmatively to all applicable Checklist questions, meaning that they fully intend to comply with the City's 2030 ECAP, and agrees to incorporate all 2030 ECAP Consistency Checklist items into the Project's design, construction and operation. The ECAP Consistency Checklist and respective answers (as further explained) is provided in **Table 9-1**.

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[6] The City's Thresholds of Significance pertaining to greenhouse gas (GHG) emissions and global climate change are intended to achieve deeper emissions reductions than the more lenient thresholds adopted by the Bay Area Air Quality Management District (BAAQMD) in June 2010. Pursuant to CEQA, lead agencies must apply appropriate thresholds based on substantial evidence in the record. The City's Thresholds rely upon the technical and scientific basis for the City's 2030 Equitable Climate Action Plan (ECAP), which provide substantial evidence that adherence to the 2030 ECAP action items will achieve GHG emissions reduction targets of 56% below 2005 levels by 2030 and 83% below 2005 levels by 2050. Use of the City's thresholds is consistent with and authorized by CEQA Guidelines section 15064. The City's thresholds have not been challenged and remain in effect.

[7] The ECAP Consistency Checklist includes all of the project-level GHG emissions reduction strategies that are either regulatory requirements or are necessary at a project level to meet the adopted city-wide GHG emissions reduction targets of 56% reduction from 2005 levels by 2030 and 83% reduction by 2050. As new strategies are adopted to align with the 2030 ECAP, the Checklist will be updated and new projects will be expected to achieve the revised strategies or comply with the GHG Reduction Standard Condition of Approval.

Table 9-1: ECAP Consistency Checklist

Yes	No	
■		1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, and/or taking advantage of allowable density and/or floor area ratio (FAR) standards in the City's General Plan?

The Project would redevelop an existing institutional campus for school uses, consistent with the Project site's General Plan land use designation of Institutional. With approximately 45,750 square feet of total building space on the approximately 7.8-acre South Campus site, the Project's FAR (at approximately 0.13) is within the allowable FAR of 8.0 as set by the General Plan.

Yes	No	
N/A		2. For developments in "Transit Accessible Areas" as defined in the Planning Code, would the project provide: i) less than half the maximum allowable parking, ii) the minimum allowable parking, or iii) take advantage of available parking reductions?

The Project site is not located within a "Transit Accessible Area" as defined in the Planning Code. The Project site is not within one-half (1/2) mile of a BART Station, a BRT Station, or a designated rapid bus line. The site is served by bus transit stops located within a one-half mile radius (see the Transportation chapter of this Draft EIR). These bus stops have a frequency of service interval of 15 minutes or less during the AM peak period, but the frequency of bus service is limited to school-based PM peak commute periods, rather than during the traditional afternoon peak commute periods**.**

Yes	No	
■		3. For projects including structured parking, would the structured parking be designed for future adaptation to other uses? (Examples include, but are not limited to: the use of speed ramps instead of sloped floors)

A structured parking garage is not proposed as part of the Project, but a stacked parking lift may be a potential solution to long-term parking requirements. The Project's design provides for 154 parking spaces on the proposed South Campus, and 154 parking spaces on the existing Campus that exist and are not proposed to change, for a total of 308 off-street parking spaces. If the ultimate parking demand for the School exceeds this parking supply at full enrollment, the School proposes to either add 36 parking spaces in a stacked parking lift at the northerly existing Campus near the athletic fields, or to reduce parking demand by prohibiting some or all students from driving to school. The potential stacked parking lift could be removed if this site were to be adapted for other uses in the future.

Yes	No	
■		4. For projects that are subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents?

The School is currently subject to TDM requirements to reduce single-occupant vehicles by 30% (more than the City's general TDM requirement of a 20% reduction), and that TDM requirement will be extended to new students and faculty attributed to the Project. The School's current TDM Plan includes providing a subsidy to students and faculty for transit passes, and that subsidy would be extended to new students and faculty as well

Yes	No	
N/A		5. For projects that are not subject to a Transportation Demand Management Program, would the project incorporate one or more of the optional Transportation Demand Management measures that reduce dependency on single-occupancy vehicles? (Examples include but are not limited to transit passes or subsidies to employees and/or residents; carpooling; vanpooling; or shuttle programs; on-site car-share program; guaranteed ride home programs)

The Project is subject to a Transportation Demand Management Program

Yes	No	
■		6. Does the project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable?

The Project applicant has committed to comply with PEV Charging Infrastructure requirements of the Oakland Municipal Code, and EV chargers will be provided as part of the Project as required.

Yes	No	
N/A		7. Would the project reduce or prevent the direct displacement of residents and essential businesses? (For residential projects, would the project comply with SB 330, if applicable? For projects that demolish an existing commercial space, would the project include comparable square footage of neighborhood serving commercial floor space)

The proposed South Campus has only been used by Head-Royce for parking since approximately 2017, when the Lincoln moved its operations to West Oakland. The Project would not displace residents, essential businesses or the former institutional use that occupied the site until 2017.

Yes	No	
■		8. Would the project prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans? (The project should not prevent the City's Bike and Pedestrian Plans from being implemented. For example, do not install a garage entrance where a planned bike path would be, unless otherwise infeasible due to Planning Code requirements, limited frontage or other constraints)

The Project will prioritize sidewalk and curb space by minimizing curb cuts along the Project's Lincoln Avenue frontage, and would not prevent implementation of any improvements associated with the City's Bike and Pedestrian Plans.

Yes	No	
■		9. Does the project not create any new natural gas connections/hook-ups?

None of the Project's proposed new buildings are proposed to have new natural gas connections or hookups.

Yes	No	
■		10. Does the project comply with the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code), if applicable?

The Project is designed to meet the requirements of the City's Green Building Ordinance. The Project is proposed to be designed and built to meet LEED Gold standards for the renovation of existing Buildings 0, 1 and 2, and to meet LEED Gold certification or equivalent for new construction of the Performing Arts Center and Link Pavilion. Strategies that would be incorporated to meet these goals include using natural light, renewable energy, and rainwater harvesting.

Yes	No	
N/A		11. For retrofits of City-owned or City-controlled buildings, would the project be all-electric, eliminate gas infrastructure from the building, and integrate energy storage wherever technically feasible and appropriate?

The Project is not a retrofit of City-owned or City-controlled buildings.

Yes	No	
■		12 Would the project reduce demolition waste from construction and renovation and facilitate material reuse in compliance with the Construction Demolition Ordinance (Chapter 15.34 of the Oakland Municipal Code)?

The Project would comply with the Construction Demolition Ordinance by requiring the Project contractor reduces demolition waste and facilitates material reuse as required.

Yes	No	
	NA	13. For City projects: Have opportunities to eliminate/minimize fossil fuel dependency been analyzed in project design and construction?

The Project is not a City project, it is a private school project.

Yes	No	
■		14. For new projects in the Designated Very High Wildfire Severity Zone: Would the project incorporate wildfire safety requirements such creation of defensible space around the house, pruning, clearing and removal of vegetation, replacement of fire resistant plants, as required in the Vegetation Management Plan?

The Project would comply with the School's existing Vegetation Management Plan, which includes requirements for pruning, clearing and removal of vegetation, and other measures to mitigate the risk of wildfire hazards.

Yes	No	
■		15. Would the project replace a greater number of trees than will be removed in compliance with the Tree Preservation Ordinance (Chapter 12.36 of the Oakland Municipal Code) and Planning Code if applicable and feasible given competing site constraints?

Based on the Tree Survey conducted for the Project site, there are 480 total trees on the Project site, of which 321 trees are identified as protected trees and subject to the Tree Preservation Ordinance. The Project proposes to remove 35 protected trees that are in poor condition and should be removed for safety, and 86 additional protected trees that are indicated for removal to accommodate the Project's design, including 30 trees of native species. According to the City Tree Ordinance, no tree replacements are required for the removal of non-native species or for trees removed for the benefit of remaining trees, but replacement tree plantings will be required for the removal of the 30 protected trees of native species to be removed by the Project, in addition to other trees as proposed pursuant to subsequent phases of development (or Final Development Plans) and their respective landscape plans..

Yes	No	
■		16. Does the project comply with the Creek Protection, Stormwater Management and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code), as applicable?

Construction improvements near an off-site creek will be managed to avoid erosion and sedimentation of that off-site creek, including construction fencing with a silt fence near the property line, and placement of straw wattles on contour, spaced on the slope between the improvements and the construction fence. Channelized drainage and point surface run-off from the Project site will be managed with on-site check dams and sediment basins. The Project will comply with the City's Creek Protection, Stormwater Management and Discharge Control Ordinance.

Whereas the Project is a development project, and the Project applicants have completed the ECAP Consistency Checklist that qualitatively demonstrates compliance with the Checklist items as part of the Project's design (or alternatively demonstrates to the City's satisfaction why certain items are not applicable), the Project is considered in compliance with the City's CEQA GHG threshold of significance, and its GHG impacts would be less than significant.

Standard Conditions of Approval

The Project applicants have implemented **SCA GHG-1,** demonstrating full compliance with the ECAP Consistency Checklist. Therefore, compliance with SCA GHG-2 pertaining to the preparation of a GHG Reduction Plan is not required.

Mitigation Measures

None required

Stationary Sources of GHG Emissions

GHG-2: The Project's limited number of stationary sources of GHG emissions (those sources that require a BAAQMD permit to operate) would not produce total emissions of more than 10,000 metric tons of CO2e annually. (**Less than Significant**)

The Project's proposed Link Pavilion building will house an electric-powered elevator to provide ADA access from the base invert elevation of the pedestrian tunnel to the upper ground surface. Additionally, the Performing Arts Center may also include an electric-powered elevator and or lift for ADA access to the upper floors and for moving larger pieces of equipment and supplies. These elevators and/or the lift may require, or it may be desired to provide, a back-up diesel generator in case of emergency power outages. These generators would be tested periodically and power the elevators in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each, per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod and found to generate approximately 8 metric tonnes of CO2e/year,[8] well below the BAAQMD threshold of 10,000 MTCO2e/yr, and these GHG emissions would be less than significant.

Mitigation Measures

None required

Cumulative GHG Emissions

Analysis of the Project's climate change impacts as discussed above provides an analysis of the Project's contribution to cumulatively significant global impacts through its individual emission of GHGs. The cumulative impacts of the Project with respect to the issue of climate change are therefore captured in the project-level analysis (Impacts GHG-1 and -2), which finds that the Project's GHG emissions would be less than significant, and no further cumulative analysis is necessary.

[8] Illingworth & Rodkin, *Head-Royce School Expansion Air Quality and Greenhouse Gas Emissions Assessment*, August 2020

10

Hazards and Hazardous Materials

This chapter of the EIR evaluates the potential impacts of the Project related to known hazards and hazardous materials. This chapter describes the existing potentially hazardous conditions in and near the Project, and evaluates the extent to which hazards and hazardous materials may affect development of the Project as proposed.

Information for this chapter of the EIR has been derived from the following primary sources:

- PES Environmental, Inc., *Phase I Environmental Site Assessment, Lincoln Child Center at 4368 Lincoln Avenue*, May 7, 2012 (**Appendix 10)**

Definition of Hazardous Materials and Waste

A hazardous material is defined as "any material that, because of quantity, concentration or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment, if released into the workplace or the environment." The term "hazardous materials" refers to both hazardous substances and hazardous wastes. By convention, most hazardous materials are thought to be hazardous chemicals, but certain radioactive and biohazardous materials are also considered hazardous. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such, or if it is toxic, ignitable, corrosive, or reactive, radioactive or bioactive. By statutory definition, biohazardous materials include biohazardous laboratory wastes and biologic specimens such as human or animal tissue (as defined by Section 117635 of the California Health and Safety Code).

Historical industrial or commercial activities on a site may have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials, which can be released during building demolition activities. If improperly handled, hazardous materials and wastes can cause public health hazards when released to the soil, groundwater or air. The four basic exposure pathways through which an individual can be exposed to a hazardous material include inhalation, ingestion, bodily contact and injection. Exposure can occur from an accidental release of hazardous materials during transportation, storage or handling. Disturbance of contaminated soils during construction can also cause exposures to workers, the public or the environment through stockpiling, handling or transportation of soils.

For the purpose of this EIR, a hazardous waste is any hazardous material that is abandoned, discarded or recycled, as defined in the State of California Health and Safety Code (Chapter 6.95, Section 25125). Hazardous wastes may be generated by actions that change the composition of previously non-hazardous materials.

The transportation, use, and disposal of hazardous materials, and the potential releases of hazardous waste to the environment, are tightly regulated through state and federal laws, as further described in the Regulatory Setting of this chapter.

Environmental Setting

This section describes the environmental setting that is applicable to health and safety regarding hazards and hazardous materials associated with the Project area.

Known Hazardous Sites

In California, regulatory databases listing hazardous materials sites provided by numerous federal, state and local agencies are consolidated in the "Cortese List" pursuant to Government Code Section 65962.5. The Cortese List is located on the California Environmental Protection Agency's (Cal EPA) website and is a compilation of the following lists:

- The California Department of Toxic Substances Control (DTSC) portion of the Hazardous Waste and Substances Sites List, available on the DTSC EnviroStor database
- The California State Water Resources Control Board (SWRCB)/or San Francisco Regional Water Quality Control Board (RWQCB) portion of List, including leaking underground storage tanks (LUSTs), underground storage tanks (UST), and Spills, Leaks, Investigations and Cleanup (SLIC) sites as listed on the SWRCB GeoTracker database
- Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit
- "Active" Cease and Desist Order (CDO) and Cleanup and Abatement Order (CAO) sites from the SWRCB, and
- Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by DTSC and listed on the EnviroStor database

The databases cited above identify sites with suspected and confirmed releases of hazardous materials to the sub-surface soil and/or groundwater. The reporting and status of these sites change as identification, monitoring and cleanup of hazardous sites progress. Typically, sites are "closed" once it has been demonstrated that existing site uses combined with the levels of identified contamination present no significant risk to human health or the environment.

Cortese List Records - Project Site

A Phase I Environmental Site Assessment (Phase 1 ESA) of the former Lincoln Child Center (the proposed South Campus) was performed by PES Environmental, Inc. (PES) in May 2012. The Phase I ESA was performed in general accordance with ASTM International guidelines for Phase I ESAs (ASTM E 1527-05), and included the following tasks:

- Federal, State and local agency databases were reviewed to identify nearby sites that have reported the use, storage, or release of hazardous materials
- Regulatory agency records regarding the site and adjacent properties were reviewed
- Historical information such as aerial photographs, Sanborn Fire Insurance maps and historical topographic maps of the site and surrounding area were obtained and reviewed to evaluate prior land uses
- Previous environmental reports prepared for the subject property were reviewed
- Individuals with knowledge of the site were interviewed, and
- An inspection of the site and a reconnaissance of surrounding properties was performed to assess the potential for contamination of the site from on-site or off-site sources. The site inspection was conducted by an environmental professional with qualifying experience.

As part of that Phase I ESA, PES also obtained an Environmental Data Resources, Inc. (EDR) report, dated April 6, 2012, which contains a listing of all regulatory database sites located within a 1-mile radius of the Project site, selected in accordance with ASTM E-1527-05 standards. This information was obtained from computerized databases of federal, State and local records. Based on their review of the environmental database search conducted by EDR, concluded that the Project site was not listed on any of the following Cortese List databases:

- Not listed as a Federal Superfund (National Priority List) site
- Not listed as a State deed-restricted site
- Not listed as a solid waste disposal site (SWF) as identified by SWRCB
- Not listed as a site with an "Active" Cease and Desist Order (CDO) or Cleanup and Abatement Order (CAO) from the SWRCB
- Not listed as having any environmental records for the property on the SWRCB GeoTracker website, and
- Not listed as having any environmental records for the property on the DTSC EnviroStor website

A more recent search of the SWRCB GeoTracker website and the DTSC EnviroStor website also reveal no listing of the subject property.[1] Based on this information, the Project site is not a hazardous materials site as listed on the "Cortese List" pursuant to Government Code Section 65962.5.

Cortese List Properties in Surrounding Area

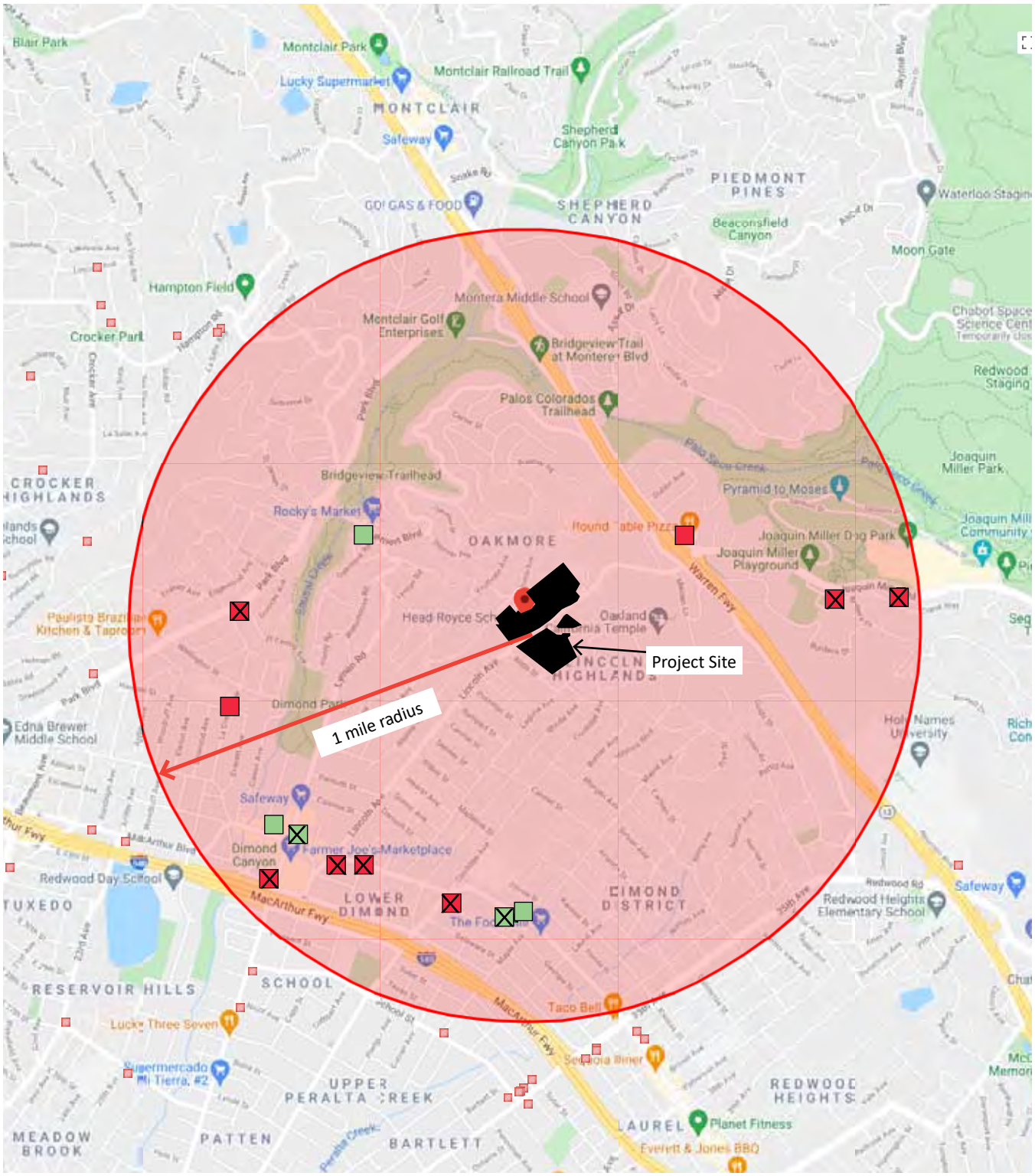
The 2012 Phase I ESA identified several sites in the vicinity that were listed on hazardous materials release and/or storage databases. The properties listed in the database for the surrounding area were not expected to present significant environmental conditions to the subject property, based on one or more of the following:

- the listed property had received case closure by the appropriate regulatory agency
- the listed property was either cross gradient or down gradient of the subject property with respect to the inferred regional groundwater flow direction
- the listed property was a soils-only affected case, and/or
- the listed property was located at too great a distance to represent a significant environmental condition with respect to the subject property

A more recent search of the DTSC EnviroStor website also revealed that there is no listed Federal Superfund, State Response, Voluntary Cleanup, School Cleanup, Evaluation, School Investigation, or Military Evaluation, Tiered Permit or Corrective Action sites within 1 mile of the Project site. A more recent search of the SWRCB GeoTracker website revealed similar sites as identified in the 2012 Phase I ESA (see **Figure 10-1**). These include three LUST Cleanup sites (two "closed" and one listed as "Open) on the uphill side of Highway 13, one Open case east of the site on Leimert, and multiple open and closed cases well down-gradient of the Project site along MacArthur Boulevard, and no permitted Waste Discharge Requirements (WDR) sites, permitted UST sites, or permitted DTSC Hazardous Waste sites within 1 mile of the Project site.[2]

[1] Geotracker and Envirostor websites accessed on 2/10/21 at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4500+Lincoln+Avenue%2C+oakland%2C+Ca and https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=4500+Lincoln+Avenue%2C+oakland%2C+Ca

[2] Ibid



LEGEND
- LUST Cleanup Sites
- Cleanup Program Sites
- ☒ Signifies a Closed Site

Figure 10-1
Listed Hazardous Materials Properties in Surrounding Area

Source: State Water Resources Control Board, Geotracker website, accessed 6/5/2021

Other Environmental Records – Project Site

The Project site is listed on the Hazardous Waste Information System (HAZNET) database maintained by the SWRCB, which includes data extracted from copies of hazardous waste manifests each year by the DTSC. The HAZNET database lists manifested off-site disposal of asbestos-containing waste in 1995, 1997, 1999, 2000, 2002 and 2006.

Presence of On-Site Hazardous Materials

The 2012 Phase I ESA also included an inspection of the property and site vicinity. In 2012, the property was similar to current conditions, and included the same three, two-story and eight single-story buildings and associated storage sheds, covered play/eating area, two-story climbing/storage structure, playgrounds, playing fields and associated landscaped and paved parking areas. During the site inspection, other than relatively small quantities of paints, adhesives, cleaners, lubricants, insecticides and drain treatment materials, no other chemicals were observed stored or used on the site. No evidence of former or existing USTs or ASTS was identified, no generators were present, no elevators were present and no hydraulic trash compactors were present.

Polychlorinated Biphenyls (PCBs)

Although no transformers were observed on the site, subsurface transformers were present along Lincoln Avenue, and fluorescent lighting was present in most buildings. Based on the age of some of the site buildings, PCB-containing light ballasts and construction materials (e.g., window caulk) may be present.

Asbestos

An assessment of asbestos-containing building materials was not conducted as part of the Phase I ESA. Standards set by the Occupational Safety and Health Administration (OSHA) require building owners to presume that thermal system insulation and surfacing asbestos-containing material (ACM) will be found in buildings constructed before 1981, and floor tile installed in buildings through 1981 are assumed as asbestos containing, unless demonstrated to be less than 1 percent asbestos through sampling. Previous asbestos surveys and abatement activities have been performed at the site, and an asbestos Operations & Maintenance Manual has been prepared for the site.

Radon

The National Radon Database includes radon information from U.S. EPA/State Residential Radon Surveys conducted between 1986 and 1992. The database includes test results from 23 sites within the subject property zip code. The average value for radon level reported in this region was 1.000 pico curies per liter (pCi/L) of air for the basement area. This is lower than the U.S. EPA's recommended action level of 4 pCi/L. The survey indicates that it is unlikely that radon levels in buildings on the subject property area are above the EPA action level, and no radon gas testing was deemed necessary for the property.

Lead-based Paint

An assessment of lead in paint was not performed as part of the scope of this Phase I ESA. However, based on the pre-1982 construction dates of several on-site buildings, lead-based paint may be present.

Airports

Aviation safety hazards can result if projects are located near airports. The public airports located nearest to the Project site are the Oakland International Airport (approximately 5 miles), the Hayward Executive Airport (approximately 11 miles), and the San Francisco International Airport (approximately 15 miles) from the Project site. There are no other private airstrips in the vicinity.

Regulatory Setting

This section provides an overview of the health and safety regulatory framework that may be applicable to the Project.

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations and responsible agencies are summarized below and are discussed in detail in this section. The Emergency Planning and Community Right to Know Act of 1986 imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that materials are accidently released.

Hazardous Materials Site Listings

The National Priorities List (NPL) is a compilation of over 1,200 sites for priority cleanup under the Federal Superfund Program. The Proposed National Priorities List identifies sites considered for NPL listing. The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) system contains data on potentially hazardous waste sites that have been reported to the USEPA by California. CERCLIS contains sites that are proposed or are on the NPL, and sites that are in the screening and assessment phase.

Hazardous Waste Handling

Under the Resource Conservation and Recovery Act (RCRA), the US EPA regulates the generation, transportation, treatment, storage and disposal of hazardous waste. The Hazardous and Solid Waste Act amended RCRA in 1984. The amendments specifically prohibit the use of certain techniques for the disposal of hazardous waste.

Hazardous Materials Transportation

The US Department of Transportation (DOT) has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR). The US Postal Service (USPS) regulations govern the transportation of hazardous materials shipped by mail.

Occupational Safety

The Occupational Safety and Health Act of 1970 (Fed/OSHA) sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).

Structural and Building Components

The Toxic Substances Control Act (TSCA) regulates the use and management of PCBs in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items. The US EPA monitors and regulates hazardous materials used as building components and their effects on human health. State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

State of California

Primary state agencies with jurisdiction over hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB). Additional state agencies are also involved in hazardous materials management. These agencies include Cal/OSHA (which is part of the Department of Industrial Relations), State Office of Emergency Services (OES), California Air Resources Board (CARB), Bay Area Air Quality Management District (BAAQMD), California Department of Transportation (Caltrans), California Highway Patrol (CHP), State Office of Environmental Health Hazard Assessment (OEHHA) and the California Integrated Waste Management Board (CIWMB).

In January 1996, the California Environmental Protection Agency (Cal EPA) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements:

- hazardous waste generators and hazardous waste on-site treatment
- underground storage tanks
- aboveground storage tanks
- hazardous materials release response plans and inventories
- risk management and prevention programs, and
- Unified Fire Code, hazardous materials management plans, and inventories

The Unified Program is implemented at the local level. The Certified Unified Program Agency (CUPA) is the local agency that is responsible for the implementation of the Unified Program. In South San Francisco, the San Mateo County Department of Environmental Health (SMCDEH) is the designated CUPA.

Hazardous Materials Management

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which must include the following:

- details, including floor plans, of the facility and business conducted at the site
- an inventory of hazardous materials that are handled or stored on site
- an emergency response plan, and
- a training program for safety and emergency response for new employees, with annual refresher courses

The California Hazardous Materials Incident Report System (CHMIRS) provides information regarding spills and other incidents gathered from the California Office of Emergency Services.

Hazardous Waste Handling

The DTSC regulates the generation, transportation, treatment, storage and disposal of hazardous waste. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Laws and regulations require hazardous materials users to store these materials appropriately and to train employees to manage them safely.

Under the federal Resource Conservation and Recovery Act of 1976 (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA, as long as the state program is at least as stringent as federal RCRA requirements. In California, the DTSC regulates the generation, transportation, treatment,

storage and disposal of hazardous waste. The hazardous waste regulations establish criteria for identifying, packaging and labeling hazardous wastes; prescribe management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Hazardous Materials Transportation

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the California Code of Regulations (CCR), which includes requirements applicable to the transportation of hazardous waste originating in the State and passing through the State. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans).

Occupational Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR. Cal/OSHA standards are sometimes, but not always, more stringent than federal regulations.

Cal/OSHA Title 8 regulations concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention planning. Cal/OSHA enforces regulations for hazard communication programs, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Materials Safety Data Sheets (MSDS) be available to employees, and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

Cal/OSHA (8 CCR), like Fed/OSHA (29 CFR), includes extensive, detailed requirements for worker protection applicable to any activity that could disturb asbestos-containing materials, including maintenance, renovation and demolition. These regulations are also designed to ensure that persons working near the maintenance, renovation or demolition activity are not exposed to asbestos.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies, including Cal EPA, CHP, CDFG, and local agencies and departments. The Oakland Fire Department (OFD) provides first response capabilities, if needed, for hazardous materials emergencies within the Project Area.

Structural and Building Components

The Project will include demolition of structures, which due to their age, may contain asbestos, PCBs or lead and lead-based paint.

Asbestos

State laws, including the Clean Air Act, regulate asbestos as a hazardous air pollutant, which subjects it to regulation by BAAQMD under its Regulation 11, Rule 2. OSHA also regulates asbestos as a potential worker safety hazard. These regulations:

- prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities
- require medical examinations and monitoring of employees engaged in activities that could disturb asbestos
- specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers, and
- require notice to federal and local governmental agencies prior to beginning renovation or demolition that could disturb asbestos

Asbestos represents a human health risk when asbestos fibers become airborne (friable) and are inhaled into the lungs. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work. Cal/OSHA regulates the removal of asbestos to ensure the health and safety of workers, and Cal/OSHA must be notified in advance of any asbestos abatement activities.

Polychlorinated Biphenyls (PCBs)

PCBs are organic oils that were formerly placed in many types of electrical equipment and in fluorescent lighting ballasts. PCBs are highly persistent in the environment and are toxic. In 1979, the USEPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment. The use and management of PCBs in electrical equipment is regulated pursuant to the Toxic Substances Control Act (40 CFR). Fluorescent lighting ballasts that contain PCBs, regardless of size and quantity, are regulated as hazardous waste and must be transported and disposed of as hazardous waste.

Lead and Lead-Based Paint

The CCR, Title 22, considers waste soil with concentrations of lead to be hazardous if it exceeds a total concentration of 1,000 ppm and a soluble concentration of 5 ppm. Both the federal and California OSHAs regulate all worker exposure during construction activities that involve lead based paint. The Interim Final Rule found in 29 CFR Part 1926.62 covers construction work where employees may be exposed to lead during such activities as demolition, removal, surface preparation for re-painting, renovation, clean up and routine maintenance. The OSHA-specified method of compliance includes respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, training, etc.

Local

Soil and Groundwater Contamination

In Alameda County, remediation of contaminated sites is performed under the oversight of the ACDEH and the San Francisco Bay RWQCB. The ACDEH implements a local oversight program under contract with the SWRCB to provide regulatory oversight of the investigation and cleanup of soil and groundwater contamination from leaking petroleum USTs and aboveground storage tanks. At sites where contamination is suspected or known to have occurred, the project sponsor is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is completed either before or during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies.

Alameda County Hazardous Waste Management Program

Under the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, the ACDEH is certified by the DTSC to implement the following programs:

- Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP)
- Risk Management Program (RMP)
- UST program
- Spill Prevention, Control and Countermeasure (SPCC) Plan for aboveground storage tanks
- Hazardous waste generators, and
- On-site hazardous waste treatment (tiered permit)

City of Oakland General Plan

The Safety Element of the City of Oakland General Plan contains the following policies pertaining to hazards and hazardous materials with potential relevance to adoption and development under the Specific Plan:

- *Hazardous Materials, Policy HM-1*: Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.
    - Action HM-1.2: Continue to enforce provisions under the zoning ordinance regulating the location of facilities which use or store hazardous materials.
    - Action HM-1.4: Continue to participate in the Alameda County Waste Management Authority and as a participant, continue to implement policies under the county's hazardous-waste management plan to minimize the generation of hazardous wastes.
    - Action HM-1.6: Through the Urban Land Redevelopment program, and along with other participating agencies, continue to assist developers in the environmental cleanup of contaminated properties.
    - Action HM-1.7: Create and maintain a database with detailed site information on all brownfields and contaminated sites in the city.
- *Hazardous Materials, Policy HM-3*: Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.
    - Action HM-3.1: Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider establishing time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.
    - Action HM-3.4: Continue to rely on, and update, the city's hazardous materials area plan to respond to emergencies related to hazardous materials

Oakland Municipal Code

To protect sensitive receptors from public health effects from a release of hazardous substances, the Oakland Municipal Code, Title 8 Section 42.105 allows the City, at its discretion, to require facilities that handle hazardous substances within 1,000 feet of a residence, school, hospital, or other sensitive receptors to prepare a Hazardous Materials Assessment Report and Remediation Plan (HMARRP). The HMARRP must include public participation in the planning process, along with the following requirements:

- identify hazardous materials used and stored at the property and the suitability of the site
- analyze off-site consequences that could occur as a result of a release of hazardous substances (including fire)
- include a health risk assessment, and
- identify remedial measures to reduce or eliminate on-site and off-site hazards

Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to hazards and hazardous materials are listed below for reference. If the Project is approved, applicable SCAs would be adopted as conditions of that project approval to help reduce potential impacts associated with hazards and hazardous materials.

SCA Hazards-1: Hazardous Materials Related to Construction

***Applies to**: All projects involving construction activities*

The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

1. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction
2. Avoid overtopping construction equipment fuel gas tanks
3. During routine maintenance of construction equipment, properly contain and remove grease and oils
4. Properly dispose of discarded containers of fuels and other chemicals
5. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program), and
6. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City Fire Prevention Bureau, Alameda County Environmental Health, and other applicable regulatory agencies, and implementation of the actions described in these agencies' conditions of approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

   When Required: During construction

   Initial Approval: N/A

   Monitoring/Inspection: Bureau of Building

SCA Hazards-2, Hazardous Building Materials and Site Contamination

***Applies to**: All projects involving; (a) redevelopment or change of use of a historically industrial or commercial site; (b) a contaminated site as identified in City records; or (c) a site listed on the State Cortese List; and if site remediation activities are required based on an environmental site assessment*

Hazardous Building Materials Assessment: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence

or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

When Required: Prior to approval of demolition, grading, or building permits

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Environmental Site Assessment Required: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

When Required: Prior to approval of construction-related permit

Initial Approval: Applicable regulatory agency with jurisdiction

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

Health and Safety Plan Required: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Best Management Practices (BMPs) Required for Contaminated Sites: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following:

1. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling, handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements.
2. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Hazards-3, Hazardous Materials Business Plan

***Applies to**: All projects involving the handling, storage, or transportation of hazardous materials during business operations*

The project applicant shall submit Hazardous Materials Business Plan information into the California Environmental Reporting System (CERS) for review and approval by Alameda County Environmental Health, and shall implement the approved Plan. The approved Plan will be available in the CERS database and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following:

1. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids
2. The location of such hazardous materials
3. An emergency response plan including employee training information
4. A plan that describes the manner in which these materials are handled, transported, and disposed.

When Required: Prior to building permit final

Initial Approval: Alameda County Environmental Health

Monitoring/Inspection: Oakland Fire Department (fire code regulations); Alameda County Environmental Health (CUPA regulations)

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

The proposed Project would have a significant impact on the environment if it were to:

1. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment
2. 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
3. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials
4. Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors
5. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
6. Be 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, and would result in a safety hazard for people residing or working in the Project Area

Cortese List - Exposure to Site Contamination

Hazards-1: The Project site is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result does not represent a significant hazard to the public or the environment. (**Less than Significant with SCAs**)

As indicated in the Setting section of this chapter of the Draft EIR, neither the 8-acre Project site nor the 14-acre existing Head-Royce Campus is included on any list compiled pursuant to Government Code Section 65962.5 of sites with suspected or confirmed releases of hazardous materials to the subsurface soil and/or groundwater. Therefore, the Project site does not present a significant hazard to the public or the environment, based on such a listing.

Since preparation of the Phase 1 ESA is 2012, the Project site has been used by Head-Royce for storage of school-related materials and parking, and has not been used to transport, use or disposal of hazardous materials. Recent (January 2020) reviews of applicable DTSC and SWQCB databases have not identified any new listings of known contaminate soil or groundwater at the site or in the immediate surroundings.[3]

Regulatory Requirements / Standard Conditions of Approval

The City of Oakland imposes numerous SCAs to reduce the potential for contaminated site conditions (known or unknown) to result in hazards to the public or the environment.

Pursuant to ***SCA Hazards-2: Hazardous Building Materials and Site Contamination***, the School is required to submit their Phase I Environmental Site Assessment report (see Appendix 10) to the City for review and approval. As indicated above, this report does not include any recommendations for remedial action for hazardous materials. Additionally, ***SCA Hazards-1: Hazardous Materials Related to Construction*** provides for actions needed under circumstances if soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities. In such an event, all construction in the vicinity of the suspect material shall cease, the area shall be secured, and the applicant/contractor shall notify the City Fire Prevention Bureau, Alameda County Environmental Health and other applicable regulatory agencies. Based on these agency determinations, the applicant would then be required to take all appropriate measures to protect human health and the environment, including identifying the nature and extent of contamination and implementing required protective measures under the oversight of the City or regulatory agency, as appropriate. With implementation of these SCAs, hazards to public and environmental health related to known, as well as unknown hazardous contamination will be reduces to less than significant levels.

Mitigation Measures

None required.

Hazardous Building Materials – Disposal and Use of Hazardous Building and Construction Materials

Hazards-2: Demolition of existing buildings on the proposed South Campus will likely encounter existing hazardous building materials, and the Project's construction activities will likely utilize construction materials and fuels considered hazardous. Handling, spills or accidents with these materials or chemicals could result in a significant impact to the health of workers and the environment. Compliance with existing regulations and applicable Standard Conditions of Approval will ensure the Project will not create a significant hazard to the public or the environment through the handling and

[3] Geotracker and Envirostor websites accessed on 2/18/20 at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4500+Lincoln+Avenue%2C+oakland%2C+Ca and https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=4500+Lincoln+Avenue%2C+oakland%2C+Ca

disposal of hazardous building material and use of hazardous construction-related materials. (**Less than Significant with SCA**)

During Building Demolition and Remodeling

The 2012 Phase I ESA cites several previous asbestos abatement activities that have been performed at the site, including hazardous waste manifests that list off-site disposal of asbestos-containing waste from the site in 1995, 1997, 1999, 2000, 2002 and 2006. An asbestos Operations & Maintenance (O&M) Manual was prepared in 2001 for asbestos-containing materials (ACM) remaining at the subject property, and a subsequent 2008 report indicates that ACM and/or suspect ACM remain in Buildings 0, 1, 2 and 6. Subsurface transformers have been identified along Lincoln Avenue, and fluorescent lighting is present in most buildings. Based on the age of some of the buildings on the Project site, PCB-containing light ballasts and construction materials (e.g., window caulk) may be present. Additionally, based on the pre-1982 construction dates of several on-site buildings, lead-based paint may be present. [4]

Construction-Phase Materials

Project construction activities may involve the use, transport and disposal of hazardous materials such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances used during construction. Construction of the Project would also require the use of gasoline and diesel-powered heavy equipment, such as graders, bulldozers, backhoes and other grading heavy equipment. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality.

Regulatory Requirements / Standard Conditions of Approval

The City of Oakland imposes numerous SCAs to reduce the potential for hazardous building materials to present a hazard to workers, the public or the environment.

Prior to approval of demolition, grading or building permits, ***SCA Hazards-2: Hazardous Building Materials and Site Contamination*** requires the Project applicant to prepare and submit a comprehensive assessment documenting the presence or lack thereof of ACMs, lead-based paint, PCBs and any other building materials or stored materials classified as hazardous. If any of these hazardous materials are present, the Project applicant is required to submit specifications for the stabilization and/or removal of these hazardous materials in accordance with all applicable laws and regulations***. SCA Air-6, Asbestos in Structures*** requires compliance with all applicable laws and regulations regarding demolition and renovation of ACM, including California Code of Regulations Title 8, California Business and Professions Code Division 3, California Health and Safety Code Sections 25915-25919.7, and BAAQMD Regulation 11 Rule 2.

During construction activities, ***SCA Hazards-1: Hazardous Materials Related to Construction*** requires the construction contractors to implement BMPs to minimize potential negative effects on groundwater, soils, and human health. These BMPs include following the manufacture's recommendations for use, storage and disposal of chemical products, avoiding overtopping construction equipment fuel gas tanks, properly containing and removing grease and oil, properly disposing of discarded containers of fuels and other chemicals, and implementing lead-safe work practices in compliance with all local, regional, state and federal requirements.

With implementation of these SCAs, hazards to workers, the public and the environment related to hazardous building materials will be reduced to less than significant levels.

[4] PES Environmental, Inc., 2012

Mitigation Measures

None required

Operational Hazards

Hazards-3: During School operations, the Project would not create a significant hazard to the public, to nearby sensitive receptors or to the School population as a result of storing, handling, emitting or a reasonably foreseeable accident involving the release of hazardous materials. (**Less than Significant**)

Typical chemicals that might be used at the School include laboratory chemicals used or stored in science laboratories and preparation areas, art supplies; including paints, stains, inks, glazes and photo processing chemicals; cleaning products; pesticides and fertilizers used for grounds maintenance; paints, solvents, fuels and lubricants used in building operation and maintenance; and chemicals used to treat water in the swimming pools. Most of these chemicals are typical household chemicals that must be used according to the manufacturers' recommendations and labeling, but do not create a significant hazard to the environment.

Title 8 of the California Code of Regulations requires every employer to develop and implement an effective Injury and Illness Prevention Program to improve safety and health in the workplace. Injury and Illness Prevention Program elements include hazard assessment, accident/exposure investigation, hazard correction and training and instruction. OSHA has found that these programs are effective in reducing the number and severity of injuries and illness in the workplace, and is required of Head-Royce School.

Businesses that store hazardous materials or hazardous substances at reportable quantities are required to prepare and submit a Hazardous Materials Business Plan to the Alameda County Department of Environmental Health. The general reportable quantities are equal to or greater than 55 gallons of a liquid, 200 cubic feet of a gas, and 500 pounds of a solid. The School does not store any hazardous materials at reportable quantities.

Conflicts with Public or Private Airports

Hazards-4: The Project site is not located in the vicinity of a public airport or private airstrip. (**No Impact**)

The Project site is located approximately 5 miles away from the Oakland International Airport, and would not conflict with airport operations or result in a safety hazard regarding airport operations. There are no private airstrips in or around Oakland.

Mitigation Measures

None required.

Cumulative Impacts

The Project, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would not result in cumulative hazards.

Potential cumulative public health and hazards impacts do not extend far beyond a project's boundaries, since such impacts are typically confined to specific locations, and site-specific hazards and do not generally combine to create a cumulative impact. Development activities in the vicinity of the Project, although minimal, could increase the exposure of persons to hazardous materials. However, the use, storage, and disposal of hazardous materials has been increasingly regulated by local, state, and federal law and regulation, and cumulative construction activities will be subject to these more rigorous controls and regulations. Therefore, the Project together with the impact of past, present, pending and reasonably foreseeable development would not result in any cumulatively significant hazardous material impacts.

11

Hydrology and Water Quality

This chapter of the EIR evaluates the potential impacts of the Project on hydrology, water resources and water quality. This chapter provides background information on hydrologic conditions within the Project area and the relevant regulatory setting applicable to the site, identifies potential impacts that could result from implementation of the Project, and identifies regulatory requirements and/or mitigation measures that would avoid or minimize potential impacts, when applicable.[1]

Information presented in this chapter of the EIR is derived from the following primary sources:

- Head-Royce School and Sherwood Design Engineers, *City of Oakland Stormwater Supplemental Form*, April 9, 2019 (**Appendix 11A**)
- ENGEO, *Peer-Review of SOM and Sherwood Design Engineers Preliminary Post Construction Stormwater Management Plan* for Head Royce School, February 4, 2020 (**Appendix 11B**)

Environmental Setting

Regional Hydrology

Sausal Creek and Peralta Creek are two of the main drainages that convey stormwater from the upper Oakland Hills to the Oakland Estuary and San Leandro Bay. Within the upper portions of these two creeks, the Project site straddles the watersheds of each of these creeks (see **Figure 11-1**). The more northerly portion of the proposed South Campus and the existing Head-Royce Campus slope southwesterly along Lincoln Avenue towards the Sausal Creek watershed. The more southerly portion of the Project site slopes downward towards the southeast into the upper Peralta Creek watershed.

To the north, the Whittle Avenue branch of Sausal Creek reaches just to the existing Head-Royce Campus. It is indicated as intermittently being an open creek and an underground culvert or storm drain. Whittle Avenue creek merges into Sausal Creek east of I-580. Sausal Creek flows as a combination of open creek, engineered channel and underground culverts, until it drains into the Oakland Estuary near the Fruitvale Bridge.

To the south and within the upper Peralta Creek watershed, the Laguna Creek Branch of Peralta Creek is mapped by the Alameda County Flood Control and Water Conservation District (ACFC&WCD) as reaching up to approximately Carmel Street (about 0.3 miles west of the Project site) as an underground culvert or storm drain (see also Figure 11-1). West of I-580, the Laguna Creek Branch merges into Peralta Creek, which eventually crosses I-880 as East Creek, and drains into San Leandro Bay at East Creek Slough.

[1] As indicated in the Utilities chapter of this EIR, this Hydrology chapter also addresses storm drainage and stormdrain infrastructure.

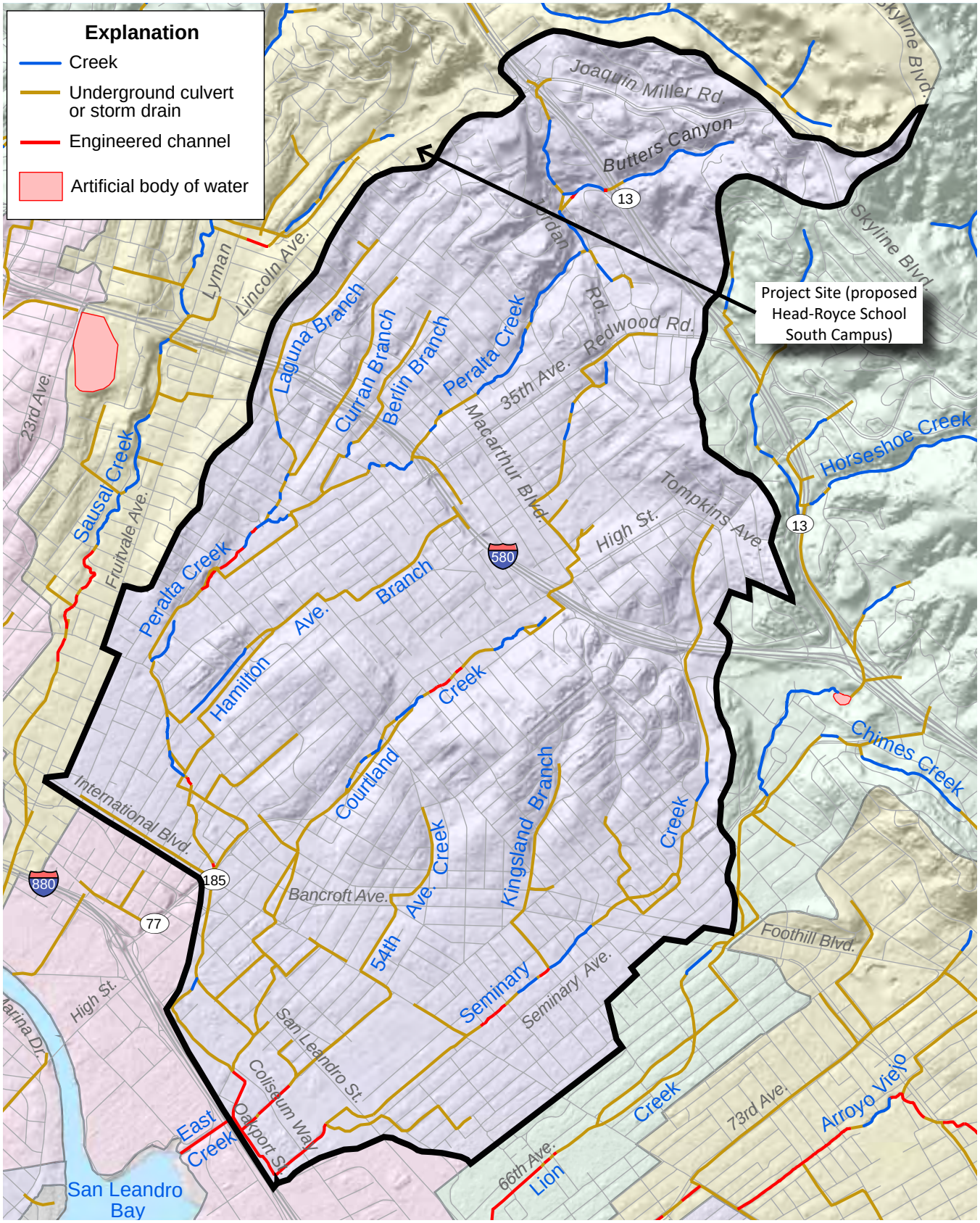


Figure 11-1
Peralta Creek and Sausal Creek Drainages

Source: Alameda County FC&WCD, 2014

Hydrology Conditions on the Project Site

A reconnaissance level survey of the Project site was conducted pursuant to the biological resource assessment conducted for this EIR (H.T Harvey & Associates, 2020). That survey found no aquatic habitat and no hydrology features (creeks, wetlands, etc.) on the Project site.

That survey did identify the Laguna Branch of Peralta Creek as being outside of/downslope from the southern boundary of the Project site (see **Figure 11-2**, and see also Appendix 6A for a photo of this feature). This channel emerges from a culvert behind an adjacent residence along Laguna Avenue, and travels southwest through the backyards of several residences before re-entering a culvert beneath Alida Street. The channel's vertical walls are lined with concrete and stone, and the bed is approximately 4 feet wide. The stormwater channel is situated in a topographically low position relative to the adjacent slopes. This channel likely conveys seasonal flows to the underground stormwater system via the downstream culvert near Alida Street, which flow downstream to Laguna Creek Branch of Peralta Creek. Vegetation along the channel consists of landscaping in the backyards of the residences. No wetland vegetation was observed in the channel and no native stands of riparian vegetation are present along the banks.

Groundwater

Several soils borings drilled as part of prior geotechnical investigations (CEL - September 1998, and Kleinfelder - December 2002), which were drilled to depths of between 10 and 15 feet, did not encounter a stable groundwater level. One boring did encounter groundwater at a depth of 6.5 feet, likely a localized perched wet layer within the surrounding fill.

Subsequent geotechnical investigations performed in March of 2017 to support designs of the proposed pedestrian tunnel included a vibrating wire piezometer to collect groundwater level measurements over time. The piezometer data collected between March 26 and May 1, 2017 showed a fluctuating groundwater level of between 10 and 16 feet below ground surface. Correlated with daily precipitation records, these measurements demonstrate that groundwater levels at the site undergo seasonal changes due to rainfall and local irrigation practices.

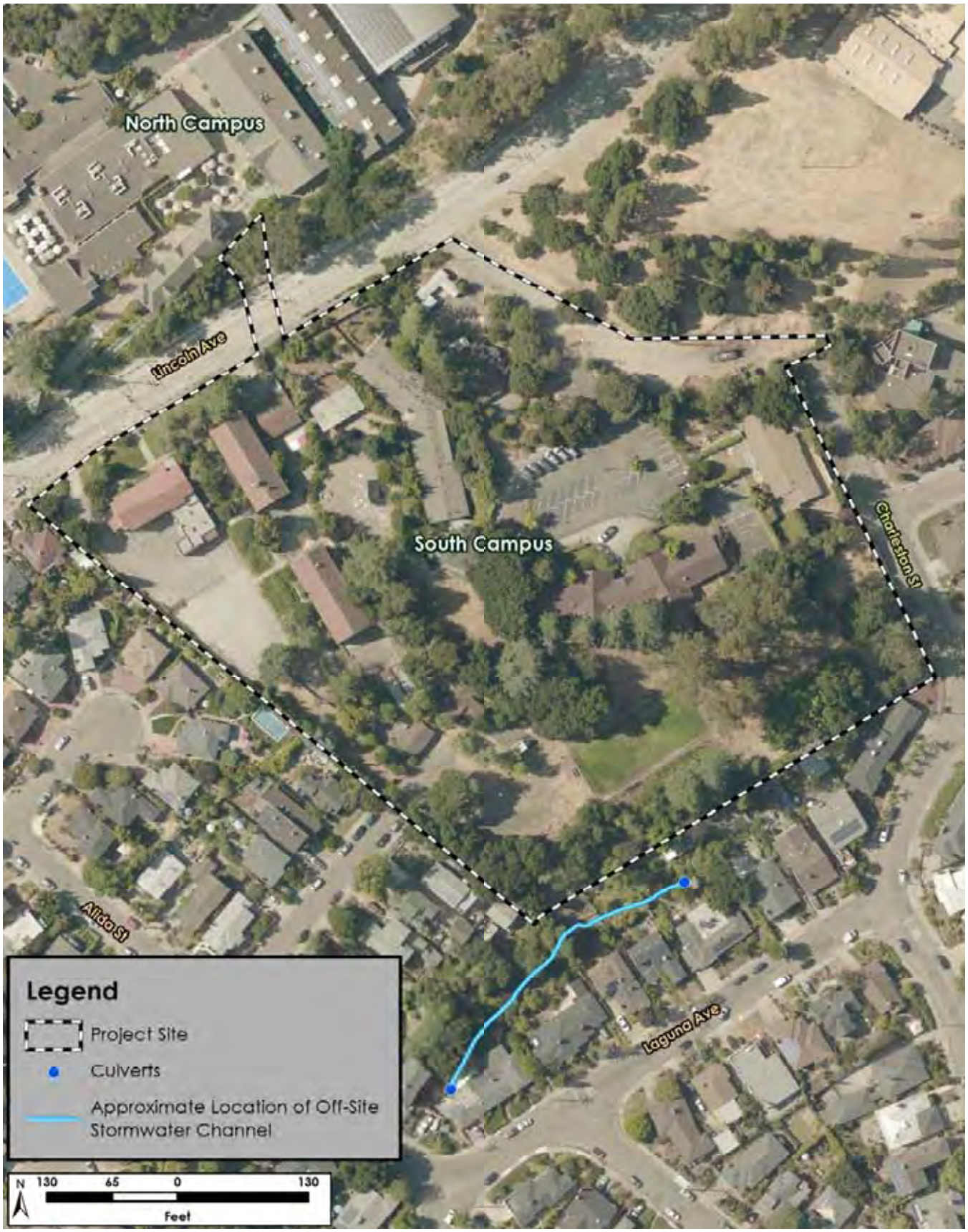


Figure 11-2
Off-Site Stormwater Channel

Source: H.T. Harvey & Asoc., 2019

Regulatory Setting

Federal Regulations

Clean Water Act (CWA)

The National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act (CWA) controls water pollution by regulating point and nonpoint sources that discharge pollutants into "waters of the U.S." California has an approved state NPDES program. The USEPA has delegated authority for NPDES permitting to the California State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay RWQCB regulates water quality in the Project Area.

State/Regional Regulations

McAteer-Petris Act / San Francisco Bay Conservation and Development Commission

The McAteer-Petris Act is a provision under California law that preserves San Francisco Bay from indiscriminate filling. The Act established the San Francisco Bay Conservation and Development Commission as the agency charged with preparing a plan for the long-term use of the Bay and regulating development in and around the Bay, while the plan was being prepared. The San Francisco Bay Plan, completed in January 1969, includes policies on 18 issues critical to the wise use of the bay, ranging from ports and public access to design considerations and weather. The McAteer-Petris Act authorizes the Bay Conservation and Development Commission to incorporate the policies of the Bay Plan into state law. The Bay Plan has two features: policies to guide future uses of the bay and shoreline; and maps that apply these policies to the bay and shoreline. The Bay Conservation and Development Commission conducts the regulatory process in accordance with the Bay Plan policies and maps, which guide the protection and development of the bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline.

Porter-Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act established the SWRCB and divided the state into nine regions, each overseen by a RWQCB. The nine regional boards have the primary responsibility for the coordination and control of water quality within their respective jurisdictional boundaries. Under the Porter–Cologne Water Quality Control Act, water quality objectives are limits or levels of water quality constituents or characteristics established to protecting beneficial uses. The Act requires the RWQCBs to establish water quality objectives while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Designated beneficial uses, together with the corresponding water quality objectives, also constitute water quality standards under the federal Clean Water Act. Therefore, the water quality objectives form the regulatory references for meeting state and federal requirements for water quality control. Each RWQCB is required to prepare and update a Basin Plan for their jurisdictional area. Pursuant to the Clean Water Act NPDES program, the RWQCB also issues permits for point source discharges that must meet the water quality objectives and must protect the beneficial uses defined in the Basin Plan.

San Francisco Bay Water Quality Control Plan (Basin Plan)

The San Francisco Bay RWQCB (SFRWQCB) is responsible for the development, adoption and implementation of the Water Quality Control Plan for the San Francisco Bay region. The Basin Plan is the master policy document that contains descriptions of the legal, technical and programmatic bases of water quality regulation in the San Francisco Bay Region. The Basin Plan identifies beneficial uses of surface waters and groundwater within its region and specifies water quality objectives to maintain the continued beneficial uses of these waters. Development pursuant to the Project is required to adhere to all water quality objectives identified in the Basin Plan.

National Pollutant Discharge Elimination System / Municipal Regional Stormwater Permit

The federal Clean Water Act (CWA) addresses urban stormwater runoff pollution of the nation's waters. In 1990, US EPA promulgated rules establishing Phase 1 of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase 1 program for Municipal Separate Storm Sewer System (MS4s) required operators that serve populations of 100,000 or greater to implement a stormwater management program as a means to control polluted discharges from these MS4s.

On November 18, 2015, the SFRWQCB issued countywide municipal stormwater permits as one Municipal Regional Stormwater NPDES Permit (MRP) to regulate stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City and Vallejo. The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District and Zone 7 of the Alameda County Flood Control and Water Conservation District, have joined together to form the Alameda Countywide Clean Water Program (Alameda Permittees).[2]

The MRP specifies best management practices (BMPs) to reduce or eliminate stormwater pollution, and imposes the following pollution reduction measures:

- reduce trash discharge from storm drains
- reduce mercury and PCBs in stormwater
- reduce erosion and control sediment at construction sites, and
- divert stormwater water through a bio-filtration system prior to discharge to the storm drain

Construction General Permit

Pursuant to the MRP, construction activities on sites that are equal to our greater than one acre in size, that include clearing, grading and excavation, are regulated by the California Construction Stormwater Permit (Construction General Permit). The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities, and prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges, and all discharges that contain hazardous substances unless a separate NPDES Permit has been issued to regulate those discharges.

Provision C.6 of the MRP requires operators and developers of construction sites disturbing one acre or more of soil to file a Notice of Intent for permit coverage under the Construction General Permit. To obtain Construction General Permit coverage, construction operators/developers must prepare a Stormwater Pollution Prevention Plan (SWPPP) to demonstrate compliance with grading ordinances and other local requirements. The SWPPP must demonstrate implementation of seasonally appropriate and effective best management practices (BMPs) to prevent construction site discharges of pollutants into the storm drains, before approval and issuance of local grading permits. All construction greater than 1-acre in size are required to provide site-specific, and seasonally and phase-appropriate, effective BMPS in the following six categories:

- erosion control
- run-on and run-off control
- sediment control
- active treatment systems, as necessary

[2] California Water Board, San Francisco Region, accessed at: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/

- good site management
- non-stormwater management

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs. The local permitting agency (e.g., South San Francisco and/or the SMCWPPP) must review applicant's erosion control plans and SWPPPs for consistency with local requirements. This review includes an assessment of the appropriateness and adequacy of proposed BMPs for each site before issuance of grading permits, and verification that sites disturbing one acre or more of land have filed a Notice of Intent for permit coverage under the Construction General Permit.

Stormwater Management Plan / Provision C.3 Requirements

The 2015 MRP includes requirements to incorporate post-construction stormwater control and low-impact development (LID) measures into new development and redevelopment projects. These requirements are known as Provision C.3 requirements. The goal of Provision C.3. is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.[3]

Provision C.3.c establishes thresholds at which new development and redevelopment projects must comply (i.e., Regulated Projects). New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) are generally considered Regulated Projects. All Regulated Projects must meet Provision C.3 requirements for post-construction stormwater control using a combination Low Impact Development (LID) stormwater controls that are capable of reducing long-term impacts of development on stormwater quality and creek channels. These LID control measures are used to reduce water quality impacts by preserving and re-creating natural landscape features, minimizing impervious surfaces, and then infiltrating, storing, detaining and evaporating stormwater into the air, and/or bio-treating stormwater runoff close to its source. These LID measures include:

- Site Design Measures: Site design measures are site-planning techniques for pollution prevention and reduction in flow rates and durations, by protecting existing natural resources and reducing impervious surfaces of development projects. Some examples of site design measures include minimizing land disturbance and preserving high-quality open space, minimizing impervious surfaces by using narrow streets, driveways and sidewalks, minimizing impervious surfaces that are directly connected to the storm drain system, clustering structures and paved surfaces and using landscaping as a drainage feature.
- Source Control Measures: Source control measures consist of either structural project features or operational "good housekeeping" practices that prevent pollutant discharge and runoff at the source, such as by keeping pollutants from coming into contact with stormwater. Examples of structural source controls include roofed trash enclosures, berms that control run-on to or runoff from a potential pollutant source, and indoor mat/equipment wash racks that are connected to the sanitary sewer. Examples of operational source controls include street sweeping and regular inspection and cleaning of storm drain inlets.

[3] California Water Board, San Francisco Region, accessed at: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/C3.html

- Stormwater Treatment: The MRP requires stormwater treatment requirements to be met by using evapotranspiration, infiltration, rainwater harvesting and reuse, or bio-treatment. Stormwater treatment measures must be sized to comply with hydraulic design criteria. The following are commonly used treatment measures: bioretention areas, flow-through planter boxes, infiltration trenches, extended detention basins, green roofs, pervious paving and grid pavements, rainwater harvesting and use, and subsurface infiltration systems.

Alameda County

Alameda Countywide Clean Water Program (ACCWP)

The ACCWP includes 17 member agencies that work together to protect creeks, wetlands, and San Francisco Bay. The City of Oakland and ACFCWCD are two of the agencies that participate in the ACCWP. The member agencies have developed performance standards to clarify the requirements of the Stormwater Pollution Prevention Program, adopted stormwater management ordinances, conducted extensive education and training programs, and reduced stormwater pollutants from industrial areas and construction sites through program implementation. The ACCWP activities include watershed assessment and monitoring, illicit discharge and connection inspections, trash assessments, promotion of Best Management Practices (BMPs) to reduce water pollution, and community work to further education about clean water. The ACCWP also coordinates with cities and other agencies to implement resource conservation efforts.

Alameda County Flood Control District

The Alameda County Flood Control District provides administrative and contracting services for the ACCWP to help comply with federal and state requirements to improve water quality and better manage urban stormwater and runoff. The Alameda County Flood Control and Water Conservation District and the City of Oakland Public Works Agency share responsibility for maintaining drainage facilities in Oakland.

City of Oakland

In the City of Oakland, the Oakland Public Works Department, Bureau of Design and Construction and Watershed and Stormwater Management staff administers the stormwater program to meet CWA requirements by controlling pollution in the local stormdrain and sewer systems.

City of Oakland General Plan

The following objectives, policies and actions from City of Oakland's General Plan (OSCAR and Safety Elements) are applicable to the Project:

Open Space, Conservation and Recreation (OSCAR) Element

- Objective CO-5: Water Quality: To minimize the adverse effects of urbanization on Oakland's groundwater, creeks, lakes, and near shore waters.

Safety Element

- Policy GE-2: Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
    - Action GE-2.2: Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.
    - Action GE-2.3: Continue to enforce provisions under the creek protection, stormwater management and discharge control ordinance designed to control erosion and sedimentation.

- Action GE-2.5: Enact regulations requiring new development projects to employ site- design and source-control techniques to manage peak stormwater runoff flows and impacts from increased runoff volumes.

City of Oakland Municipal Code

The City of Oakland implements the following regulations to protect water quality and water resources:

Creek Protection, Stormwater Management, and Discharge Control Ordinance

Chapter 13.16 of the Oakland Municipal Code prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance gives the City authority to implement measures to comply with NPDES regulation, including C.3. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains. The ordinance establishes comprehensive guidelines for the regulation of discharges to the city's storm drain system and the protection of surface water quality. The ordinance identifies BMPs and other protective measures for development projects. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing city drainage facilities.

Title 13, Chapter 13.16 of the City of Oakland Municipal Code establishes a number of guidelines to protect Oakland's creeks by reducing and controlling stormwater pollution, preserving and enhancing creekside vegetation and wildlife, and controlling erosion and sedimentation. The ordinance includes specific measures applicable to properties that are designated Creekside Properties because they either contain creeks or other watercourses and/or are adjacent to a property with a creek or riparian corridor. According to the ordinance, "a creek is a watercourse that is a naturally occurring swale or depression, or engineered channel that carries fresh or estuarine water either seasonally or year round." The ordinance includes permitting guidelines for development and construction projects taking place in or near creeks, with specific requirements for each of the following categories:

- Category I: Applies to any indoor development or work that would not affect the quality of the creek environment. No special submittals are required for this category.
- Category II: Applies to any exterior development or work that does not include earthwork, and that is more than 100 feet from the centerline of a creek. Best management practices to protect water quality must be followed for projects that fall within this category, and the project's site plan must show the relationship and distance between the development or work to be conducted, and the top of bank of the creek.
- Category III: Applies to any exterior development or work that may adversely impact a creek, beyond a 20 foot setback from the top of bank of the creek and within 100 feet of the centerline of the creek, as well as any work or development that includes earthwork beyond the 20 foot setback from the top of the bank of a creek. Submittal requirements for this category of project include a site plan that shows the relationship and distances between the development or work to be conducted and the top of bank of the Creek, as well as a Creek Protection Plan that describes the BMPs that will be employed to assure construction activity will not adversely impact the creek bank, riparian corridor or water quality.
- Category IV: Applies to any exterior development or work that is conducted from the centerline of a creek to the 20-foot setback from the top of bank of the creek. Submittal requirements for this category of project include a site plan that shows the relationship between the development or work to be conducted and the top of bank of the creek; a Creek Protection Plan that describes the BMPs to be employed to assure construction activity will not adversely impact the creek bank, riparian corridor or water quality; and a Hydrology Report.

According to the Ordinance, a "creekside property" means those properties located in Oakland, as identified by the Environmental Services Manager, having a creek or riparian corridor crossing the property and/or that are contiguous to a creek or riparian corridor. According to section 13.16.120 of the ordinance, “no person shall commit or cause development or work within the boundaries of a creekside property, or within the public right-of-way fronting a creekside property, unless a creek protection permit has first been obtained from the Chief of Building Services.”

Grading Ordinance

Chapter 15.04.660 of the Grading Ordinance requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope onsite, or the depth of excavation could exceed five feet at any location. Therefore, the project sponsor would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

City of Oakland Storm Drainage Design Standards Manual

The City of Oakland’s Bureau of Engineering and Construction has published Storm Drainage Design Standards (Standards) that provide design criteria, standards, policies and procedures for storm drainage improvements within the City of Oakland. All storm drainage facilities shall be designed in accordance with these Standards, accepted engineering principles, and state and federal water quality regulations. These guidelines and standards serve to protect natural creek segments and creek vegetation, and to control bank erosion, and to protect the natural character of creeks. Procedures in this Manual apply to the design of typical facilities. Where unusual circumstances exist, the engineer should contact the City for additional guidance and approval. The City’s Standards will be updated on a continual basis to reflect changes in City practices.

Standard Conditions of Approval

The City’s Standard Conditions of Approval relevant to hydrology and water quality are listed below. These Standard Conditions of Approval would be adopted as mandatory requirements of the Project should it be approved, and would ensure that significant impacts would not occur.

SCA Hydro-1: Erosion and Sedimentation Control Plan for Construction

Applies to*: All projects involving construction activities that require a grading permit per OMC sec. 15.04.660, or are located on a hillside property (20% or greater slope), except projects requiring a category III or IV creek protection permit*

1. Erosion and Sedimentation Control Plan Required: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

   When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

2. Erosion and Sedimentation Control during Construction: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

   When Required: During construction

   Initial Approval: N/A

   Monitoring/Inspection: Bureau of Building

SCA Hydro-2: State Construction General Permit

***Applies to**: All projects that disturb one acre or more of surface area*

The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.

When Required: Prior to approval of construction-related permit

Initial Approval: State Water Resources Control Board; evidence of compliance submitted to Bureau of Building

Monitoring/Inspection: State Water Resources Control Board

SCA Hydro-3: Architectural Copper

***Applies to**: All projects involving new architectural copper*

The project applicant shall implement Best Management Practices (BMPs) concerning the installation, treatment, and maintenance of exterior architectural copper during and after construction of the project in order to reduce potential water quality impacts in accordance with Provision C.13 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The required BMPs include, but are not limited to, the following:

a. if possible, use copper materials that have been pre-patinated at the factory
b. if patination is done on-site, ensure rinse water is not discharged to the storm drain system by protecting storm drain inlets and implementing one or more of the following: discharge rinse water to landscaped area; collect rinse water in a tank and discharge to the sanitary sewer, with approval by the City; or haul off-site for proper disposal
c. during maintenance activities, protect storm drain inlets to prevent wash water discharge into storm drains, and
d. consider coating the copper with an impervious coating that prevents further corrosion

When Required: During construction; ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Hydro-4: NPDES C.3 Stormwater Requirements for Regulated Projects

***Applies to**: All projects considered Regulated Projects under the NPDES C.3 requirements. Regulated Projects include (with certain exceptions and special provisions) projects that create or replace 10,000 square feet or more of new or existing impervious surface area*

1. Post-Construction Stormwater Management Plan Required: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

    a. location and size of new and replaced impervious surface

    b. directional surface flow of stormwater runoff

    c. location of proposed on-site storm drain lines

    d. site design measures to reduce the amount of impervious surface area

    e. source control measures to limit stormwater pollution

    f. stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.

    When Required: Prior to approval of construction-related permit

    Initial Approval: Bureau of Planning; Bureau of Building

    Monitoring/Inspection: Bureau of Building

2. Maintenance Agreement Required: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

    a. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity, and

    b. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

    When Required: Prior to building permit final

    Initial Approval: Bureau of Building

    Monitoring/Inspection: Bureau of Building

SCA Hydro-5: Creek Protection Plan

***Applies to**: All projects requiring a category III or IV creek protection permit*

1. Creek Protection Plan Required: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below.

    When Required: Prior to approval of construction-related permit

    Initial Approval: Bureau of Planning

    Monitoring/Inspection: N/A

2. Construction BMPs Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following:

    a. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.

    b. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.

    c. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.

    d. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be re-packed and native vegetation planted.

    e. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

    f. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

    g. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

    h. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

    i. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

    j. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

    k. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.

    l. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed on the Alameda County Clean Water Program website as Best Management Practices (https://www.cleanwaterprogram.org/businesses/construction.html).

    m. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at

the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

3. Post-Construction BMPs Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.

   When Required: Prior to approval of construction-related permit

   Initial Approval: Bureau of Planning

   Monitoring/Inspection: N/A

4. Creek Landscaping Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.

   When Required: Prior to approval of construction-related permit

   Initial Approval: Bureau of Planning

   Monitoring/Inspection: N/A

5. Creek Protection Plan Implementation Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, the project applicant shall regularly monitor all erosion, sedimentation, debris, and pollution control. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

   When Required: During construction; ongoing

   Initial Approval: N/A

   Monitoring/Inspection: Bureau of Building

SCA Hydro-6: Vegetation Management on Creekside Properties

***Applies to**: All projects located on creekside properties*

The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:

1. identify and leave “islands” of vegetation in order to prevent erosion and landslides and protect habitat
2. trim tree branches from the ground up (limb-up) and leave tree canopy intact
3. leave stumps and roots from cut down trees to prevent erosion
4. plant fire-appropriate, drought-tolerant, preferably native vegetation

5. provide erosion and sediment control protection if cutting vegetation on a steep slope
6. fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management
7. obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine)
8. do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat
9. do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development [4]
10. do not trim/prune branches that are larger than 4 inches in diameter
11. do not remove tree canopy
12. do not dump cut vegetation in the creek
13. do not cut tall shrubbery to less than 3 feet high, and
14. do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

Significance Criteria

According to the City's Thresholds of Significance, the Project would have a significant hydrology or water quality impact it would:

1. Violate any water quality standards or waste discharge requirements, result in substantial erosion or siltation (on- or off-site) that would affect the quality of receiving waters, or otherwise substantially degrade water quality
2. Create or contribute substantial runoff which would be an additional source of polluted runoff
3. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off- site
5. 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

[4] Per OMC 13.16.030, "Oakland Municipal Code 13.16.030, "Top of bank" means the point at which a line projected from the toe of the bank toward the top of the bank at a slope of two (horizontal) to one (vertical), or twenty-six and one-half (26 ½) degrees from horizontal, intersects surrounding level ground, unless such a line does not intersect surrounding level ground at all, the top of bank shall be determined at the discretion of the Chief of Building Services or his or her designee as the point at which the slope of the bank begins most closely to approximate the horizontal.

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

6. Result in substantial flooding on- or off-site; 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 that would impede or redirect flood flows; place within a 100-year flood hazard area structures which would impede or redirect flood flows; expose people or structures to a substantial risk of loss, injury or death involving flooding; or expose people or structures to a substantial risk of loss, injury, or death as a result in inundation by tsunami
7. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.

Water Quality during Construction

Hydrology -1: During construction activities, the Project does have the potential to violate water quality standards or waste discharge requirements, and result in substantial erosion or siltation that could affect the quality of receiving waters or otherwise substantially degrade water quality. With implementation of applicable City of Oakland SCAs, the potential for these impacts to occur would be reduced to less than significant levels. (**Less than Significant with SCAs**)

As discussed in detail in the Geology chapter of this EIR, the Project would involve grading activities during the construction phase that would occur on approximately 5.1 acres (or 221,100 square feet), representing approximately 64% of the 8-acre proposed South Campus property. Substantial cut grading would be conducted for excavation of the proposed pedestrian tunnel entrance, near the upper entrance to the Loop Road, and cuts into the slope uphill from the proposed Performing Arts building. Substantial fill would occur along the lower westerly boundary of the site to create for the Loop Road. The majority of grading activity would consist of more minor cuts and fills to create more level and moderately sloped parking areas, road base and building sites. Overall, the Earthwork Plan (see prior Figure 8-10) would result in total cuts of approximately 13,800 cubic yards (CY) of soil, fills of approximately 8,100 CYs, and a net export of approximately 5,700 CY of soil, not including the tunnel excavation. During and immediately after these grading operations, newly exposed soil would be subject to substantial water erosion if not properly controlled. Vegetation removal could also reduce soil cohesion render exposed soils to erosive forces. If not effectively managed, the dislodged soils could be washed into nearby drainages and/or the stormwater system, causing excessive siltation of creeks and receiving water bodies.

Project construction would also involve use of motorized heavy equipment including trucks and grading equipment that require fuel, lubricating grease and other fluids. Accidental chemical release or spill from a vehicle or large equipment could affect surface water. Such spills could become washed into the on-site drainages and eventually the Bay, or could infiltrate into soil affecting groundwater quality.

Regulatory Requirements / Standard Conditions of Approval

The City of Oakland imposes numerous SCAs to reduce soil erosion and potential water pollution during construction.

Pursuant to ***SCA Hydro-1: Erosion and Sedimentation Control Plan for Construction***, the Project applicant will be required to submit an Erosion and Sedimentation Control Plan for the Project, and will be required to implement the approved Erosion and Sedimentation Control Plan during all grading operations. No grading operations will be allowed during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

Pursuant to ***SCA Hydro-2: State Construction General Permit***, the Project applicant will be required to comply with all regulations and requirements of the Construction General Permit issued by the SWRCB. The Project

applicant will need to submit a Notice of Intent (NOI), a Stormwater Pollution Prevention Plan (SWPPP) and other required permit registration documents to SWRCB, and then file evidence of compliance with these state permit requirements with the City. The SWPPP will be required to include a detailed description of construction materials, practices and equipment storage and maintenance, as well as a list of pollutants likely to contact stormwater. Site-specific erosion and sedimentation control practices will need to be identified, a list of measures demonstrating how the discharge of materials to the stormwater system will be eliminate or reduce (including site-specific BMPs) must be documented and approved, and an inspection and monitoring program established. Each of these SWRCB permit approvals and requirements shall be obtained prior to approval of the Project's grading permit.

To the extent that the Projects involves new architectural copper (not currently identified as required or proposed), the applicant will also be required to implement BMPs concerning the installation, treatment and maintenance of exterior architectural copper during and after construction.

With implementation of City-required SCAs Hydro-1 and Hydro-2 (and potentially Hydro-3), the Project's potential impacts pertaining to water quality and sedimentation during construction would be reduced to a level of less than significant.

Mitigation Measures

None needed

Water Quality during Operations

Hydrology-2: During operations (post-construction), the Project does have the potential to violate water quality standards or waste discharge requirements that could affect the quality of receiving waters or otherwise substantially degrade water quality. With implementation of applicable regulatory requirements and pursuant to City of Oakland SCAs, the potential for these impacts to occur would be reduced to less than significant levels. (**Less than Significant with SCAs**)

After construction, the Project site will include new impervious surfaces including paved streets, parking lots and building rooftops. Stormwater that flows over these impervious does not infiltrate through these surfaces, but runs off these surfaces as stormwater runoff. Stormwater runoff picks up pollutants like oil and grease, heavy metals, bacteria, trash, sediment and other pollutants from the urban landscape. The increased student population, additional vehicles circulating through the site, additional parked cars, and improvements to landscape and open play areas all have the potential to contribute to an increased amount of non-point sources of pollutants in the runoff from the site. Increased pollutant load in stormwater runoff can harm local creeks, lakes and the Bay waters, as these pollutants directly impact water quality.

Regulatory Requirements / Standard Conditions of Approval

According to the Project's Stormwater Supplemental Form,[5] the Project site currently has 153,100 square feet of total impervious surface, including 43,249 square feet of building rooftops, 74,473 square feet of sidewalks, patios, paths and driveways, and 35,378 square feet of uncovered surface parking lot area. The total amount of impervious surface at the site after Project construction will be 105,161 square feet, or a reduction of nearly 50,000 square feet. However, the Project will involve 56,481 of replaced impervious surfaces (mostly driveway sand parking) and 48,680 of new impervious surfaces (mostly in sidewalks, patios, paths and driveways). Since the Project creates or replaces more than 10,000 square feet of new or existing impervious surface area, it is considered a Regulated Project under the NPDES C.3 requirements, and C.3 source control, site design, and treatment requirements apply.

[5] City of Oakland; Stormwater Supplemental Form; Head-Royce School; Oakland, California; April 19, 2019

According to ***SCA Hydro-3: NPDES C.3 Stormwater Requirements for Regulated Projects***, the Project applicant (Head-Royce School) must comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant is required to submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the location and size of new and replaced impervious surface, the directional surface flow of stormwater runoff, the location of proposed on-site storm drain lines, site design measures to reduce the amount of impervious surface area, source control measures to limit stormwater pollution, and stormwater treatment measures to remove pollutants from stormwater runoff (including the method used to hydraulically size the treatment measures). The Project applicant is also required to enter into a maintenance agreement with the City, providing for acceptance of the responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures, and providing for legal access to the on-site stormwater treatment measures to verifying and inspect the on-site stormwater treatment system.

Project-Proposed Preliminary Stormwater Treatment Measures

The Project's proposed Preliminary Stormwater Control Plan includes both source control measures to limit stormwater pollution, and stormwater treatment measures to remove pollutants from stormwater runoff.[6]

Source control strategies include stenciling all stormdrain inlets, preventing stormwater from contacting trash/recycling storage areas, positioning downspouts to direct stormwater away from loading areas, installing grease interceptors, retaining existing vegetation, using efficient irrigation systems, promoting surface infiltration, minimizing use of pesticides and fertilizers, and using Bay Friendly landscaping practices.

The Preliminary Stormwater Control Plan identifies several drainage management areas (DMA), delineated under both pre-Project and post-Project scenarios (see **Figure 11-3**). The design discharge values from these DMAs were determined using the rational method, with rainfall intensities selected from NOAA rainfall data for the site under a 10-year storm event. The Preliminary Stormwater Control Plan shows the sizes of the drainage sub-basins, as well as the selected runoff coefficients that were used to determine design discharge values in the pre- and post-Project conditions.[7] The Preliminary Stormwater Control Plan shows the paths of stormwater flow and the destination of flow between the City storm drain system and an off-site drainage channel (see **Figure 11-4**).

[6] SOM and Sherwood Design Engineers; *Preliminary Post Construction Stormwater Management Plan*; Head Royce School; February 15, 2019, and *Stormwater Supplemental Form*; Head-Royce School, April 19, 2019

[7] SOM and Sherwood Design Engineers; Existing Hydrology and Proposed Hydrology (Sheets 4.0 and 4.1) Preliminary Post Construction Stormwater Management Plan; Head Royce School; Oakland, California; February 15, 2019

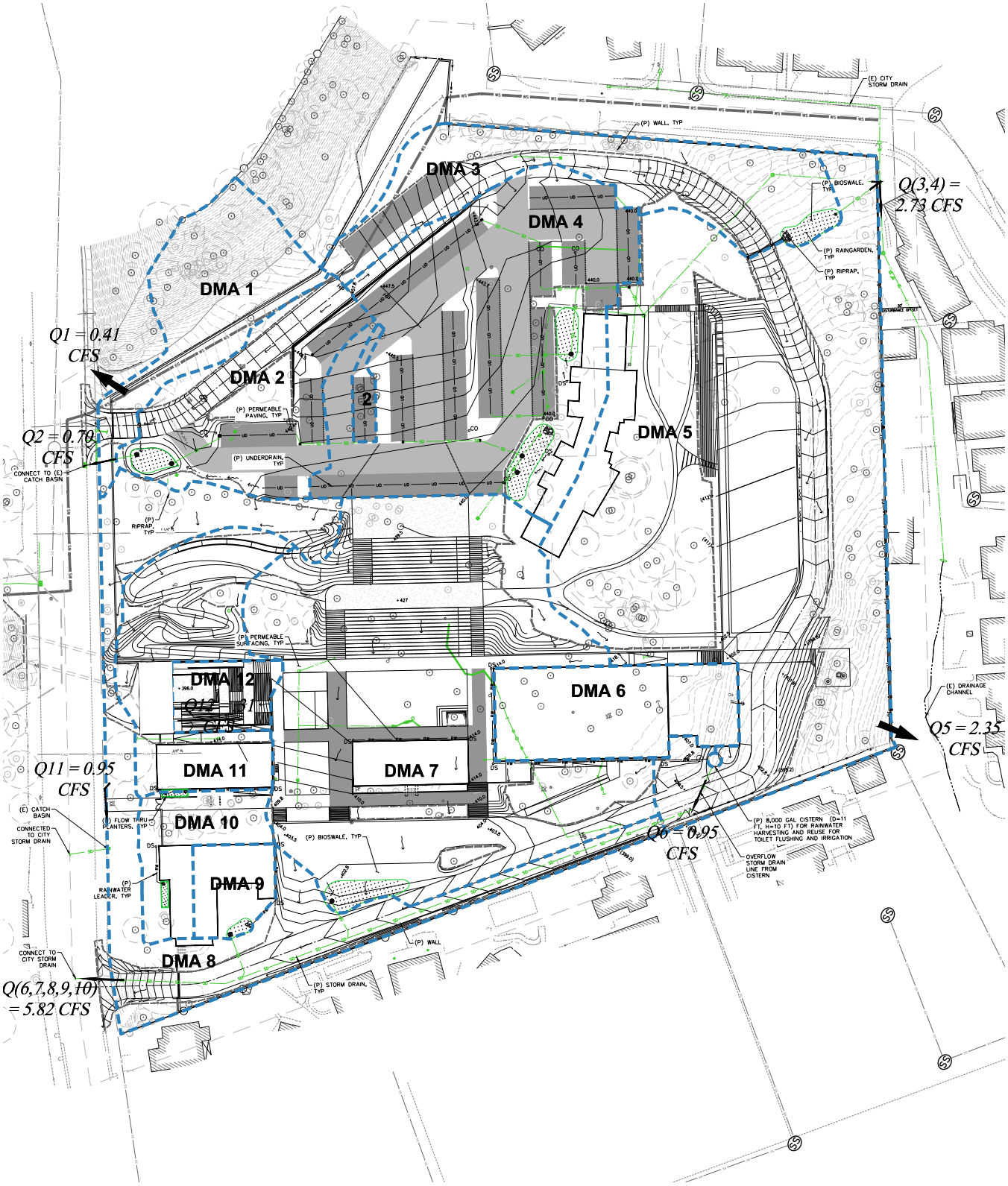


Figure 11-3
Preliminary Stormwater Control Plan, Drainage Management Areas

Source: Sherwood Design Engineers, February 2019

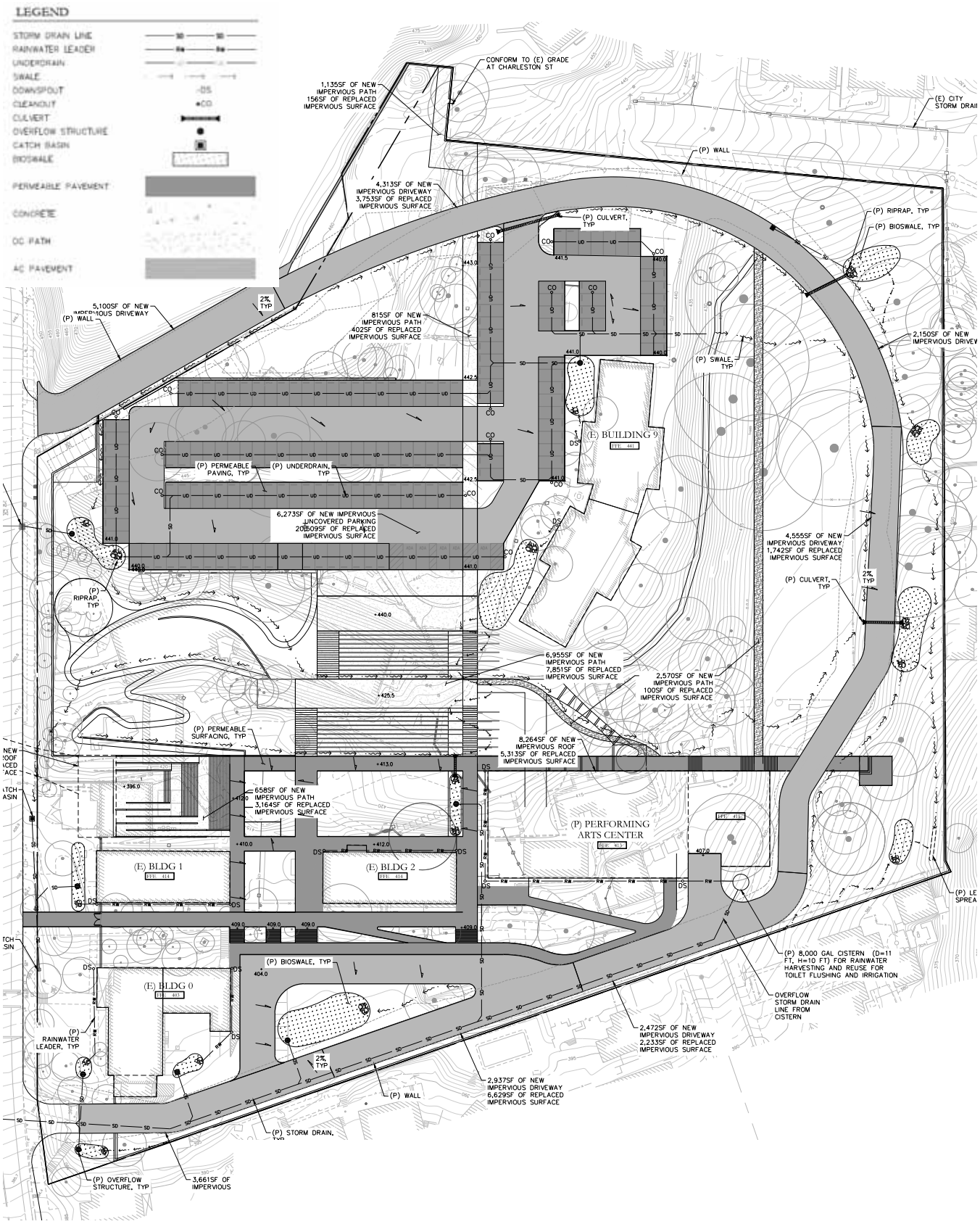


Figure 11-4
Preliminary Stormwater Control, Drainage Plan

Source: Sherwood Design Engineers, February 2019

Stormwater treatment measures are provided across each of twelve separate post-Project DMAs. Eight of these DMAs will be treated by bioretention areas located adjacent to proposed hardscape (impervious) areas. Four of the DMAs (which account for much of the on-site parking) will have permeable paving that flows into an underdrain, which then drains to bioretention areas. Based on the EIR consultant's peer-review of the proposed Preliminary Stormwater Control Plan, their conclusions are as follows:

- The civil drainage plan includes an appropriate assessment of existing conditions regarding the runoff volumes and general direction of flow from the drainage management areas, including flows entering the City storm drain system and flows entering into an off-site drainage channel.
- The bioretention areas were sized on a flow hydraulic design basis. The bioretention areas were sized so that they would have a capacity equal to the flow of runoff from the site resulting from a rain event equal to at least 0.2 inches per hour intensity. This meets the intent of water quality requirements outlined in Provision C.3 of the MRP (the calculations and sizes of the individual biotreatment areas were not provided for review).
- Those DMAs that incorporate pervious pavers appear to be in general conformance with requirements outlined in Provision C.3 of the MRP (the individual pervious paver detail was not provided in the plans for review).
- The Preliminary Stormwater Plan indicates that 10-year peak flows leaving the site after implementation of the Project would be the same or less than existing pre-Project levels at points of discharge. The Project would not contribute to any increased risk of flooding in downstream receiving waters.
- The Hydromodification Susceptibility Map published by the Alameda County Clean Water Program indicates that the subject project is in a "Potential Susceptibility Area" locality. However, the Project does not increase the total impervious surface over pre-project conditions, and therefore (in the opinion of the EIR peer-review consultant) the Project is not subject to Hydromodification Management Measures stipulated within the referenced ACCWP handbook. This is in conformance with Section 7.2 of the referenced ACCWP handbook, which discusses the applicability of projects to the Hydrograph Modification Management Plan requirements.

Based on this peer-review of the Preliminary Stormwater Control Plan, the post-construction stormwater treatment facilities provided for the Project are in general conformance with Alameda County Clean Water Program, Provision C.3 of the MRP, and thus also consistent with SCA Hydro-4: NPDES C.3 Stormwater Requirements for Regulated Projects.[8] These requirements are intended to, and will reduce impacts to surface water quality from new development on downstream receiving water. With implementation of these measures pursuant to a Final Stormwater Control Plan to be submitted to the City for review and approval with detailed Project drawings submitted for site improvements, and implemented during construction, post-construction operational impacts of the Project on stormwater quality will be less than significant.

Mitigation Measures

None needed

Stormwater Runoff

Hydrology-3: The Project will not create or contribute substantial runoff that would exceed the capacity of existing or planned stormwater drainage systems, and would not substantially alter existing drainage

[8] ENGEO, letter from Matt Sasaki, EIT to Mr. Scott Gregory, Lamphier-Gregory, *Review Of Stormwater Control Plan,* February 4, 2020

patterns of the site or area in a manner that would result in substantial erosion, siltation, or flooding, both, on- or off- site. (**Less than Significant**)

The Project will not alter the course of a creek, river or stream. The only creek in the vicinity is off-site and not proposed to be modified by the Project.

The Project results in a decrease in the total impervious surface of the site over pre-Project conditions, and the Project's Preliminary Stormwater Plan indicates that 10-year peak flows from the site will be the same or less than existing pre-Project levels at points of discharge, thereby not contributing to increased risk of flooding in downstream receiving waters. The following **Table 11-1** demonstrates both pre-Project and post-Project 10-year stormwater flows from the site, based on the parameters of the proposed Preliminary Stormwater Management Plan (not required pursuant to Hydromodification Management).

Table 11-1: Changes in Pre- and Post-Project Stormwater Runoff

	Pre-Project (Q, as cubic feet per second)	**Post-Project (Q, as cubic feet per second)**
Runoff contributing to off-site drainage channel	6.24	5.08 (-1.16)
Runoff contributing to Linnet Road stormdrain	1.16	0.95 (-0.21)
Runoff contributing to Lincoln Ave. stormdrain	7.15	6.93 (-0.22)
Runoff from Pedestrian Tunnel to existing Campus		0.31
Total Runoff	**14.54**	**13.27 (-1.27)**

Source: SOM and Sherwood Design Engineers; Existing Hydrology and Proposed Hydrology (Sheets 4.0 and 4.1) Preliminary Post Construction Stormwater Management Plan, Head Royce School, February 15, 2019

As indicted, the Project will result in an overall reduction in stormwater flows from the site, and will reduce flows that contribute to the off-site Laguna Branch of Peralta Creek drainage channel, as well as to the City storm drain systems within both the Linnet Road and Lincoln Avenue rights-of-way. As such, the Project will not create or contribute substantial runoff that would exceed the capacity of existing or planned stormwater drainage systems, and would not substantially alter the existing drainage pattern of the site by increasing the rate or amount of flow of a creek.

Mitigation Measures

None required

Groundwater

Hydrology-4. The Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (**Less than Significant with SSCAs/regulatory requirements)**)

Existing storm drainage systems in the Project Area currently intercept most rainfall and runoff waters, thus limiting the amount of groundwater recharge that occurs. As demonstrated in Hydrology-3 above, the Project will not result in increased runoff from the site, and the minor amount of retained stormwater will minimally increase the volume of surface water that can filter into the ground and recharge groundwater basins, but such increase in potential infiltration would not be substantial.

Groundwater Dewatering

As indicated in the Geology chapter of this EIR, groundwater was encountered in soil borings conducted along the alignment of the proposed pedestrian tunnel, and is anticipated to be above the invert elevation of the tunnel and is likely to be encountered during construction of the tunnel. The quantity of groundwater assumed to be encountered is not expected to be significant, but detailed estimates of groundwater quantities to be encountered will be further evaluated during final design evaluations.

Regulatory Requirements

Depending on the volume and pollutant loads of non-stormwater discharges associated with construction dewatering, different regulatory requirements apply. Pursuant to ***SCA Hydro-2: State Construction General Permit***, the Project applicant will be required to comply with all regulations and requirements of a Construction General Permit issued by the SWRCB. Authorized non-stormwater may be discharged to a storm drain pursuant to a Construction General Permit. A permit from the City (as the local sewer agency) must be obtained prior to such discharge. This approach is generally appropriate for water that contains some sediment and/or pollutants, but sediment may require pre-treatment and acceptable pollutants and pollutant levels are defined by the City. General Construction Permits typically include requirements for pre-discharge testing and reporting, and establishment of acceptable discharge limitations/prohibitions pertaining to the chemical quality of the water, discharge flow rates and quantities. Depending on water quality, non-stormwater may require off-site hauling for treatment by a licensed commercial contractor who can remove, transport and dispose (or treat and recycle) polluted water.

If dewatering is not permitted pursuant to the ***Construction General Permit (SCA Hydro-2***, above), then a statewide low-threat discharge Waste Discharge Requirements (WDR) or a site-specific NPDES permit may be required. A statewide low-threat discharge Waste Discharge Requirements (WDR) permit generally provides for accumulated non-stormwater to be retained and managed on the construction site via evaporation, infiltration or used on-site for dust control, irrigation or other construction-related purposes. This approach is generally appropriate for water that is free of pollutants, other than sediment. For those dewatering activities that cannot obtain permission to discharge to the local sanitary sewer and where the discharge cannot be regulated under the Construction General Permit or the statewide low-threat discharge WDRs, site-specific NPDES Dewatering Permits may be sought from the RWQCB.

Implementation of the Construction General Permit and/or statewide low-threat discharge Waste Discharge Requirements (WDR) or site-specific NPDES permit requirements will reduce potential water quality impacts from groundwater dewatering activities during construction to a less than significant level. Best Management Practices (BMPs) will be required and incorporated into individual SWPPPs and other permits prior to approval of grading permits, providing an acceptable level of water quality protection.

Mitigation Measures

None required

Flood Hazards

Hydrology-5: The Project would not result in substantial on- or off-site flooding, would not place any structures within a 100-year flood hazard area that might impede or redirect flood flows, and would not expose people or structures to substantial risks associated with flooding or inundation. (**No Impact**)

The Project site is located well outside of any 100-year flood zone, is not susceptible to flooding hazards in the event of dam or reservoir failure, and is not is located within a tsunami inundation zone. The nearest large water body reservoir is the Temescal Reservoir, and the inundation pathway in the event of a failure of that reservoir does not intersect the Project site. There are no risks associated with flooding at this site.

Mitigation Measures

None needed

Conflict with the City of Oakland Creek Protection Ordinance

Hydrology-6: With implementation of all applicable regulatory requirements, the Project will not fundamentally conflict with the City of Oakland Creek Protection Ordinance, intended to protect hydrologic resources. (**Less than Significant with SCAs**)

Pursuant to OMC Title 13, Chapter 13.16 (the City of Oakland Creek Protection Ordinance), "a creek is a watercourse that is a naturally occurring swale or depression, or an engineered channel that carries fresh or estuarine water, either seasonally or year round." The Laguna Branch of Peralta Creek flows through adjacent properties bordering the Project site to the southeast. This creek meets the City definition of a "creek" pursuant to the Creek Protection Ordinance.

Portions of the Project's improvements are within 100 feet of the Laguna Branch of Peralta Creek, including portions of the Loop Road, retaining walls, fill and stormwater treatment measures (see **Figure 11-5**). The existing cross slope up to the property line from the creek varies from about 4% to almost 30% at the southeast corner. Uncontrolled erosion and sedimentation could adversely affect this creek, in direct conflict with the Creek Protection Ordinance.

Regulatory Requirements / Standard Conditions of Approval

The Oakland Creek Protection Ordinance includes permitting guidelines for development and construction projects taking place in or near creeks, with specific requirements for each of four different types of categories. As a project that proposes exterior development that is beyond a 20-foot setback from the top of bank of the creek but within 100 feet of the centerline of the creek, and also as a project that proposes earthwork that would occur beyond the 20-foot setback from the top of bank of the creek, the Project qualifies for a Category III Creek Permit. Pursuant to ***SCA Hydro-5, Creek Protection Plan***, all projects requiring a Category III or IV Creek Protection Permit must provide a site plan that shows the relationship and distances between the development or work to be conducted and the top of bank of the Creek, as well as a Creek Protection Plan that describes the BMPs that will be employed to assure construction activity will not adversely impact the creek bank, riparian corridor or water quality. The Creek Protection Plan is reviewed and approved by the City, together with project drawings submitted to the City for site improvements, and must include the following provisions:.

- All applicable erosion, sedimentation, debris and pollution control BMPs to protect the creek during construction must be included in the Creek Protection Plan, and implemented during and post-construction.
- All graded areas shall be temporarily protected from erosion by seeding with fast-growing, non-invasive annual species, preferably locally sourced from native plants, potentially including hydro-mulch mixes of native plant species.
- The project applicant is also required to shall include final landscaping details for the site, including a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plantings must be drought-tolerant where appropriate, as well as native and riparian plants in and adjacent to riparian corridors. Plants for revegetation should be mature enough to plant out and establish as they grow into the site. The planting plan should describe the range of nursery stock, cuttings, and staking, etc. that will be used.
- During construction, the Project applicant is required to regularly monitor all erosion, sedimentation, and debris and pollution control.

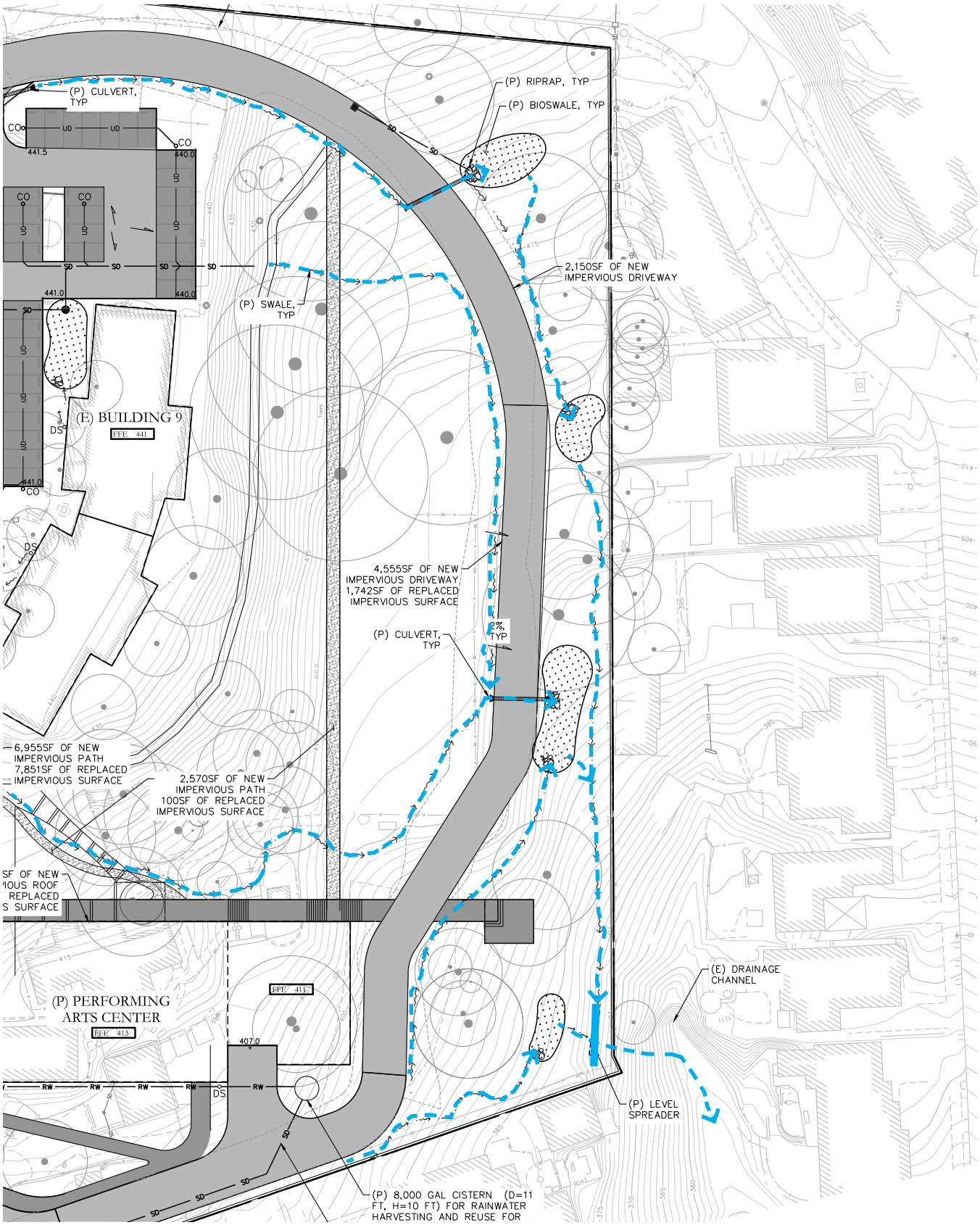


Figure 11-5
Stormwater Runoff and Treatment Measures Tributary to Off-Site Drainage Channel

Source: Sherwood Design Engineers, 12/10/2019

- New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.
- No healthy riparian vegetation shall be removed beyond that actually necessary for ongoing maintenance of the watercourse, and no vegetation shall be removed in a manner that could increase the vulnerability of the watercourse to erosion.

Project's Preliminary Plans

The Project's preliminary grading plans and development plans for the site indicate an un-disturbed edge between the proposed improvements and the property line. Per the applicant's pre-permit memorandum pursuant to a Creek Permit application,[9] this buffer area will be managed through the construction period with erosion control measures that will include construction fencing, a silt fence near the property line, and straw wattles placed on contour and spaced across the slope between the improvements and the construction fence. The channelized drainage and point source runoff will be managed on-site with check dams and sediment basins that manage and control sediment within the Project boundaries. Pursuant to SCA Hydro-2, the Project will be required to implement a Stormwater Pollution Prevention Plan to ensure that construction activities comply with stormwater runoff regulations.

During on-going operations and pursuant to SCA Hydro-5, the Project includes preliminary stormwater treatment measures that address regulatory requirements for stormwater flow, quantity and quality. These source control and treatment measures include rainwater harvesting, biotreatment areas, rain gardens and infiltration basins. As indicated above in Table 11-1, the Project will result in an overall minor decrease in peak runoff into the drainage course, as well as improved water quality leaving the site.

The Project will be required to obtain and comply with all applicable regulations and requirements of the City of Oakland Creek Permit, thereby protecting waterbodies. The proposed South Campus is likely to be determined to be a "Creekside property" (the creek is not on the proposed South Campus site, but the site is contiguous to the off-site Laguna Branch of Peralta Creek on the adjacent properties), and the Project will be required to implement ***SCA Hydro-6: Vegetation Management on Creekside Properties***, requiring additional BMPs for managing vegetation prior to, during, and after construction.

Mitigation Measures

None needed

Cumulative Hydrology Effects

The Project will not result in a cumulatively considerable contribution to significant cumulative impacts on hydrology or water quality. As indicated below, with implementation of applicable regulatory requirements, cumulative impacts to hydrology and water quality would be less than significant, and the Project would not result in a cumulatively considerable contribution to a significant cumulative hydrology or water quality impact. (**Less than Cumulatively Considerable**)

Construction-related runoff from the Project and from other past, current and reasonably foreseeable future development in the Oakland hills could have adverse cumulative effects on hydrology and water quality, including increased stormwater runoff and pollutant loading to downstream waters and the Bay. However, all present and reasonably foreseeable construction projects are required to comply with the same regulatory requirements as the Project, which are designed to control the discharge of construction-period stormwater pollutants. Those regulatory requirements that apply to all cumulative construction projects include compliance with the Construction General Permit, and preparation and implementation of a Stormwater

[9] Sherwood Engineers, letter from Drew Norton, Principal, to Rebecca Lind, City of Oakland; "RE: Head Royce School Creek Permit", January 20, 2020

Pollution Prevention Plans (SWPPPs). With implementation of the Construction General Permit and BMP requirements at each cumulative construction site, potential cumulatively significant impacts to water quality will be individually addressed prior to issuance of each grading permit. No individual construction site, including construction projects pursuant to the Project, would substantially contribute to cumulative construction-period water quality effects.

All regulated cumulative development projects are required to implement Stormwater Management Plans that comply with applicable C.3 provisions, and to incorporate post-construction stormwater controls and low-impact development (LID) measures. These regulations are designed to protect water quality from all new cumulative construction and development, including the Project. As applicable, cumulative projects will also be required to demonstrate that stormwater volumes can be managed by downstream conveyance features such that they do not exceed the capacity of these facilities or induce flooding.

The Project would not substantially alter the existing drainage patterns within the Project Area in a manner that would increase the rate or amount of surface runoff in a manner that would result in flooding. Development pursuant to the Project will not contribute to potential cumulative effects that might alter the course of Sausal Creek or Peralta Creek will not contribute to cumulative siltation effects, and will not increase the rate or amount of cumulative runoff that contributes to Sausal Creek, Peralta Creek, or the Bay.

12

Land Use and Planning Policy

This chapter addresses the physical aspects of land use, and the regulatory land use and planning framework that guides development of the Project site. The following analysis focuses on potential land use and planning impacts resulting from implementation of the Project. Existing land uses on and around the Project site are described, and applicable City of Oakland General Plan land use policies and other applicable land use plans and regulations are identified. This chapter analyzes a study area that includes the Project site and those surrounding areas that could be directly or indirectly affected by construction or operation of the Project.

Physical Setting

Regional and Local Setting

The Project Area comprises approximately 22 acres in the North and Lower Hills areas of the City of Oakland in Alameda County. The Project Area is bisected by Lincoln Avenue, which follows a southwest/northeast alignment from I-580 to Highway 13. The existing approximately 14-acre Head-Royce School Campus is in the Oakmore neighborhood of the North Hills area on the northwest side of Lincoln Avenue, at addresses of 4315 and 4365 Lincoln Avenue. The approximately 8-acre proposed South Campus is in the Lincoln Highlands neighborhood on the southeast side of Lincoln Avenue, at an address of 4368 Lincoln Avenue (see **Figure 12-1**).

Immediately adjacent to and uphill from the proposed South Campus the Ability Now Bay Area property and associated buildings, at 4500 Lincoln Avenue. Ability Now Bay Area provides education, communication, computer literacy, vocational training, wellness and community integration services to adults with developmental and physical disabilities. Head-Royce School has an agreement with Ability Now Bay Area and a Conditional Use permit granted by the City in January 2018, for non-exclusive use of the existing playfield at the Ability Now property.

The Project Area vicinity is characterized primarily by single-family residential neighborhoods to the north, west and south. There are two large institutional uses to the north (beyond the Ability Now property), including the Ascension Greek Orthodox Cathedral and the Oakland California Temple of the Church of Jesus Christ of Latter-day Saints, both located uphill of the Project Area and below Highway 13. A small commercial center (Woodminster) is located on the uphill side of Highway 13, where Lincoln Avenue transitions into Joaquin Miller Road. Redwood Regional Park and Joaquin Miller Park are located further uphill on Joaquin Miller Road.

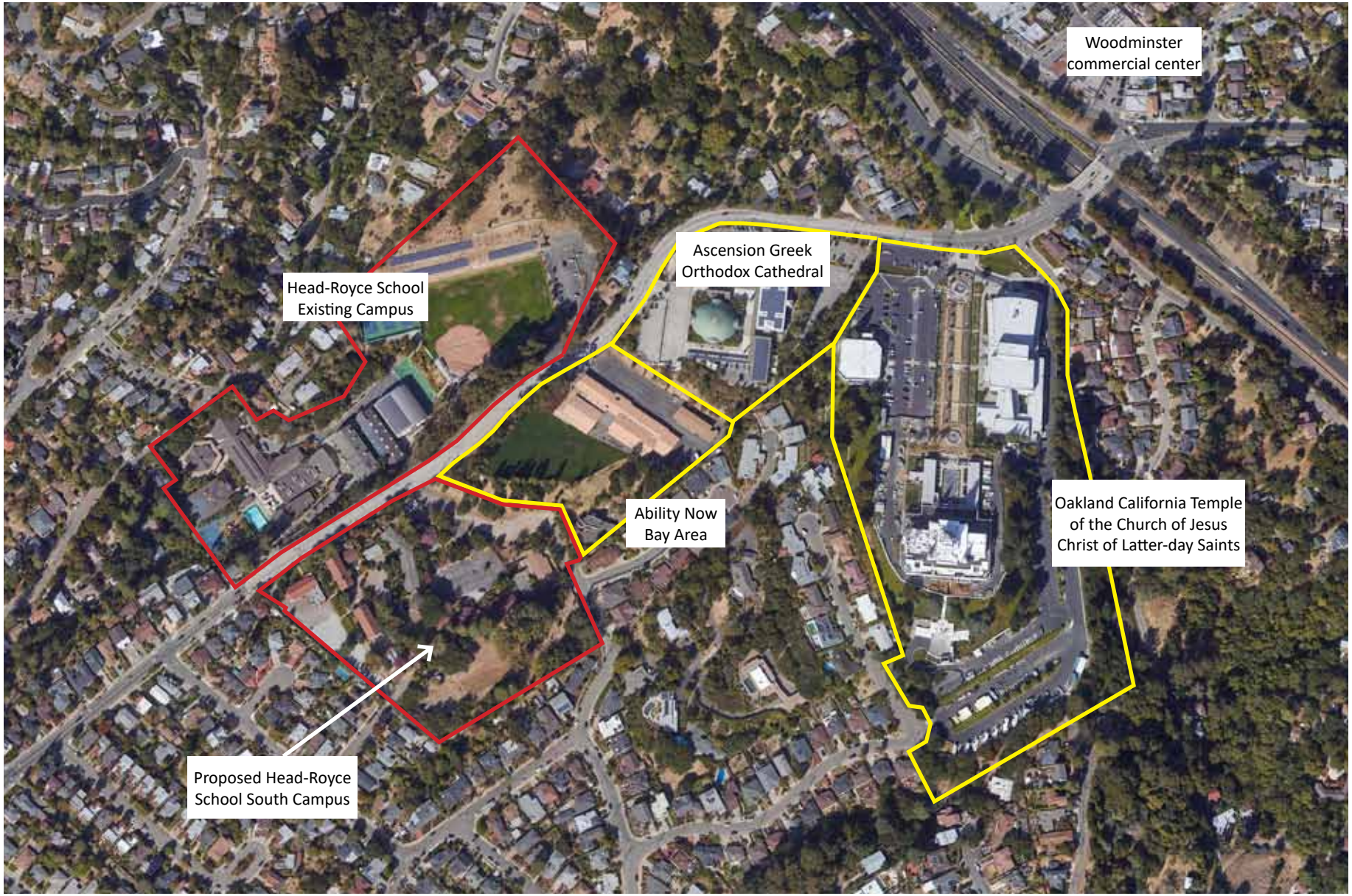


Figure 12-1
Surrounding Land Uses

Previous and Existing Land Uses

Existing Head-Royce Campus

Head-Royce school is an independent co-educational college preparatory day school for students in kindergarten through the 12th grade. The Head-Royce School has been located on its current 14-acre Campus site since 1964. The existing Campus includes 12 buildings that house classrooms and administrative functions, a library, a gym and an auditorium, a café and a swimming pool (see **Figure 12-2**). Attached to the Campus on a separate parcel is a multi-purpose sports field, outdoor tennis courts and various other outdoor play areas. Several of the educational buildings on the upper portions of the Campus (nearest Lincoln Avenue) were constructed pursuant to a prior 2008 Master Plan. The existing Campus generally sits on a steeply sloping site downhill from Lincoln Avenue, with only the entry gate visible along Lincoln Avenue.

A Planned Unit Development (PUD) permit, as amended in 2016 (see **Appendix 12**), currently governs use of the existing Campus for school activities. That PUD permit permitted the School to increase its enrollment to 875 students at the time of approval, and to increase enrollment by up to 15 students each year, to a maximum school enrollment at Head Royce School of 906 students during the school year. Current enrollment (as of 2019) is approximately 880 students, with 111 teaching faculty members and approximately 65 professional and administrative staff. School hours generally run from 8:25 a.m. to 3:20 p.m., and after-school programs are available for elementary and middle school students until 6:00 p.m. each day that school is in session. [1]

The 2016 PUD permit also allows for the School to operate a Summer Program, with a maximum Summer Program enrollment of 780 children per session. The Summer Program includes two, three (3) week sessions spanning six weeks, generally beginning the third week in June through the last week in July. Hours are from 7:30 a.m. to 6:00 p.m. over the summer, from Monday through Friday only. The Summer Program may have evening or weekend Special Events, but those Special Events must be included in the maximum number of Special Events permitted by the PUD.[2]

Former Lincoln Site / Proposed South Campus

The 8-acre former Lincoln site was originally the site of an orphanage, with residential cottages constructed in 1929 and the 1930s. Between the 1940s and the 1970s, the orphanage changed its name to the Lincoln Child Center, the orphanage was reorganized as a foster care agency, and many of the residential facilities were converted to classrooms to offer tutoring workshops for youth in the Oakland public school system. By 1997, the Lincoln Child Center's residential group homes were closed. The Lincoln Child Center (Lincoln) began focusing on providing school-based mental health services, therapeutic behavioral services, family support programs, early childhood mental health consultation and school engagement programs to respond to community needs. By 2010, Lincoln relocated to a new site in West Oakland, and sold the 8-acre former Lincoln site to Head-Royce School in 2013. In 2018, Lincoln celebrated its 135th year anniversary by launching a capital project for a new community-based Family Resource Center in West Oakland.

[1] City of Oakland, Head Royce School Conditions Of Approval, Case File: REV13-003, Condition of Approval #12: School Grades/Enrollment / Verification, June 7, 2016

[2] Ibid, Condition of Approval # 15: Summer Program Enrollment / Operations

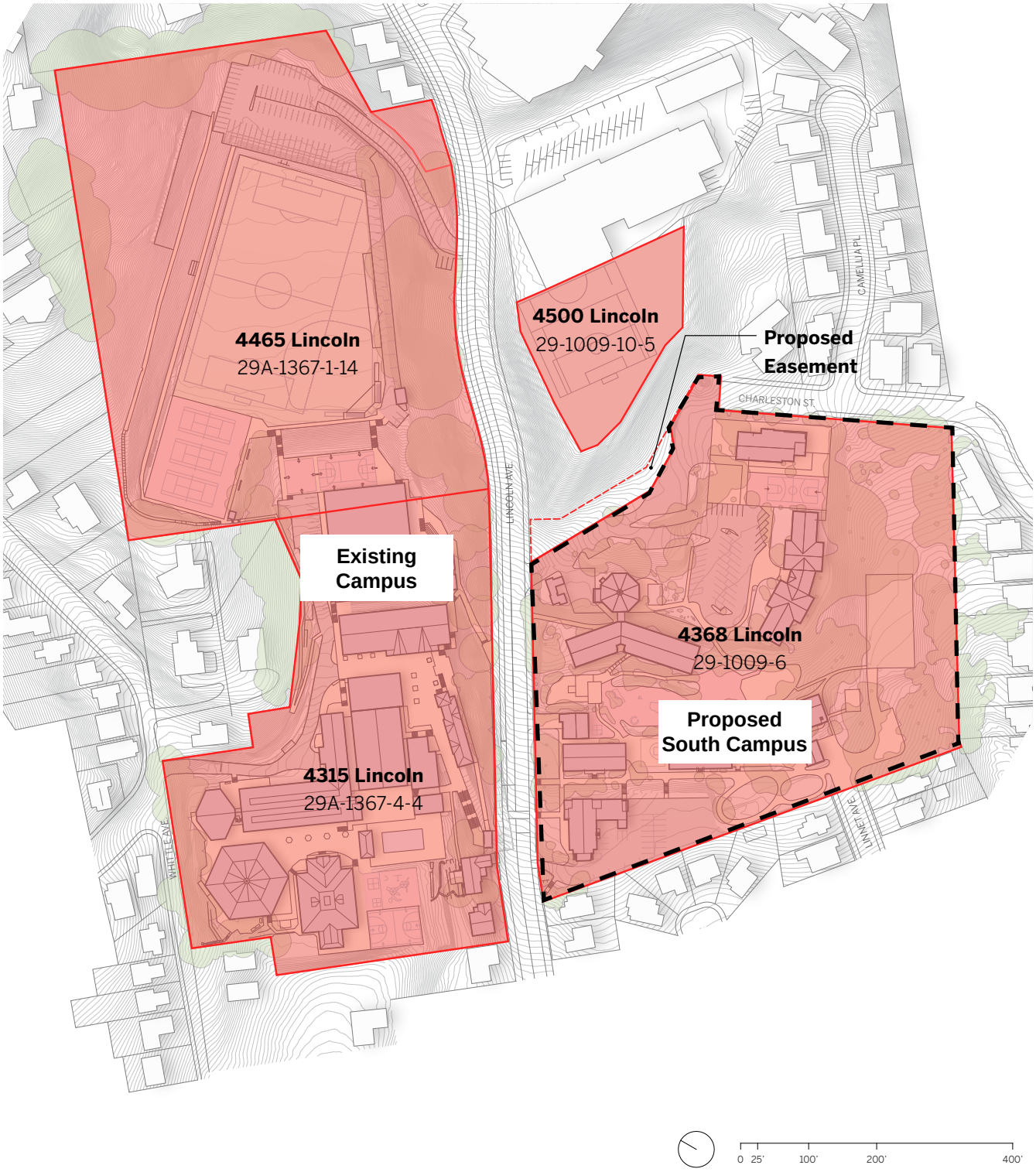


Figure 12-2
Proposed South Campus and Other Head-Royce School Properties

Source: Head-Royce School Draft Preliminary Development Plan, prepared by SOM - December 2018

All of the existing 11 buildings and improvements on the former Lincoln site are those previously constructed by the Lincoln Child Center or its predecessors. Current use of this property by the Head-Royce School is limited to parking. Per the June 2016 PUD, conditions of approval, the School must provide a minimum of 157 off-street parking spaces and maintain sufficient off-street parking to meet Oakland Planning Code requirements. These required parking spaces may be provided either at the existing Campus or at 4368 Lincoln Avenue (the former Lincoln site), provided that parking spaces used at 4368 Lincoln Avenue are not allocated to a separate use permit governing uses at that site (i.e., by Lincoln).[3] The School may use surplus parking at the former Lincoln site (and other locations) for additional parking, provided that use of these parking spaces is not in fulfillment of the School's obligation to provide 157 off-street parking spaces. The School may also use the former Lincoln property as an alternative staging area for drop-off vehicles if the staging area at the Mormon Temple becomes unavailable for that use,[4] and may use the former Lincoln property for parking to ensure that sufficient parking is provided for certain Special Events at the existing Campus that generate between 50 and 400 people.[5]

Regulatory Setting

This section describes City of Oakland plans, policies and regulations relevant to the Project and its site. This section also identifies potential conflicts with policies or existing land use regulations, and how any conflicts could be addressed.

City of Oakland General Plan

The Oakland General Plan establishes comprehensive, long-term land use policies and provides the primary policy direction for development throughout the City. The General Plan is made up of a series of "Elements," and each General Plan Element includes citywide policies dealing with a particular topic. The Oakland General Plan includes the following individual Elements:

- Land Use and Transportation Element (LUTE, adopted March 1998), including the Bicycle Master Plan (November 2002) and the Pedestrian Master Plan (December 2007). The LUTE designates the kinds, location and intensity of land uses, as well as appropriate zoning controls to achieve development policies.
- Historic Preservation Element (HPE, adopted March 1994 and amended July 1998). The HPE provides the goals, policies and actions to encourage the preservation of older buildings, districts and other physical features with historic value
- Open Space, Conservation, and Recreation Element (OSCAR, adopted June 1996). The OSCAR contains policies addressing the management of open land, natural resources and parks in the City
- Safety Element (adopted November 2004 and amended 2012). The Safety Element includes a policy framework to guide public decision-making process with regard to public safety, geologic hazards, fire, flooding and hazardous materials, and includes a Local Hazard Mitigation Plan.
- Housing Element 2015-2023 Update (last adopted December 9, 2014). The Housing Element provides an assessment of the need for housing and an inventory of housing; statement of the goals with regard to housing residents; and a program for providing the needed amount of housing throughout the City

[3] Since Lincoln is no longer a user or tenant at the site, no parking spaces are currently allocated to Lincoln.

[4] Ibid, Condition of Approval # 23 (a) iv: Transportation Demand Management

[5] Ibid, Condition of Approval # 23 (d) ii: Transportation Demand Management

- Noise Element (adopted June 2005). The Noise Element analyzes and quantifies the existing and projected noise levels from noise sources such as traffic, commercial and aviation activities, and includes implementation measures to address any foreseeable noise problems
- Scenic Highways Element (adopted September 1974). The Scenic Highways Element addresses the preservation and enhancement of attractive roadways and major thoroughfares traversing the City.

General Plan Consistency and Physical Effects

Conflicts with a General Plan do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, "effects analyzed under CEQA must be related to a physical change." Section 15125(d) of the Guidelines states that EIRs shall discuss any inconsistencies between the proposed project and applicable policies. Regarding a project's consistency with the General Plan in the context of CEQA, the Oakland General Plan states the following:

> "*The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Quality Act (CEQA).*"

Further, Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on environmental policies and plans, asking if the project would "conflict with any applicable land use plan, policy, or regulation . . . *adopted for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed elsewhere in this EIR.

The compatibility of the proposed Project with General Plan policies that do not relate to physical environmental issues will be considered by decision-makers (e.g., the City Planning Commission and City Council) as part of their decision whether to approve or disapprove the proposed Project. The Project's consistency with the General Plan is based on the Project as proposed. Moreover, a conflict with a policy or regulation that exists today but that is amended to accommodate a proposed project does not normally constitute a significant effect on the environment under CEQA. That is, should the decision-makers determine that any part of the City's policy framework be amended to accommodate the Project, the Project would not conflict with applicable City land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and in such instance, there would be a less than significant effect under CEQA.

Project's Consistency with the Land Use and Transportation Element of the General Plan

The following section provides an assessment of the Project's overall consistency with the provisions and policies of the Land Use and Transportation Element of the General Plan (the LUTE). The provisions and policies of other General Plan Elements are addressed in their respective topic area of this EIR (e.g., Historic Preservation Element policies are addressed in the Cultural and Historic Resource chapter, Noise Element policies are addressed in the Noise chapter, etc.)

General Plan Land Use Designations

The General Plan Land Use Diagram (see **Figure 12-3**) classifies proposed South Campus, as well as the adjacent Ability Now Bay Area property, the Ascension Greek Orthodox Cathedral property and the Oakland California Temple of the Church of Jesus Christ of Latter-day Saints property as Institutional.

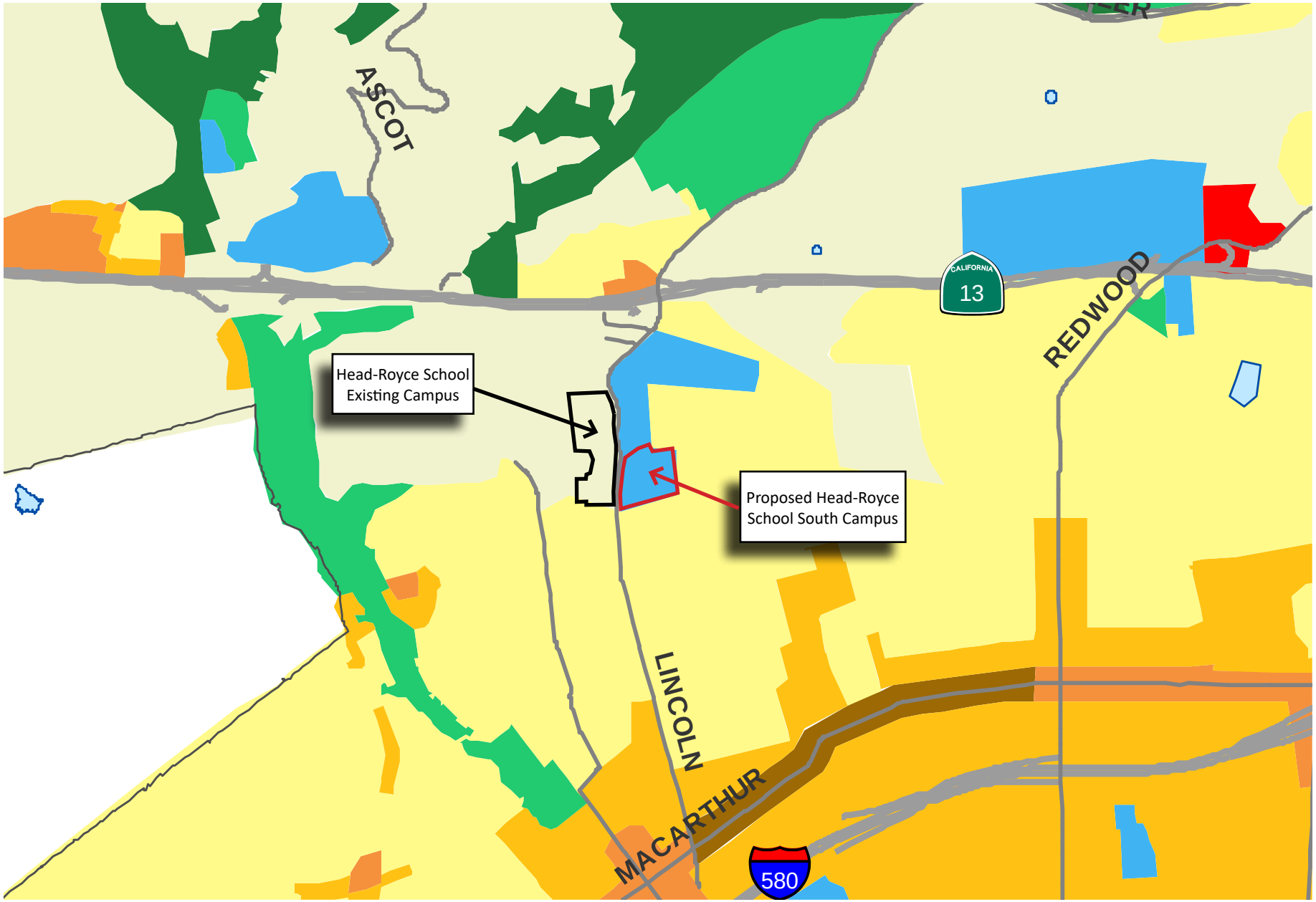


Figure 12-3
City of Oakland General Plan Land Use Designations

Source: City of General Plan Land Use Map, accessed at:
https://www.oaklandca.gov/resources/general-plan-map

The Institutional land use classification is intended to create, maintain and enhance areas appropriate for educational facilities, cultural and institutional uses, health services and medical uses, as well as other uses of similar character. Future uses may include educational and cultural facilities, institutions, health services and medical facilities. Under certain conditions, mixed-use housing and commercial development that supports these institutional areas may be allowed. The maximum floor: area ratio (FAR) for this land use classification is 8.0.

Consistency Analysis: The Project would integrate an existing but currently underutilized 8-acre campus at the former Lincoln site (also an institutional use that operated under a Conditional Use Permit as approved by the City), with the 14-acre existing Campus of the Head-Royce School, reestablishing the 8-acre former Lincoln site as an institutional land use. All of the Project's proposed uses on the former Lincoln site are institutional in character, including the rehabilitation and reuse of certain existing buildings for administrative and classroom space, construction of a new multi-use performance arts building for school/student use, new vehicular and pedestrian circulation expressly for use by the School, and a privately owned and maintained pedestrian tunnel to connect the existing Head-Royce Campus to the proposed South Campus. The Project's development intensity (based on demolition of approximately 16,500 square feet of building space, retention of approximately 27,350 square feet of building space, and construction of approximately 19,400 square feet of new building space) is a net increase of approximately 2,900 square feet, and a total of approximately 46,750 square feet of building space at buildout. On the total approximately 8-acre site, the Project would have a FAR of 0.13, well below the maximum intensity of 8.0 as defined in the General Plan (and also a lower FAR than the existing Head-Royce Campus).

The General Plan Land Use Diagram classifies the majority of the existing Campus as Hillside Residential. The Hillside Residential classification is intended to create, maintain and enhance neighborhood residential areas that are characterized by detached, single unit structures on hillside lots. Typical lot sizes range from approximately 8,000 square feet to one-acre in size. Future development within this classification should remain residential in character. A small portion of the existing Campus is classified as Detached Unit Residential, which is intended for residential areas with single-family homes, with allowances for schools and other small-scale civic institutions.

Consistency Analysis: The Head-Royce School and many of its existing facilities on the existing Campus have existed on this site since 1964, and are conditionally permitted within these residential land use classifications pursuant to the City's Conditional Use Permit (CUP) process. The most recent CUP for the existing Campus is the Planned Unit Development (PUD) permit as amended in 2016, which governs use of the existing Campus for school activities. That PUD permit permits the School to increase its enrollment to a maximum school enrollment of 906 students. The Project proposes to increase total student enrollment to a maximum of 1,250 students, or an increase of 334 students over its currently permitted enrollment cap. The School estimates that on average, the proposed South Campus may have approximately 240 students at any given time during the day, and the difference of approximately 104 students would be accommodated at the existing Campus. This would increase student population at the existing Campus from a maximum of 906 student (under current PUD requirements) to 1,010 students at any given time.

The increased student population that would occur at the existing Campus would be accommodated within existing School facilities.

The only new construction proposed on the existing Campus consists of an opening to the north end of an underground pedestrian tunnel, and potentially lifting the roof and interior ceiling height of the current multi-use building (known as the MEW) to better function as a school gymnasium, which was its original purpose. Both of these improvements support institutional use of the School. In sum, the Project's location, size and uses are consistent with the Oakland General Plan's land use classification for the property.

Project's Consistency with Relevant LUTE Policies

The LUTE contains a number of land use policies that address issues related to land use and planning for properties classified as Institutional uses, and that are particularly relevant to the proposed South Campus and the Project. As specifically noted in the LUTE,

> *"Oakland houses a number of renowned educational, medical, and other types of institutional facilities that serve not only the City, but the region as well. Over the course of the life of the General Plan, these institutions will continue to grow and expand to meet the changing demands of their patrons. However, expansion plans have previously raised issues about compatibility with surrounding residential uses. The scale of development, traffic impacts and removal of housing units have been among the concerns expressed.*

The following General Plan policies help guide the physical and operational changes at the City's institutionally classified locations, and the Project's consistency with these policies is addressed below.

Policy:	**Consistency Determination**
Policy N2.1 Designing and Maintaining Institutions: As Institutional uses are among the most visible activities in the City and can be sources of community pride, high-quality design and upkeep/maintenance should be encouraged. The facilities should be designed and operated in a manner that is sensitive to surrounding residential and other uses.	**Consistent**: The Project would result in the maintenance and improvement of the currently underutilized former Lincoln site. The Project maintains and intends to rehabilitate the three historic buildings on this site (Buildings 0, 1 and 2), retain one other building (Building 9), and to add two new buildings, including a Performing Arts Center. The new buildings are to be designed to meet LEED Gold standards. Potential impacts to surrounding residential areas associated with construction and operation of the proposed Loop Road and the new Performing Arts Center building (e.g., noise, air quality, slope stability, aesthetics), etc.), are addressed in respective chapters of this EIR, but have not been found to be significant effects under CEQA.
Policy N2.2 Providing Distributed Services: Provision of government and institutional services should be distributed and coordinated to meet the needs of City residents.	**Generally Consistent**: The Project would not provide a government or public institutional service. The locational criteria for the distribution of public services coordinated to meet the needs of City residents is not applicable to the Project. Rather, the Project is an expansion of an existing private institution to a site located in immediate proximity to its existing facilities. Head-Royce School has been located on its current 14-acre Campus adjacent to Lincoln Avenue since 1964, and the 8-acre proposed South Campus has been in institutional use since the 1930s. The former institutional user of the proposed South Campus (Lincoln) relocated to a new site in West Oakland to better meet the needs of City residents, and sold its former campus to Head-Royce School in 2013.
Policy N2.3 Supporting Institutional Facilities: The City should support many uses occurring in institutional facilities where they are compatible with surrounding activities and where the facility site adequately supports the proposed uses.	**Generally Consistent**: The Project is intended to support only one use, that of a private school. Within that private school use, the Project proposes to include administrative space, classrooms, outdoor

	space and a new Performing Arts building. The analysis presented in other chapters of this EIR demonstrates that, with implementation of SCAs and certain additional mitigation measures, the Project would not result in a significant environmental impact on the surrounding residents or community. The School has indicated that the increase of 344 new students (to a maximum of 1,250 students) would be distributed across both the existing and proposed South Campus, and that the proposed South Campus is expected to accommodate between 10 percent and 30 percent of all students (estimated at approximately 240 students) at any given time during the school day. The facilities at the proposed South Campus (Buildings 0, 1 and 2 and the Performing Arts Center) would adequately support this proposed increase in use. The school facilities at the existing Campus are also capable of accommodating an increase in student population, which is estimated to be approximately 104 additional students throughout the day at the existing Campus.
Policy N2.4 Locating Services along Major Streets: New large-scale community, government and institutional uses should be located outside of areas that are predominantly residential. Preferably, they should be located along major thoroughfares with easy access to freeways and public transit or in the Downtown.	**Generally Consistent**: At a FAR of 0.13 as compared to a maximum allowed FAR of 8.0, the Project is not a large-scale institutional use, and per the Planning Code, high schools are not considered an intensive civic activity. Although the Project is located in a residential area (residential uses abut along two sides of the proposed South Campus site), it is also adjacent to other institutional uses (the existing Head-Royce School Campus, and the Ability Now property to the north) The Project is within an area that includes two other large institutional uses (the Greek Orthodox Church and the Mormon Temple). The proposed South Campus site itself has been in institutional use since the 1930s. The proposed South Campus is located along a major thoroughfare (Lincoln Avenue) with easy access to Highway 13.
Policy N2.5 Balancing City and Local Benefits of Institutions: When reviewing land use permit applications for the establishment or expansion of institutional uses, the decision-making body should take into account the institution's overall benefit to the entire Oakland community, as well as its effects upon the immediately surrounding area.	**Generally Consistent:** This policy addresses the range of issues that City decision-makers should consider when reviewing the merits of the Project, including the institution's overall benefit to the entire Oakland community. The analysis presented in other chapters of this EIR demonstrates that, with implementation of SCAs and certain additional mitigation measures, the Project would not result in a significant environmental impact (based on City CEQA thresholds) on the surrounding residents or community.
Policy N2.6 Disposing of Public Property: Before disposing of schools or other significant public or quasi-public properties that are no longer needed for their original purpose, careful consideration should be given to their possible utilization for other kinds of civic, institutional, or open space uses.	**N/A:** This policy is not applicable as there is no disposal of public or quasi-public property occurring. When Lincoln decided to vacate and their former site was no longer needed for its original purpose, Head-Royce School acquired the property with the intent to utilize it for another type of institutional use(i.e., as an opportunity for School expansion).

Policy N2.7 Designing Community Facilities: Site design, architecture and operating practices of community facilities should be compatible with the area's desired character, and should include public art where possible.	**Consistent**: This policy addresses the range of design issues that City decision-makers should consider when reviewing the relative merits of the Project. These issues are all addressed pursuant to consideration of the Project's proposed PUD permit and Design Review process, and do not pertain to potential environmental effects. As indicated in the Aesthetics chapter of this EIR, the Project would not substantially degrade he visual character of the Project site or its surroundings.
Policy N2.8 Long Range Development Planning: Require, where legally allowed, and in all other situations encourage, those institutions designated with the "Institutional" land use classification should be required to present Long Range Operation and Development Plans to the City Planning Commission. While these plans could be binding or non-binding, they should present realistic information regarding the continued operation and/ or expansion of the facilities. The City suggests that substantial public input be built into the process of developing the plans. The plans could be required as a part of development applications, or on a periodic basis.	**Consistent**. Head-Royce School has a currently effective long range operation and development plan (the most current 2016 Planned Unit Development permit, as amended in 2019), which was approved by the City Planning Commission. The Project application is an amendment to this PUD permit to incorporate the proposed South Campus into these long-range operations and development plans. As a special permit, the PUD amendment would be binding, and would include realistic information regarding the continued operation and expansion of the School facilities. Public input has been sought, and incorporated into the School's development plans.

In sum, the Project is consistent with the Institutional land use designation and the General Plan policies and objectives that support it.

Project's Consistency with City of Oakland Zoning

Project's Consistency with Permitted Uses

The City of Oakland Zoning Map (see **Figure 12-4**) designates the proposed South Campus, as well as much of the surrounding neighborhood on the south side of Lincoln Avenue, as Residential Detached-1 (RD-1). Under the City's Planning Code, the RD-1 zoning district is intended to accommodate detached, single unit structures and a limited range of commercial uses. Schools (Community Education use) are permitted with approval of a Conditional Use Permit.[6]

The existing Head-Royce School Campus is primarily zoned Residential Hillside-4 (RH-4) as also shown in Figure 12-4. The RH-4 district is intended to create, maintain and enhance areas for single-family dwellings on minimum lot sizes of 6,500 to 8,000 square feet and a limited range of civic uses, and is typically appropriate in already developed areas of the Oakland Hills.

Consistency Analysis: Pursuant to Section 17.10.180 of the Oakland Municipal Code, activities typically performed by public and private elementary, junior high and high schools (such as the Project) are defined as Community Education Civic Activities. Community Education use is conditionally permitted within both the RH-4 and RD-1 zoning districts, and the Project includes an application for a Conditional Use Permit (CUP). Pending approval of that CUP, the Project would be consistent with the uses and activities of the City's zoning.

[6] Table 17.19.01: Permitted and Conditionally Permitted Activities

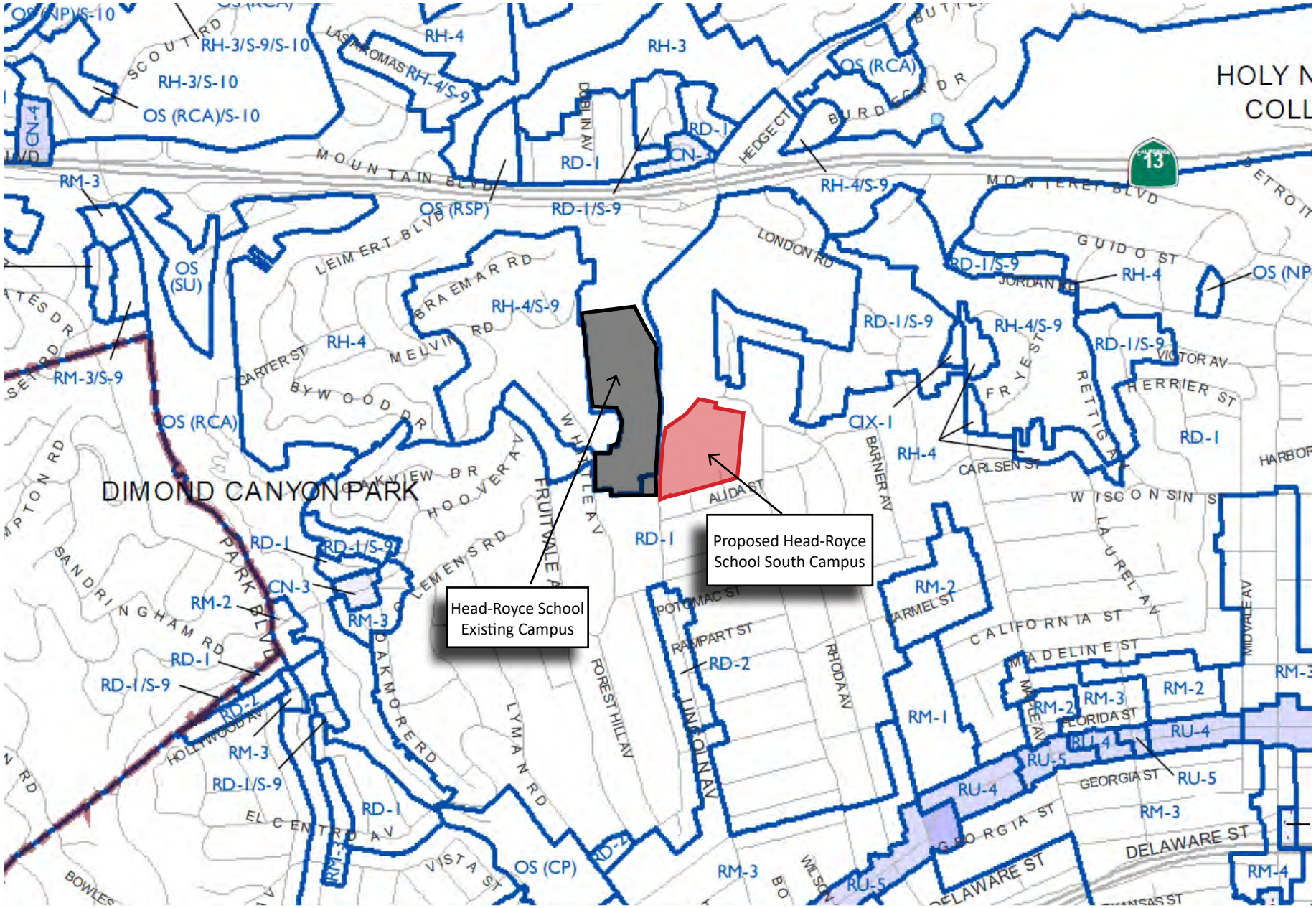


Figure 12-4
City of Oakland Zoning

Source: City of Oakland Zoning Map, accessed at: https://www.oaklandca.gov/resources/zoning-map

Project's Consistency with RD-1 Zoning Development Standards

Section 17.15.050 of the Oakland Planning Code prescribes a number of development standards that are specific to the RD-1 zoning district, as enumerated in Table 17.15.03: Property Development Standards, Table 17.15.05: Floor Area Ratio (FAR) and Lot Coverage, and Table 17.15.06 for Height Regulations for all Lots with a Footprint Slope of >20%. The Project's consistency with these development standards is addressed below.

Standard:	Consistency Determination
Front Setback: Minimum front setback at <20% street-to-setback gradient = 20 feet Minimum front setback at >20% street-to-setback gradient = 5 feet	**Consistent**: The frontage of the proposed South Campus along Lincoln Avenue is defined as the "front". The nearest new structure to the Lincoln Avenue right-of-way proposed pursuant to the Project is the Link Pavilion, which is located approximately 28 feet from Lincoln Avenue, exceeding all front setback requirements applicable.
Side Setback: Minimum interior side at <20% footprint slope = 5 feet Minimum interior side at >20% footprint slope = 5 feet or 10% of the lot width	**Consistent:** The nearest new structure to a side lot is the Performing Arts Center. The site where the Performing Arts Center is proposed to be located has a footprint slope of approximately 17% (7 feet of rise across approximately 40 feet of footprint depth), and therefore a minimum interior side setback of 5 feet. The Performing Arts Center building is located approximately 50 feet from the nearest side lot line of those properties along Linnet Avenue, exceeding the 5-foot side setback requirement by 45 feet.
Rear Setback: Minimum rear setback is 20 feet. For lots which abut an adjoining rear setback, the minimum rear setback depth shall be increased by an additional one-half (½) foot of rear setback depth for each additional one (1) foot of lot depth over one hundred (100) feet, up to a maximum rear setback depth of forty (40) feet.	**Consistency:** The Performing Arts Center is the nearest new structure to the rear lot, and is located approximately 120 feet from the nearest rear lot line. The Performing Arts Center exceeds the 40-foot maximum rear setback by over 60 feet.
Building Height: For lots with a footprint slope of < 20%, the maximum wall height of a primary building = 25 feet, and the maximum pitched roof height = 30 feet For lots with a footprint slope of > 20%, the maximum wall height varies between 35 to 40 feet, depending on Oakland Planning Code Section 17.108.020 provides for different maximum building heights in certain situations. In the RD-1 zone, Civic facilities (i.e., schools) that have increased yards may have a height of up to seventy-five (75) feet upon the granting of a CUP, provided that the minimum setback otherwise required is increased by one foot for each foot by which the facility exceeds the maximum height.	**Consistent:** The tallest building proposed pursuant to the Project is the new Performing Art Center. The site where the Performing Arts Center is proposed to be located has a footprint slope of approximately 17% (7 feet of rise across approximately 40 feet of footprint depth), and therefore a maximum building height of 30 feet. The Performing Art Center is proposed to be 32 feet, thus slightly exceeding the base zoning height. However, as a Civic facility, the 32-foot height is permitted if the minimum setback otherwise required is increased by two feet (one foot for each foot that the Performing Arts Center exceeds the maximum height). Since the Performing Arts Center has a side setback of approximately 50 feet, exceeding the 5-foot side setback requirement by 45 feet, this criteria for allowing a 32-foot tall building is met.
Building Articulation: The maximum wall length before articulation is required is 40 feet.	**Consistent:** The proposed Performing Arts Center building has a maximum wall length if approximately 140 feet along the side lot lines of those properties along Linnet Avenue. Design Review level of architecture for the Performing Arts Center has not been advanced to the level of detail needed to determine articulation, but the

	Project's proposed PUD permit application states that the design will be consistent with the zoning and design controls of the City's Planning Code.
Lot Coverage and FAR: The maximum lot coverage for lots greater than 1 acre in size = 20% The maximum FAR for lots with a footprint slope > 20% = 0.20. FAR only applies to lots that have a footprint slope of > 20%.	**Consistent:** At Project buildout, there would be approximately 32,234 square feet of lot coverage by buildings on the approximately 8-acre proposed South Campus, for a lot coverage of approximately 9%. The proposed South Campus has an overall footprint slope of approximately 12% (61 feet of rise across the approximately 484 feet of lot width parallel to Lincoln Avenue). At this average slope, the FAR regulations do not apply. Even if the FAR regulations did apply to the site, the Project's FAR is approximately 13% (46,250 square feet of building space across approximately 8 acres), well below the otherwise applicable maximum FAR.

In summary, the Project is consistent with the land uses conditionally permitted in the Residential Detached-1 (RD-1) zoning district and the development standards of that zoning district. The Project's proposed changes at the existing Campus (limited to the pedestrian tunnel opening, and potentially a stacked parking facility in the long-term) are directly related to the school use, and also subject to a conditional use permit. Furthermore, as provided in the Oakland Planning Code Section 17.15.060 (B): Planned Unit Developments, large integrated developments shall be subject to the Planned Unit Development regulations of Chapter 17.142 if they exceed the sizes specified therein. In developments which are approved pursuant to the PUD regulations, certain uses may be permitted in addition to those otherwise allowed in the RD zones, and certain of the other regulations applying in the RD zones may be waived or modified. The normally required design review process may also be waived for developments at the time of initial granting of a Planned Unit Development permit (see further discussion, below).

City of Oakland Planned Unit Development (PUD) Permits

The provisions of Chapter 17.142 of the Oakland Planning Code are known as the Planned Unit Development (PUD) regulations. The purposes of these regulations are to encourage the comprehensive planning of tracts of land; provide flexibility in the application of certain regulations in a manner consistent with the general purposes of the zoning regulations; and promote a harmonious variety of uses, the economy of shared services and facilities, compatibility with surrounding areas, and the creation of attractive, healthful, efficient and stable environments for living, shopping or working. According to Oakland Planning Code Section 17.142.020, a PUD is a large, integrated development adhering to a comprehensive plan and located on a single tract of land of 60,000 square feet or more, or on two or more tracts of land equaling 60,000 square feet or more in total that may be separated only by a street or other right-of-way. As such, the Project is appropriately considered pursuant to a PUD permit.

In developments that are approved pursuant to the PUD regulations, certain uses may be permitted in addition to those otherwise allowed in the underlying zoning, certain other zoning regulations may be waived or modified, and the normally required design review process may also be waived for developments at the time of initial granting of a PUD permit. Unless otherwise specified in the PUD permit, any future changes within a Planned Unit Development shall be subject to applicable design review regulations.

Head-Royce School PUD Permit

The City approved a PUD permit for the Head-Royce School in 2006, providing for the development and operation of the existing Campus for school activities. That PUD was amended in 2016 for modification to

enrollment numbers and other issues, and was amended again in 2018 to incorporate use of the playfields at the adjacent Ability Now property for school athletic practices. The prior 2016 PUD permit and associated Conditions of Approvals included a Final Development Plan (FDP) for the existing Campus, a Conditional Use Permit (CUP) for construction of parking spaces, amendments to the prior 2006 PUD, and new Conditions of Approval (see below) related to, but not limited to the topics of:

- school enrollment
- hours of academic and childcare operation
- summer program enrollment/operations
- number of special events/days and hours of operation, and
- implementation of a Transportation Demand Management (TDM) program

Project's Proposed PUD Permit and PDP

The Project includes an application to further amend the prior 2016 PUD permit in its current form and to extend these amended permit conditions to apply to the proposed South Campus and associated integration with the existing Campus of the Head-Royce School. Specific to the Project, the PUD amendments and proposed South Campus Preliminary Development Plan (PDP) provide for the following:

- Expansion of the existing Head-Royce School Campus across Lincoln Avenue to the site of the former Lincoln Center at 4368 Lincoln Avenue (proposed South Campus)
- Construction of a pedestrian tunnel under Lincoln Avenue
- Demolition of eight structures (including Buildings #3, 4, 5, 6, 7, 8, 10 and 11)
- Remodeling of four existing buildings, three of which have historical classification (Buildings #0, 1 and 2), as well a non-historic Building #9
- Construction of a 1,500-square foot Pavilion building that links to the pedestrian tunnel, and a 15,900 square-foot multi-use Performing Arts Center building (as an accessory use to the School)
- Retention of certain existing parking spaces and adding additional parking and on-site circulation
- Modified plans for on-site student drop-off and pick-up activities along on on-site Loop Road, rather than having these activities occur along the Lincoln Avenue frontage, and
- Increased student enrollment from the currently permitted 906 students, to a maximum of 1,250 students

The Project's proposed PUD permit and PDP application do not request any density bonus or other modifications to the underlying zoning regulations that apply to the site (with the potential exception of an allowance for multi-family use of existing Building 9 as temporary housing for new faculty members). Rather, the existing PUD (as amended in 2016) requires an amendment to that PUD for any increase in enrollment beyond 906 students, and for any proposed new building or site expansion, as indicated below:

> *"The Project Applicant shall apply for a new or amended Planned Unit Development Permit for any student enrollment increase over 906 students on the Head Royce campus site, including but not limited to any physical expansion of Head Royce School's operations at 4315 Lincoln Avenue or any other "Future Construction" associated with increasing Head Royce School's operations. The City may require preparation of a campus-wide Master Plan for any such expansion. Future Construction is defined for purposes of this condition as: new, wholly reconstructed, or relocated school buildings, any expansion of floor area (as defined by Planning Code), new enclosed buildings or portions of buildings (i.e., storage shed, garage, attic on an existing building). For purposes of this condition, future construction does not*

include features such as unenclosed decks/balconies, stairs, walkways, patios, courtyards, fences, walls and retaining walls, trellises or other landscape features, interior remodeling of an existing building, or repair of existing building features. Any future Master Plan shall address, at a minimum, an adequate on-site pick-up and drop-off area, how the school will accommodate additional student growth, a comprehensive development plan for the entire School, including addressing all on-site parking, events, sports fields (if applicable) and traffic-related and vehicle access issues. The last enrollment and staffing form submitted to the California Department of Education shall be required as part of the application documents."

An assessment of the Project's relative consistency with the detailed 2016 Conditions of Approval is provided below, together with a description of proposed amendments to those 2016 Conditions as necessary or as requested by the Applicant to implement the proposed South Campus PDP.

2016 Conditions of Approval:	**Consistency or Proposed Amendment:**
School Grades/Enrollment /Verification: a) Head Royce School is permitted to operate a K-12 Community Education Facility. b) The School is permitted to increase its enrollment to 875 students with this [2015] approval. Enrollment may increase by up to 15 students each year thereafter (e.g. up to 890 students at the start of the 2016-2017 school year and up to 906 students at the start of the 2017-2018 school year) provided the School meets and maintains required Auto Trip Reductions. The maximum school enrollment at Head-Royce School is 906 students. No enrollment fluctuation resulting in enrollment above 906 students is allowed. c) The school shall submit enrollment numbers to the Bureau of Planning no later than October 15th each year. d) In accordance with state law, the school shall also submit its enrollment figures to the California Department of Education no later than October 15th of each year.	**Proposed Amendment:** The Project proposes to further increase student enrollment by an additional 344 students, from the current maximum of 906 students, to a new maximum of 1,250 students. Proposed allowable increases in enrollment would be no more than 20 additional students per year.
Total Number of Employees. a) The Project Applicant shall submit the total number of employees to the Bureau of Planning no later than October 15th each year. b) In accordance with state law, the school shall also submit their employee numbers to the California Department of Education no later than October 15th of each year.	**Consistent:** The current Conditions of Approval do not limit the number of on-site faculty or employees of the School. To support enrollment, the total projected faculty and staff count will be increased to 189, an increase of 17 employees.
Hours of Operations (Academic, Childcare and After School Program): Head Royce School's hours of operation, which include academic, childcare and afterschool programs, are from 7:00 a.m. to 6:30 p.m. Monday through Friday. a) Athletic practices, including outdoor practices may commence at 6:30 a.m. on weekdays. Outdoor athletic practices and games shall end by 7:30 p.m. or sundown, whichever is earlier. b) Indoor activities involving only school students, faculty, staff and members of the Board of Trustees (such as play rehearsals, standardized testing, band practices, and meetings of student organizations, faculty committees and meetings of the Board of Trustees) are not considered Special Events (see below)) and may occur	**Consistent:** The Project does not propose any modifications to the School's current hours of operation. The current hours of operation would apply to new uses within the proposed South Campus. Indoor activities that do not constitute Special Events (such as play rehearsals, standardized testing, band practices, and meetings of student organizations, faculty committees and meetings of the Board of Trustees) may take place within the proposed new Performing Arts Center building or within other buildings on the proposed South Campus.

after 6:30 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on weekends. c) No field-wide lighting may be installed on the athletic field.	
Summer Program Enrollment / Operations: a) Summer Program hours are from 7:30 a.m. to 6:00 p.m. over the summer from Monday through Friday only. b) Summer Program includes two, three (3) week sessions spanning six weeks, generally beginning the third week in June through the last week in July. c) The Summer Program may have evening or weekend Special Events. However, those Special Events will be included in the maximum number of Special Events listed below. d) The maximum Summer Program enrollment is 780 children per session. The Director of Operations shall submit the enrollment numbers to the Planning and Zoning Division 2 weeks prior to each session of the Summer Program. e) The playing fields or pool shall not be used prior to 9:00 AM. f) The School shall operate the Summer Program and shall not lease, partner, or loan the Summer Program to another operator or organization. g) Unless otherwise noted, all Conditions of Approval that apply to School operations apply to the Summer Program.	**Consistent:** The Project does not propose any modifications to the Summer Program enrollment numbers or operations. Summer programs would be allowed to use facilities in the proposed South Campus, and a certain number of permitted Special Events for the Summer Program may occur on the proposed South Campus, but overall Summer Program enrollment and operational requirements would remain the same.
Number of Special Events / Days and Hours of Operation: The School and the Summer Program shall be permitted to hold Special Events at the Head-Royce School campus subject to the following: a) A "Special Event" is defined as a gathering in which visitors (including parents) are invited to the campus in conjunction with a School or Summer Program-sponsored event or activity such as a Back to School night, a performance (play or musical), athletic event, dance, walk-a-thon, guest speaker, fair, Admissions Open House, promotion or graduation ceremony, associated and carried out by the school (not hosted by an outside group or organization) and for which 50 or more visitor vehicles are expected. If more than one Special Event occurs on a single day, each Special Event shall count as a separate event. A Special Event does NOT include indoor activities involving only School students, faculty, staff and members of the Board of Trustees (such as play rehearsals, standardized testing, band practices, and meetings of student organizations, faculty committees and meetings of the Board of Trustees). In addition, neighborhood meetings required or requested to be held on campus as a condition of this permit or otherwise by the City are not considered to be Special Events. b) The school shall post an annual calendar on its website and provide the website link to the Neighborhood Committee at the beginning of the School year listing all Special Events and the anticipated number of visitor vehicles that will be generated for each event. The School is permitted an additional ten (10) total weekday evening events that are not identified on the annual calendar, provided that the Neighborhood Committee is provided a 30-day notice of such addition and those events shall not take place during weekends or the summer. c) During school academic, childcare and afterschool program hours of operation, Mondays through Fridays, the School is permitted an unlimited number of Special Events. However, these events for which	**Consistent:** The Project does not propose any modifications to the number of Special Events that may be held, or to the days and hours of operations for these Special Events. Certain Special Events (specifically including elementary school, middle school or high school graduation ceremonies) may occur in the proposed South Campus' outdoor amphitheater area, and certain other Special Events (particularly plays and musical performances) would occur at the new Performing Arts Center at the South Campus. However, the overall number of permitted Special Events would not increase, and current regulations regarding days and hours of operations for Special Events would not change.

50 or more visitors' vehicles are expected, must follow procedures for Special Events. d) The school shall be permitted a maximum of 85 evening Special Events per school year during the hours of 7:00 p.m. -9:30 p.m. All Special Event participants shall have left the campus and the lot locked by 10:00 p.m. School dances shall end by 10:30 p.m. with all participants leaving by 11:00 p.m. e) The school shall be permitted a maximum of 55 Saturday daytime Special Events per school year during the hours of 9:00 a.m. to 6:00 and 10 Saturday evening Special Events per school year during the hours of 6:00 p.m. to 9:30 p.m. The school shall be permitted a maximum of 10 (10) Sunday Special Events per school year during the hours of 9:00 a.m. - 6:00 p.m. The school shall be permitted a maximum of ten (10) single day summer Special Events during the hours of 9:00 a.m. - 6:00 p.m. and only on weekdays. f) No events shall be held that have not been published on the school calendar 30 days in advance, or emailed to immediate neighbors one month in advance. The school is not permitted to rent or loan out any of its facilities. g) All Special Events shall be monitored by the School per the Condition of Approval.	
Parking Requirement and Shared Parking: At maximum enrollment (906 students), the School shall provide a minimum of 157 off-street parking spaces and in all cases shall, at a minimum, maintain sufficient off-street parking to meet Oakland Planning Code section 17.116.070(C). These spaces may be provided either at 4315 or 4368 Lincoln Avenue, provided that the spaces used at 4368 Lincoln Avenue are not already allocated to the existing use permit governing uses at that site. The School may use surplus parking at 4368 Lincoln Avenue, the Greek Orthodox Church, Cerebral Palsy Center, Mormon Temple or other off-site locations for additional parking, provided that use of these facilities for parking is not in fulfillment of the School's obligation to provide 157 off-street parking spaces at maximum enrollment and are not required or needed for the uses governing those sites.	**Proposed Amendment:** Based on 2019 parking counts, the School currently provides 154 off-street parking spaces on the existing Campus, and uses additional available parking on the former Lincoln site (proposed South Campus) to meet its minimum requirement of 157 off-street parking spaces. The Project proposes to add to this current number of parking spaces, equivalent to the following: a) 129 parking spaces currently located on the South Campus, plus b) reconfiguration of existing parking lots on the proposed South Campus to accommodate and additional 25 parking spaces, and c) potentially adding up to 36 new parking spaces as "stacked" parking on the upper North Campus lot near the soccer field The Project would result in providing a total of 344 parking spaces Campus-wide.
Traffic and Circulation: The project sponsor shall monitor the morning drop-off and afternoon pick-up queue during the school year as well as during any summer program operations. The procedures and monitoring forms are included in the TDM Plan. The project sponsor shall implement the monitoring procedures by either retaining a qualified independent traffic consultant to monitor the extent of the after-school pickup queue along Lincoln Avenue, or hire a qualified independent traffic consultant, approved by the City's Bureau of Planning, to train at least two (2) supervising monitors to implement and supervise the monitoring procedures. Any new	**Proposed Amendment**: The Project proposes a completely new and amended Vehicular Access and Circulation Plan for the School. Pursuant to this proposal, a new internal Loop Road running within the perimeter of the proposed South Campus will provide approximately 1,000 feet of on-Campus, off-street queuing space, and create distinct drop-off and pick-up points for the upper school and the lower and middle school students. During the peak periods on school days, primary pick-up and drop-off activities

supervising monitor must be trained directly by the independent traffic consultant.

If the school's drop-off or pick-up queue extends for more than 60 seconds in any single monitoring period (excluding delays due to extenuating circumstances such as a traffic accident) past the school's upper driveway and the red "no parking" zone above the driveway along the north side of Lincoln Avenue and extending into the "Keep Clear" zone, the school shall implement as many of the following actions and continue to implement these actions as necessary to accomplish the necessary reduction in the length of the queue:

- Implement staggered morning drop-off and afterschool pickup times.
- Stagger the afterschool bus pick-up times so that the buses are loaded and leave prior to the start of pickup.
- Discourage early arrival for pickup within the Transportation Policy Guide and during an annual back to school traffic presentation.
- Increase public and private bus ridership in addition to those already in effect at the time of the queueing violation.
- If the previous measures do not reduce the queue, work with the City to restrict on-street parking during morning drop-off and afternoon pickup on Lincoln Avenue to allow for a longer queue. The School shall retain a qualified traffic consultant to prepare an analysis of the queue extension for review by the City's Transportation Services and Oakland Police Department Traffic Safety Divisions. The School shall pay any required review fee. The City may decline to restrict on-street parking to allow a longer queue, in which case other measures noted above must be pursued.

Monitoring Action(s): Monitoring and reporting shall take place for four one-week periods, once at the beginning of each School semester, and once at the beginning of each Summer Program session. After 2017, the number of monitoring sessions and the duration of the monitoring period for each school year shall be determined by the City of Oakland's Transportation Services Division, Oakland Traffic Safety Division and Bureau of Planning, and based in part of the school's performance in reducing the queue. In accordance with the TDM, either a qualified independent traffic consultant or two (2) trained monitors shall:

- Monitor the Lincoln Avenue queues during after-school pick-up (3:00 to 3:45 p.m.) and morning drop-off (7:55 to 8:30 a.m.) by recording observations of the length of each queue, reporting on the number of vehicles in the queue every 15 minutes, and the maximum number of vehicles in the queue during the daily monitoring period using the form provided as an appendix to the TDM.
- The monitoring persons shall also note the number of buses in the queue at each monitoring time.
- The Director of Operations shall prepare a report at the end of every week during each monitoring period based on the information gathered, sign the report, and submit to the Bureau of Planning.
- In addition to monitoring forms, the School shall also submit video documentation of the queue during the time periods referenced above eight (8) days each year (two days during each of the four (4) monitoring weeks) for a total of sixteen (16) video clips.
- If the results of any of the monitoring periods show that the queue of vehicles extends for a period of 60 seconds or more during each monitoring period past the School's upper driveway, the School shall consult with Bureau of Planning, Transportation Services Division, and Oakland Police Department Safety Division and determine which of the

(except for bus loading and unloading) will occur on the proposed South Campus. The internal Loop Road will replace the current drop-off and pick-up procedures, which occur on Lincoln Avenue.

Access to the proposed South Campus is proposed to be controlled by a new signalized intersection at the northeast corner of the site along Lincoln Avenue. The Lincoln Avenue right-of-way will be reconfigured to accommodate a downhill left-turn pocket and an uphill right-turn pocket. Parallel parking spaces along the south side of Lincoln Avenue will be removed to accommodate this modification. Egress from the proposed South Campus will be controlled by a signalized intersection at the northwest corner of the site. This signal will replace the signal that currently controls the pedestrian crosswalk at the Head-Royce Gatehouse. The traffic signal location at the entrances to the Head-Royce east parking lot and Ability Now Bay Area will be maintained.

The loading zones for both AC Transit and private buses will be maintained on Lincoln Avenue. However, the internal Loop Road will be sized to accommodate emergency vehicles.

above actions shall be implemented in what order to reduce the length of the queue.

Monitoring and reporting shall continue for an additional three (3) weeks following implementation of each of the above actions and shall continue as long as the City deems necessary to show that it has been effective in reducing the length of the queue.

Transportation Demand Management.

The applicant shall maintain a TDM plan during both the regular school year and during the Summer Program. These Conditions, not the TDM Plan, are the governing and enforceable conditions of approval.

a) Traffic Circulation and Management: The School shall continue to implement policies to ensure that the drop-off and pick-up process is managed effectively and efficiently; to minimize traffic on neighborhood streets; and to encourage safe driving behaviors. These policies include:

i. Continuation of before and after-school childcare programs to reduce the number of peak vehicles arriving and departing the campus.

ii. Maintenance of detailed, written instructions of the vehicle pick-up and drop-off process for the purpose of increasing efficiency in the pick-up and drop-off operation. These procedures, which will be incorporated into a Transportation Policy Guide (Guide), shall include, but are not limited to, how to access the vehicle drop-off/pick-up lane from each direction (loops), a map showing the specific area where vehicle drop-off and pick-up is permitted, rules regarding safe practices for entering and exiting vehicles, and the area that queue cannot exceed. The School shall actively discourage and communicate the dangers of picking-up students on streets other than the designated drop-off area, as part of the Guide, parent meetings, Back to School nights and other means. The Guide shall specifically discourage early arrival for afternoon pickup. The summer program shall follow the Transportation Policy Guide.

iii. Compliance with Mitigation Measure Mitigation T1 and Condition 11.

iv. *Mormon Temple Staging Area and Alternative*: If the Mormon Temple Staging Area becomes unavailable for use during the pick-up or drop-off process, the School shall promptly institute one of the alternative means of maintaining the queue in compliance with these conditions as set forth. If an off-site staging area continues to be the preferred method to control the queue, the School shall institute that alternative within 30 days of the unavailability of the Mormon Temple in consultation with City staff. Alternative potential staging areas could include the parking lot of the Greek Orthodox Church, the Cerebral Palsy Center and/or the School's property at 4368 Lincoln,

v. *Circulation Assistants*: During morning drop-off and afternoon pick-up periods, the project applicant shall assign 5 adults in the morning and 8 adults in the afternoon to assist with the efficient flow of pick-up and drop-off traffic.

Consistent: The Project now proposes to utilize the new on-site Loop Road and designated vehicle drop-off and pick-up locations along this internal roadway, rather than relying on Lincoln Avenue for before and after school drop-off and pick-up.

However, the School will retain before- and after-school childcare programs, will continue to provide written instructions of the vehicle pick-up and drop-off process, and will continue to retain Circulation Assistants to ensure that the drop-off and pick-up process is managed effectively and efficiently.

b) Parking Management Strategies. The School shall implement parking management strategies to ensure that the School minimizes parking in the neighborhood; that school-related parking does not disrupt traffic; and that provides incentives to reduce single occupancy vehicles

i. Through its TDM and Transportation Policy Guide, the School's policy shall be to direct staff, students and visitors to park in the School's 157 off-street spaces, in the lot at 4368 Lincoln Avenue, in the 20 spaces by

Proposed Amendments: The Project proposes to increase the 154 current off-street parking spaces on the existing Campus and the 129 parking spaces on the former Lincoln site (283 total) by an additional 25 spaces within the proposed South Campus, and 36 "stacked" parking spaces on the upper

agreement on Clemens Avenue and on Lincoln Avenue above the Gatehouse and direct them not to park on the side streets in the neighborhood. ii. The School shall continue to pay for a Residential Permit Parking program on Alida Avenue, Alida Court and Linette Court through the City of Oakland, unless the neighbors on these streets withdraw their request to maintain this permit program. iii. Staff who contract with the school to carpool shall be given on-site priority spaces relative to non-carpooling staff in order to reduce single occupancy vehicles, iv. Students shall be directed by the School to park in off-street parking on campus or on Lincoln Avenue above the Gatehouse. Students that contract with the school to carpool shall be given on-site priority spaces in order to reduce single occupancy vehicles. v. The School shall maintain the required number of parking spaces per Section 17.116.070(C) at all times, including the Summer Program (one (1) space for each three employees plus one space for each 10 high school students of planned capacity.) An increase in employees or high school students could require additional parking spaces to be provided to meet the Planning Code. Required parking may be provided either on the Head Royce campus itself, unless prohibited by other Conditions of Approval, or at 4368 Lincoln Avenue or at other off-street locations. Surplus parking spaces are defined as those spaces above and beyond the requirements of the Planning Code for the permitted use. City staff shall use the School staff and student enrollment information submitted to the State of California Department of Education to determine compliance with parking ratios. vi. In its Transportation Policy Guide, the School shall define "single occupancy vehicle" as a vehicle with the one driver and one non-driving student or child.	existing Campus lot near the soccer field, for a total of 344 parking spaces Campus-wide. The School will continue to direct staff, students and visitors to park in the School's off-street spaces, and direct them not to park on the side streets in the neighborhood. The School will also continue to pay for the Residential Permit Parking program on Alida Avenue, Alida Court and Linette Court, to provide on-site priority parking spaces to carpools, and to direct students to only park in off-street parking on Campus.
c) Auto Trip Reduction Program. The School shall discourage single-student and single parent/student driving in the Transportation Policy Guide and implement policies with a goal of reducing single occupant vehicles arriving or departing the School. The Auto Trip Reduction Program shall be included in the TDM Plan and address all four modes of transportation (pedestrian, bicycle, carpooling/vanpooling, and transit), including: i. The project applicant shall continue to sponsor and provide private buses (or an equivalent service and capacity as existing conditions). ii. The project applicant shall continue to subsidize an AC Transit bus pass to students and faculty as long as AC Transit bus service is available. The project applicant shall assign a transportation coordinator who will provide carpooling and ride-matching services to parents who are interested in carpooling. iii. The School shall commit to maintain an average of 27% of its school-year student enrollment traveling to school by modes other than single occupancy vehicles (e.g. driving or being driven alone) as long as AC Transit maintains the bus routes that serve the School. However, once the School achieves a maximum student enrollment of 906 students, the School shall commit to maintain an average of 30% of its school-year student enrollment traveling by modes other than single occupancy vehicles. A survey of alternative travel modes shall occur during each of the two independent monitoring periods carried out during the school year, and the counts shall be averaged over the two (2) monitoring periods. However, the School may elect to conduct	**Consistent:** The School will continue to maintain its Auto Trip Reduction Program, addressing four modes of alternative transportation (pedestrian, bicycle, carpooling/vanpooling, and transit). To that end, the School will continue to sponsor and provide private buses, will continue to subsidize AC Transit bus passes to students and faculty, and will continue to assign a transportation coordinator to provide carpooling and ride-matching services to parents who are interested in carpooling. Once the enrollment of the School exceeds the current maximum student enrollment of 906 students, the School will implement its commitment to maintain a minimum average of 30% of its school-year student enrollment traveling by modes other than single occupancy vehicles, and will continue to conduct appropriate surveys and monitoring to verify achievement of this trip reduction requirement (see also the VMT analysis in the Transportation and Circulation chapter of this EIR).

additional third party monitoring and the counts shall be averaged overall additional academic year monitoring periods. Alternative travel modes shall include walking, biking, carpooling or taking a bus. If AC Transit chooses to discontinue one or more of the routes that service the School, the average required by this condition will be lowered by the percent of students who used the discontinued transit line. The School and the City will then work together to determine transportation alternatives and a new, appropriate percentage of students that should be traveling to school by means other than single-occupancy vehicles.	
d) Special Events i. The project applicant shall establish transportation procedures for Special Events to ensure that Special Events are managed efficiently and effectively, and minimize traffic and parking in the neighborhood. The project sponsor shall anticipate the attendance of Special Events and note this on the school's calendar. At least two weeks prior to a Special Event, the School shall confirm the anticipated number of vehicles and distribute the appropriate parking locations and restrictions to the attendees and Neighborhood Liaison Committee. For all Special Events, the school shall direct visitors not to park on neighborhood streets and instead encourage them to park in off-street lots or on either side of Lincoln Avenue above the gatehouse. ii. For single or cumulative Special Events on the same day that will generate between 50 and 150 people, the School shall provide sufficient parking either at the main campus, 4368 Lincoln Ave. or Lincoln Ave. above the gatehouse. For single events or cumulative events on the same day expected to be between 150 and 400 people, the School shall provide sufficient parking on-site, at 4368 Lincoln Avenue, on Lincoln Avenue above the gatehouse, the Mormon Temple, the Greek Orthodox Church and/or Cerebral Palsy Center. For events exceeding 400 people, an off-site alternative, with a shuttle or valet system, is required. iii. Traffic Monitors during Special Events: The purpose of traffic monitors during Special Events is to direct cars away from neighborhood streets and into off-street parking or onto Lincoln Avenue above the gatehouse. Single or cumulative events with 50 or fewer visitor vehicles are not considered Special Events per Condition 16 (clean version) and do not require a traffic monitor. However, parking signs shall be posted along Lincoln Avenue. Single or cumulative events with 50-150 people shall require one monitor along Lincoln Avenue at the corner of Lincoln and Alida and another monitor at the Whittle Gate. Single or cumulative events between 50 and 200 people shall require four (4) monitors. Monitors will be stationed at the following streets to direct cars to parking provided for the event: Whittle Gate, Lincoln Avenue south of the gatehouse, Alida Street between Lincoln and Laguna Avenue, and Alida Court. Single or cumulative events over 200 people shall require six (6) monitors, unless an off-site shuttle service is used. In addition to the streets listed above, the monitors will be stationed at the following streets: Tiffin Avenue between Whittle and Lincoln Avenue, and Burlington Street. The traffic monitors shall wear a colored safety vest, carry digital cameras, and provide adequate information to the school in order to identify the Special Event parking violators and for the school to implement the enforcement policy. Monitors shall be in the neighborhoods 15 minutes prior to any event. iv. The project applicant shall provide a live hotline number to reach an event manager during Special Events to be used to report violations or complaints. Enforcement of violations of Traffic Safety Rules observed	**Consistent:** The School will continue to establish transportation procedures for Special Events to ensure that Special Events are managed efficiently and effectively, and minimize traffic and parking in the neighborhood. These procedures will be consistent with those as required pursuant to the 2015 Conditions of Approval.

during Special Events shall be handled in the manner set forth in subsection f below and the TDM Plan	
e) Communication The project applicant shall establish communication protocols to institutionalize and encourage good neighbor parking and driving behavior, to ensure that the School community drives in a safe manner; and to ensures the rules are clearly communicated, including: i. Traffic Safety Rules: The TDM contains a list of Traffic Safety Rules that are designed specifically to increase safety of the school community and the neighborhood. The TDM also includes a list of "Good Neighbor Rules" designed to decrease impacts to neighbors. ii. The project applicant shall continue to maintain a Transportation Policy Guide. The Guide shall include, but not be limited to the following: Vehicle drop-off and pick-up procedures designed to promote an efficient operation; bus loading procedures; Traffic Safety Rules; "Good Neighbor Rules" including blocking driveways, U-turns in neighbor's driveways; Transit Subsidy Program; Special Event Traffic and Parking Rules; and consequences for violations. If needed to reflect the updated TDM Plan, the Transportation Policy Guide shall be submitted to Bureau of Planning, Transportation Services Divisions, and OPD-Traffic Safety for review. The project applicant shall distribute the Transportation Policy Guide to each student's parent/guardian. Each student's parent/guardian will need to provide written acknowledgement of receipt of the Policy Guide, and acceptance of its policies as a condition of enrollment. The School shall submit a record of each family's acknowledgement of receipt in a form acceptable to the City if requested. The project applicant shall hold a parent meeting at the beginning of each school year to discuss the traffic and parking. If rules change significantly, as determined by the Director of the Bureau of Planning, after the beginning of the school year, the project applicant shall hold another meeting. A City staff member may attend. The project applicant shall annually review the Transportation Policy Guide and submit the Transportation Policy Guide for review by the Bureau of Planning, Transportation Services Division, and OPD-Traffic Safety staff.	**Consistent:** The School will continue to establish communication protocols to institutionalize and encourage good neighbor parking and driving behavior, to ensure that the School community drives in a safe manner, and to ensure the rules are clearly communicated. This will continue to include publishing of Traffic Safety Rules, a list of "Good Neighbor Rules" designed to decrease impacts to neighbors, and a Transportation Policy Guide.
f) Enforcement of Traffic Safety Rules and Event Traffic and Parking i. The School shall implement and maintain a system to identify and track persons who violate the School's Traffic Safety Rules as set forth in the TDM. Good Neighbor Rules as set forth in the TDM shall not be considered Traffic Safety Rules subject to enforcement by the Bureau of Planning. Violations of the Vehicle Code are enforced by the Oakland Police Department. ii. During the pick-up and drop-off periods: The School shall assign four (4) traffic monitors to implement and monitor the Traffic Safety Rules. The monitors shall be placed at: • Whittle Gate, • On the westbound loop (e.g. the intersection of Laguna and Alida) • Two traffic monitors for Lincoln Ave between the main entrance and upper driveway. The traffic safety rule monitors shall wear a safety vest, carry digital cameras, and provide adequate information to the school in order to identify the rule violators and for the school to implement the traffic	**Consistent:** The School will continue to implement and maintain a system to identify and track persons who violate the School's Traffic Safety Rules, including the assignment of traffic monitors to implement and monitor the Traffic Safety Rules.

safety rule enforcement policy. Monitors shall be in the neighborhoods 15 minutes prior to scheduled pick-up and drop-off times.

g) Compliance Reporting

i. The project applicant shall hire a qualified traffic consultant, approved by the Director of Planning or designee, to monitor compliance with the traffic-related conditions in the Conditions of Approval and the approved TDM. Specifically, the independent monitors shall verify compliance by:

• Counting the number of traffic assistants and monitors present during drop-off and pick-up periods.

• Observing the drop-off and pick-up traffic flow and recommending measures to ensure smooth operations to the City.

• Reviewing the length of the queue and check if it extends above the upper driveway.

• Collecting the number of violations that have been reported from Head Royce's database and recommending measures to reduce violations.

• Recording parking occupancy in all Head Royce parking lots.

• Monitoring Whittle Avenue and Alida for School –related parking.

• Auto Trip Reduction Program and related documents as determined satisfactory by the Director of Planning, to meet the alternative transportation mode percentage.

ii. The independent monitor shall monitor the school's compliance with the traffic-related conditions of approval as implemented by the TDM four times per year: once each semester, once during the Summer Program and once during a Special Event involving over 100 cars. The independent traffic consultant shall submit a written report within two weeks of the monitoring summarizing the results of the monitoring session. The reports shall include recommendations to remedy potential infractions of the traffic-related conditions of approval, if appropriate to the Bureau of Planning. Such measures proposed by the independent traffic consultant must be approved by the City of Oakland prior to implementation. The City of Oakland shall have one week to review and approve the submitted measures. Upon City of Oakland approval of enhanced or additional TDM measures, the project applicant shall be given four weeks after the approval to implement the recommended measures.

iii. The School shall have one semester to cure any traffic-related violations of the conditions of approval. If after invoking enhanced or additional TDM measures the School still does not meet its traffic-related conditions of approval based on the independent monitors reports submitted to the City of Oakland, the Bureau of Planning may refer the matter to the City of Oakland Planning Commission for scheduling of a compliance hearing to determine whether the School's approvals should be revoked, altered, or additional conditions of approval imposed. This could include a permanent reduction in enrollment. The City of Oakland can also impose penalties on a per infraction fee pursuant to the City's Master Fee Schedule based on the observations of city officials, the Oakland Police Department, or the independent monitors. In determining whether reduced enrollment or other remedies are appropriate, the City of Oakland shall consider if the School has demonstrated a good faith effort to comply with the traffic-related conditions of approval. It will be up to the School to provide evidence to the City of Oakland of good faith efforts for review.

Consistent/Proposed Amendments: The Project proposes two primary amendments to the 2016 PUD that will substantially modify and are intended to improve on school drop-off and pick-up procedures, vehicle queues on Lincoln Avenue, and traffic circulation and parking in the surrounding neighborhood. These two primary amendments include: 1) the construction and use of a new on-site Loop Road and designated vehicle drop-off and pick-up locations along this internal roadway, rather than relying on Lincoln Avenue for before and after school drop-off and pick-up; and 2) and an increase of 61 parking spaces to the current 283 current off-street parking spaces on the existing Campus and proposed South Campus (for a total of 344 parking spaces Campus-wide).

No on-going monitoring or reporting provisions to measure the effectiveness of this new circulation, drop-off and pick-up procedures or parking provisions have been proposed, but may be made by the City as conditions of Project approval, including the retention of independent monitors to verify the effectiveness of these PUD amendments and compliance with applicable traffic-related conditions of approval.

Emergency Management Plan The project applicant shall develop an Emergency Management Plan (EMP), and submit this EMP to the Planning and Zoning Division, Transportation Services Division, OPD-Traffic Safety and the Fire Marshal for review and consultation. The Applicant shall implement the final EMP. The EMP shall include at least the following components: a) Fire Protection Bureau Occupancy Review: The School shall cooperate and coordinate with the Fire Services Department to conduct yearly occupancy and fire safety inspections of the school, fire drills and unannounced future site visits. The resulting Fire Department report(s), and any follow-ups, shall be sent to the Planning and Zoning Division for review. b) Emergency Preparedness Plan: The School shall submit an Emergency Preparedness Plan, within 6 months after this approval. The completed plan shall be submitted to the Planning and Zoning Division and the Fire Protection Bureau for review and consultation. The plan shall discuss emergency evacuation procedures that will facilitate emergency vehicle access to the neighborhood during School pick-up and drop-off operations. The plan shall be implemented. c) Fire Department Site Visits: The project applicant shall coordinate with the Oakland Fire Marshal's Office to make periodic unannounced visits to the school (the frequency, timing, and types of visits should be at the Fire Marshal's discretion based on need for visits and compliance by the school) to verify that adequate emergency vehicle access is being maintained during peak pick-up and drop-off periods. The Fire Marshal should consult with the School to identify modifications to the circulation rules, if emergency access problems are identified.	**Consistent:** Head-Royce School has a current Emergency Management Plan, and amendments to that Plan are proposed to incorporate the proposed South Campus. That Emergency Management Plan has been peer-reviewed pursuant to this EIR, with additional recommendations specific to the issue of emergency evacuation procedures.
Whittle and Lincoln Avenue Properties. The properties located at 4200, 4220, 4180 Whittle Avenue and 4233 Lincoln Avenue shall be limited solely to permitted residential uses as defined in the Oakland Planning Code, and the School will not merge the lot without obtaining an amendment to the PUD as a Major Change. The school shall maintain the residential character of these houses and ensure that the houses maintain their structural integrity. These properties shall not be used for additional School parking, School storage (including storage of maintenance equipment), school deliveries or student pick-up or drop-off.	**Consistent.** The Project proposes no change of use or changes to the terms of the 2016 PUD pertaining to the use of these nearby properties for on-going residential use.

In summary, the Project is a large, integrated development intended to adhere to a comprehensive plan. The proposed South Campus is a single tract of land of 60,000 square feet or more, and once added to the existing Campus, the Head-Royce School will include two or more tracts of land equaling 60,000 square feet or more in total, separated only by a street or other right-of-way. As such, the Project is subject to the PUD regulations of the City, and the Project applicant (the School) has applied for such a PUD permit. The PUD permit application includes a Preliminary Development Plan (PDP) of the entire development proposal. Final Development Plans (FDPs) may be submitted concurrently with the PDP, or may be submitted in stages as development of the proposed South Campus proceeds. The Project's application for amending the currently applicable 2016 PUD permit shall be considered by the City Planning Commission, which shall determine whether the Project conforms to the permit criteria set forth in the PUD regulations.

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

The City of Oakland has established thresholds of significance for CEQA impacts (City of Oakland, 2013). The Project would have a significant adverse impact on the environment regarding land use, plans, and policies if it would:

1. Physically divide an established community
2. Result in a fundamental conflict between adjacent or nearby land uses
3. Conflict with any applicable land use plan, policy, or the 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
4. Conflict with any applicable habitat conservation plan or natural community conservation plan

Division of an Established Community

Land Use-1: The Project would not divide an established community. (**Less than Significant**)

The Project represents redevelopment of the previously developed Lincoln Child Center property. This property has defined boundaries that are currently fenced and that have been fenced for decades. There is no current public access through this private property that would be prevented or divided by the Project. The Project would reestablish institutional/civic land use on the same site as was used by Lincoln, with the same property boundary and generally the same configuration of building space.

Although the proposed South Campus is adjacent to residential neighborhoods to the south and west, it is adjacent to other existing institutional land uses to the east (Ability Now Bay Area, the Ascension Greek Orthodox Cathedral, and the Oakland California Temple of the Church of Jesus Christ of Latter-day Saints), each progressing uphill from the proposed South Campus. On the opposite side of Lincoln (to the north) is the existing Campus of Head-Royce School. The Project represents a continuation of institutional land use on a property that had been in institutional use for prior decades. Redevelopment of institutional use on this property does not divide the surrounding established community.

The Project itself would be divided across two sides of Lincoln Avenue, and students would either cross Lincoln Avenue at one of two at-grade street crossings, or utilize the proposed pedestrian tunnel to cross back and forth between the two campuses. Crossings between campuses would occur consistent with regular daily class schedules, with up to as many as 8 crossings of perhaps as many as 250 students per day. If the pedestrian tunnel is constructed, these student crossings would not interfere with traffic circulation along Lincoln Avenue. However, if the pedestrian tunnel is not constructed (or until it is constructed in Phase III of the Project), these student crossings between the divided campuses would interrupt traffic flow on Lincoln at the two signalized crossings, which could be perceived as a temporary division of the community. All student crossings would occur at either of the two signalized intersections, with specific crossing-sequenced signal timing, and monitored by School crossing guards. These student crossings would be temporary occasions each day, and would not represent a permanent division of the established community.

Mitigation Measures

None required

Fundamental Conflict with Nearby Land Uses

Land Use-2: The Project would not result in a fundamental conflict between adjacent or nearby land uses. (**Less than Significant**)

The Project proposes to use the former Lincoln site, which is adjacent to existing residential neighborhoods, for school purposes. A school use adjacent to residential neighborhoods does not represent an inherent conflict between adjacent land uses. There are public and private schools adjacent to residential neighborhoods throughout the City of Oakland that are not in conflict with each other, and adherence to General Plan policies and zoning regulations is intended to ensure that institutional uses are sensitively designed and compatible with the area's character. General Plan policy (LUTE Policy N2.1 Designing and Maintaining Institutions) requires that individual institutional facilities should be designed and operated in a manner that is sensitive to surrounding residential and other uses.

The extent to which the Loop Road, the Performing Arts Center building and/or any other design element of the Project may result in a quantitative or qualitatively significant environmental effect on the surrounding area has been fully analyzed in this EIR. Specifically, the Project's transportation impacts, including whether traffic generated by the Project can be accommodated safely is fully addressed in the Transportation and Circulation chapter. Whether the Project can be accommodated and adequately served by existing or proposed public facilities and services is addressed in the Public Service and Utilities section of this EIR. Whether the Project will require excessive earth moving or the destruction of desirable natural features is addressed in the Geology and Biology chapters of this EIR. Whether the Project would substantially harm major views is fully addressed in the Aesthetics chapter of this EIR. Based on the analyses included in these other respective chapters of this EIR, the proposed Project does not fundamentally conflict with adjacent or nearby land uses to the extent that such conflict would rise to the level of a significant CEQA impact, or such impacts can be reduced to levels of less than significant through implementation of mitigation measures as identified in other respective chapters of this EIR.

Mitigation Measures

None required, other than those measures identified in the respective Transportation, Noise, Air Quality and Geology and Soils chapters of this EIR.

Conflict with Applicable Plans and Policies

Land Use-3: The Project would not 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 or zoning ordinance, adopted for the purpose of avoiding or mitigating an environmental effect. (**Less than Significant**)

Potential conflicts with the General Plan and other plans, policies and regulations do not inherently result in a significant effect on the environment within the context of CEQA. CEQA Guidelines Section 15358(b) states that, "effects analyzed under CEQA must be related to a physical change." CEQA Guidelines Section 15125(d) further states that an EIR shall discuss any inconsistencies between a proposed project and the applicable General Plan in the Environmental Setting section of the document, rather than as an impact. Further, Appendix G (Environmental Checklist Form) of the CEQA Guidelines indicates that a project would result in a significant impact related to land use and planning if it would, "cause a significant environmental impact due to a conflict with any applicable land use plan, policy or regulation adopted *for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). Accordingly, the Regulatory Setting section of this chapter (above) provides an evaluation of the overall consistency of the Project with applicable plans, policies and regulations, finding no such conflict. The physical impacts that may result from any conflicts or, in this

instance, proposed changes to the School's PUD permit and its associated Conditions of Approval, are analyzed in the various impact sections of this EIR.

Consistency with the General Plan

As indicated in the Regulatory Setting section above, the Project is generally consistent with the Land Use and Transportation Element (LUTE) of the City of Oakland General Plan, and the General Plan policies and objectives that support it. The Project would not conflict with any General Plan policies adopted for the purposes of avoiding or mitigating an environmental effect.

Consistency with City Zoning

As indicated in the Regulatory Setting section above, the Project is also consistent with the land uses conditionally permitted in the Residential Detached-1 (RD-1) and Hillside Residential (RH-4) zoning district, and the development standards of that zoning district. The Project would not conflict with any zoning regulations or development standards adopted for the purposes of avoiding or mitigating an environmental effect. As also indicated in the Regulatory Setting section above, the City's PUD provisions allow for certain additional land uses not otherwise permitted in the underlying zoning district, and waivers or modifications to certain regulations that apply to properties in the underlying zoning district. The Project does not seek or rely on such waivers or modifications, other than to enable use of an existing building (Building #9) for temporary housing for new School faculty members. The Project would not conflict with any zoning regulations or development standards of the existing 2016 PUD permit adopted for the purposes of avoiding or mitigating an environmental effect.

The Project seeks to amend the prior 2016 PUD permit and its associated Conditions of Approval to enable development of the proposed South Campus, integration of the new South Campus with the exiting Campus, and to increase overall school enrollment by 344 additional students. Of these increased students, approximately 240 students are expected to be at the proposed South Campus at any given time, such that approximately 104 additional students would be accommodated within existing facilities at the North Campus. This proposal is required pursuant to the prior 2016 PUD permit's Conditions of Approval wherein a Master Plan is required for any increases in student enrollment or future construction. The environmental consequences of this proposed change to the 2016 PUD and its Conditions of Approval is the focus of this EIR, and all such impacts are fully disclosed.

Mitigation Measures

None required specifically as related to land use, other than those measures identified in other respective chapters of this EIR.

Conflict with an HCP or NCCP

Land Use-4: The Project would not conflict with any applicable habitat conservation plan or natural community conservation plan. (**No impact**)

The Project site is not included in any natural community conservation plan or applicable habitat conservation plan. Therefore, the Project has no impact related to potential conflicts with such plans or programs.

Mitigation Measures

None required

Cumulative Land Use Impacts

Land Use 5: The Project, in combination with other past, present, existing, approved, pending and reasonably foreseeable future projects within and around the Project Area would not result in an adverse cumulative land use or planning impact. (**Less than Cumulatively Significant**)

This analysis considers cumulative development (past, present, existing, approved, pending, and reasonably foreseeable future projects, as described in Chapter 4: Approach to Environmental Analysis), in combination with the Project, to determine if their effects would combine to result in cumulative land use impacts. The vicinity surrounding the Project is largely built out with residential neighborhoods and other institutional facilities of varying density and building types. All past development in the area is reflected in the regional growth model and is consistent with land use classifications of the General Plan and with zoning districts.

As indicated in Chapter 4 of this document, there are very few individual City-listed cumulative development projects in the immediate vicinity of the Project, where they could combine to create significant land use or policy conflicts. Further, any future cumulative development would be required to adhere to existing land use and development policies and regulations of the City, and any request for a land use change (such as a General Plan amendment or rezoning) would only be approved upon the City's determination that such a proposal is compatible with its surroundings and appropriate for the property in question. There are no City-sponsored pending or reasonably foreseeable future transportation or circulation plans for the area that would improve existing transportation infrastructure in a manner that would divide the area. In summary, the Project would not make a cumulatively considerable contribution to potential cumulative land use impacts, and would not combine with other cumulative development to result in any significant or adverse cumulative land use or planning impacts.

13

Noise and Vibration

This chapter of the EIR evaluates the potential impacts of the Project related to noise and vibration. This chapter describes the fundamentals of environmental noise and groundborne vibrations, describes the existing noise environment in the Project site and vicinity, and evaluates the extent to which the Project may generate significant new noise levels or groundborne vibrations.

Information for this chapter of the EIR has been derived from the following primary source:

- Illingworth & Rodkin, Inc., *Head-Royce School Noise and Vibration Assessment*, July 23, 2020 (**Appendix 13A)**

Background on Noise and Vibration

Fundamentals of Environmental Noise

Noise can be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative frequency of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear.

There are several noise measurement scales used to describe noise. A decibel (dB) is a unit of measurement that indicates the relative amplitude of a sound. Zero on the decibel scale is based on the lowest sound level that a healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis (i.e., an increase of 10 decibels represents a ten-fold increase in acoustic energy, an increase of 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc.). There is a relationship between the subjective amount of noise (or loudness) of a sound, and its intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common method is the A-weighted sound level (dBA). This method is based on a scale that gives greater "weight" to the frequencies of sound that the human ear is most sensitive to. Representative outdoor and indoor noise levels, by units of dBA, are shown in **Figure 13-1**. Because sound levels can vary over short periods of time, a method for describing either the average character of the sound or the statistical behavior of the variations, must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the sum of all the time-varying events. This energy-equivalent sound/noise descriptor is called Leq. The most common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration.

The instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from noise sources. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Figure 13-1
Representative Outdoor and Indoor Noise Levels

Source: Technical Noise Supplement, Caltrans, September 2013

Sensitivity to noise increases during the evening and at night. Because excessive noise interferes with the ability to sleep, a 24-hour noise descriptor has been developed that incorporates artificial noise "penalties" that are added to quiet-time (or night) noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm), and a 10 dB addition to nighttime (10:00 pm - 7:00 am) noise levels. The Day/Night Average Sound Level (DNL or Ldn) is essentially the same as CNEL, with the exception that the evening time period is not included, and all noise occurrences during the three-hour evening period are grouped into the daytime period.

The list of acoustical terms used in this report include the following, as defined below:[1]

Decibel, dB:	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level:	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz):	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA):	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (Leq):	The average A-weighted noise level during the measurement period.
Lmax and Lmin	The maximum and minimum A-weighted noise level during the measurement period.
L01, L10, L50, L90	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level (Ldn or DNL):	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Leve (CNEL):	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level:	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

[1] Source: *Handbook of Acoustical Measurements and Noise Control*, Harris, 1998.

Intrusive Noise:	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Fundamentals of Groundborne Vibration

Ground vibration consists of rapidly fluctuating motions (or waves) with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is Peak Particle Velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For this analysis, a PPV descriptor with units of millimeters per second (mm/sec) or inches per second (in/sec) is used to evaluate construction-generated vibrations for building damage and human responses. **Table 13-1** shows the reactions of people, and the effects on buildings, that continuous or frequent intermittent vibration levels produce. The guidelines in Table 13-1 represent a syntheses of vibration criteria for human response and potential damage to buildings resulting from construction vibration.

Table 13-1: Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures

Source: *Transportation and Construction Vibration Guidance Manual*, California Department of Transportation, September 2013

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile-driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor is routinely used to measure and assess groundborne vibration, and almost exclusively to assess the potential for that vibration to cause damage and to measure the degree to which that vibration causes annoyance to humans. The two primary concerns regarding construction-induced vibration (i.e., the potential to damage a structure and the potential to interfere with the enjoyment of life), are evaluated against different vibration limits.

Human perception to vibration varies with the individual, and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level. The annoyance levels shown in Table 13-1 should be interpreted with care since vibration may be found to be annoying at lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major damage that may threaten the structural integrity of the building. Safe vibration limits that can be applied to assess the potential for vibrations to damage a structure may vary. The damage criteria presented in Table 13-1 include several categories for ancient, fragile and historic structures (the types of structures most at risk to damage). Most buildings are included within the categories ranging from "historic and some old buildings" to "modern industrial and commercial buildings". Construction-induced vibration that can be detrimental to a building is very rare, and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

Existing Setting

Prior Noise Monitoring

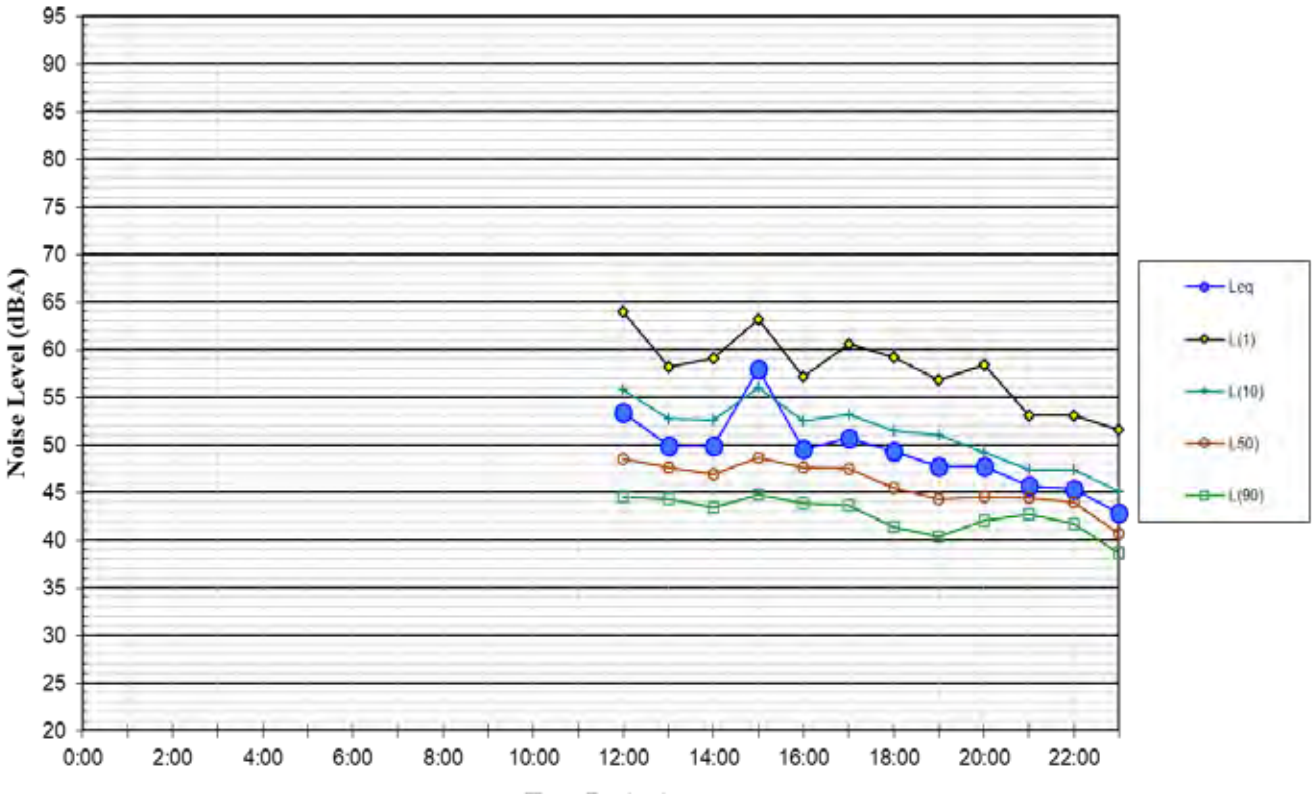
Noise monitoring was conducted at the Head-Royce School in June of 2019. The purpose of this noise monitoring was to develop a baseline noise condition at the School, and to measure noise levels that were generated by an upper-class graduation ceremony that occurred during the weekend on June 8, 2019. Noise measurements were taken by the School (as measured by Salter Associates, a professional acoustics firm) from Friday June 7, 2019, to Monday June 10, 2019. The June 2019 noise monitoring included a long-term measurement (LT-1) in the North Campus' upper parking lot, approximately 180 feet from the centerline of Lincoln Avenue, as shown in **Figure 13-2**. The primary noise sources at this location were parking lot activities and traffic along Lincoln Avenue.

Upper class graduation took place on Saturday (June 8, 2019) inside the existing Campus gymnasium. Daytime noise levels at location LT-1 ranged from 48 to 60 dBA Leq on weekdays (Friday the 7th, and Monday the 10th of June), and from 45 to 54 dBA Leq on weekend days (Saturday the 8th and Sunday the 9th of June), including periods during the graduation ceremony. The day-night average noise level at this location was 51 dBA Ldn on Saturday (June 8th, the day of the graduation ceremony), and 52 dBA Ldn on Sunday (June 9th).

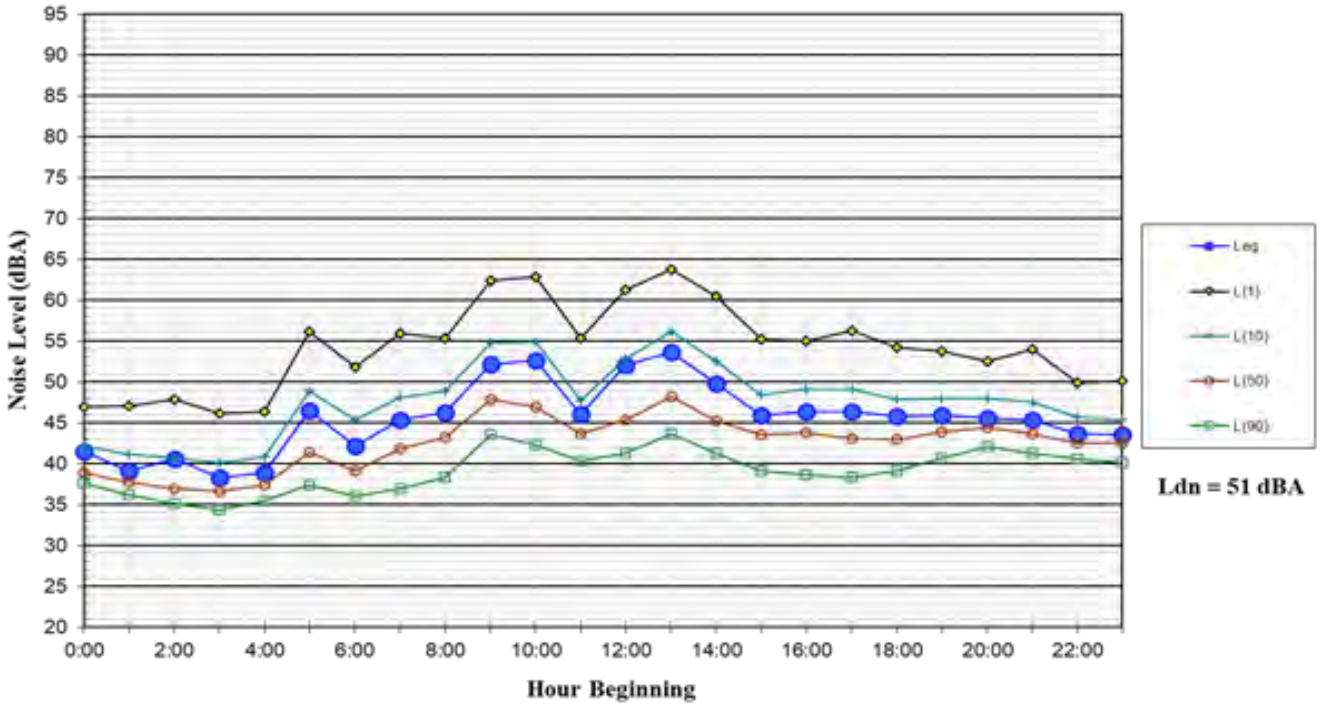
Using a combination of the data from June 7th and June 10th, weekday day-night noise levels were calculated to be 53 dBA Ldn. Daytime background noise levels (expressed as L90), which are representative of background noise levels in the surrounding residential areas, ranged from 40 to 45 dBA L90 on the weekdays, and from 37 to 47 dBA L90 on the weekend days. The results of the long-term measurements are shown in **Figures 13-3 and 13-4**.

Figure 13-2
June 2019 Noise Monitoring Location

Source: Salter Associates, 2019



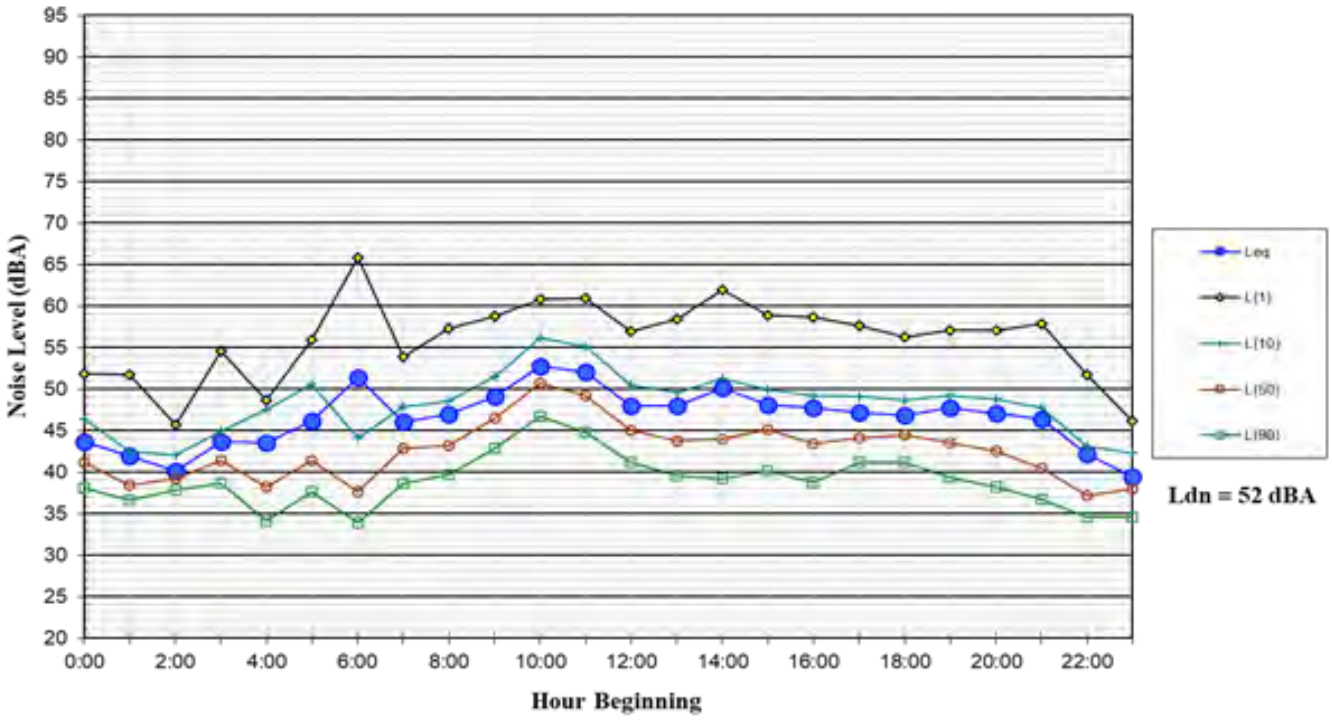
Long-term Measurement Data from June 7, 2019



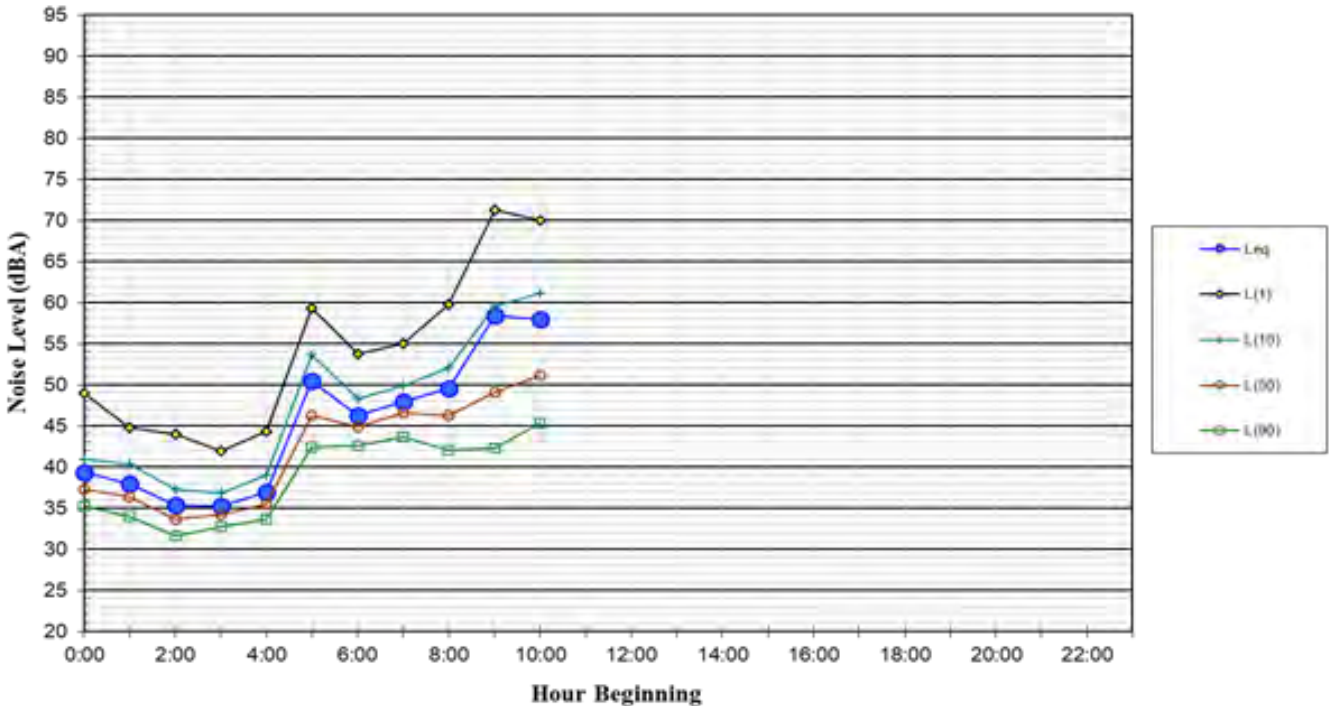
Long-term Measurement Data from June 8, 2019

Figure 13-3
Results of Long-Term Noise Measurements

Source: Salter Associates, 2019



Long-term Measurement Data from June 9, 2019



Long-term Measurement Data from June 10, 2019

Figure 13-4
Results of Long-Term Noise Measurements (cont.)

Source: Salter Associates, 2019

Noise Modeling for Current Conditions

The results of the June 2019 noise monitoring were compared to traffic noise modeling using the Federal Highway Administration's Traffic Noise Model (TNM version 2.5). Traffic volume inputs to the Noise Model are based on the traffic study prepared for this EIR (Fehr & Peers, 2020, see Appendix 14A). Based on noise modeling that relies on existing traffic volume inputs, traffic noise levels at 50 feet from the center of Lincoln Avenue are calculated to be approximately 61 dBA Ldn under existing conditions. Noise levels drop off at a rate of approximately 4.5 dBA per doubling of distance from the roadway. At a distance of 180 feet from the centerline of Lincoln Avenue, noise levels would be expected to be 53 dBA Ldn. These modeling results are consistent with the measured data from June 2019, as described above.

Sensitive Receptors

The Project site is located at 4315 Lincoln Avenue in the Lincoln Highlands/Oakmore/Dimond neighborhood. The Project site is surrounded by residences to the east, west and south. These surrounding neighborhoods are considered sensitive receptors to noise generated by the Project.

The closest residences are immediately adjacent to the Project site along the North Campus' southerly and westerly boundaries. These are residences that front onto Charleston Street and Laguna Avenue to the south and that back to the Project sites southerly boundary, and residences that front onto Alida Court and Linnet Avenue to the west and that back onto the Project sites westerly boundary. Another nearby sensitive receptor is the Ability Now facilities to the east, but these facilities are separated by approximately 300 from the Project site by an existing playfield (which is shared by Ability Now and the School).

Regulatory Setting

Federal, state and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is generally the responsibility of local governments. Local regulation of noise involves implementation of General Plan policies and noise ordinance standards. The City of Oakland General Plan identifies general principles intended to guide and influence development plans, and the noise ordinances establishes standards and procedures for addressing specific noise sources and activities.

Federal

Federal Transit Administration

The Federal Transit Administration (FTA) publishes methodology and criteria for assessing the impact of transit projects. These publications include thresholds for damage risk due to construction-related vibration, as shown in **Table 13-2**. These thresholds should be viewed as criteria to be used to identify problem locations that must be addressed during final design.

Table 13-2: FTA Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate Lv (VdB)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

PPV: Peak Particle Velocity

VdB: RMS vibration velocity in decibels re 1 micro-inch/second

State

State of California Noise Insulation Standards

The California Noise Insulation Standards found in CCR, Title 24 establish requirements for new multi-family residential units, hotels and motels that may be subject to relatively high levels of transportation noise. In these cases, the noise insulation criterion is 45 dB Ldn inside noise sensitive spaces. For developments with exterior transportation noise exposure exceeding 60 dB Ldn, an acoustical analysis and mitigation (if required) must be provided showing compliance with the 45 dB Ldn interior noise exposure limit.

Local

City of Oakland General Plan

The City of Oakland General Plan Noise Element's land use compatibility guidelines are shown in **Table 13-3**. Residential land use is considered "normally acceptable" when exposed to Ldn/CNEL of 60 dBA or less, "conditionally acceptable" when exposed to a Ldn between 60 and 70 dBA, "normally unacceptable" between Ldn 70 and 75 dBA and "clearly unacceptable" above Ldn 75 dBA. Schools are considered "normally acceptable" when exposed to Ldn of 60 dBA or less, "conditionally acceptable" when exposed to a Ldn between 60 and 70 dBA, "normally unacceptable" between Ldn 70 and 80 dBA and "clearly unacceptable" above Ldn 80 dBA.

Table 13-3: Oakland General Plan Noise Element, Noise-Land Use Compatibility Matrix (Ldn/CNEL)

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential	< 60	60-70	70-75	> 75
Transient Lodging (motels, hotels)	< 65	65-75	75-80	> 80
Schools, libraries, churches, hospitals, nursing homes	< 60	60-70	70-80	> 80
Auditoriums, concert halls, amphitheaters	NA	< 70	NA	> 70
Sports Arena, Outdoor Spectator Sports	NA	< 75	NA	> 75
Playgrounds, Neighborhood Parks	< 65	NA	65-75	> 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	< 75	NA	65-75	> 75
Office Buildings, Business Commercial, Professional	< 65	65-75	> 75	NA
Industrial, Manufacturing, Utilities, Agriculture	< 70	70-80	> 80	NA

Source: Adapted from City of Oakland General Plan, Noise Element, Figure 6

Normally Acceptable- Development may occur without an analysis of potential noise impacts (although it might still be necessary to analyze noise impacts that the project may have on its surroundings

Conditionally Acceptable- Development should be undertaken only after an analysis of noise-reduction requirements is considered, and if necessary, noise mitigation features are included in the design. Conventional construction will usually suffice as long as it incorporates air conditioning or forced fresh air supply systems, although it will likely require that project occupants maintain their windows closed

Normally Unacceptable- Development should generally be discouraged; it may be undertaken only if a detailed analysis of the noise reduction requirements is conducted, and if highly effective noise insulation, mitigation or abatement features are included in the design

Clearly Unacceptable- Development should not be undertaken.

The Noise Element also discusses acceptable noise levels for interior spaces. According to the Noise Element, conventional contemporary construction methods and materials decrease outdoor noise by 12-18 dB (with partially open windows). According to common practice, the following are the maximum interior noise levels generally considered acceptable for various land uses:

- 45 dB: residential, hotels, motels, transient lodging, institutional (churches, hospitals, classrooms, libraries), movie theaters
- 50 dB: professional offices, research and development, auditoria, meeting halls
- 55 dB: retail, banks, restaurants, sports clubs
- 65 dB: manufacturing, warehousing

City of Oakland Planning Code

The noise performance standards of the Oakland Planning Code (Chapter 17 of the OMC) are set to control operational and construction noise levels. The following noise standards are applicable to the Project.

Construction Noise (OMC Section 17.120.050(G): Temporary Construction and Demolition Noise)

Table 13-4 presents noise level standards from the Noise Ordinance that apply to temporary exposure to short- and long-term construction noise. In this context, short-term refers to construction activity lasting less than 10 days at a time, while long-term refers to construction activities lasting greater than 10 days at a time.

This table shows the maximum allowable receiving noise levels during the daytime, as received by any residential, commercial or industrial land use, and which is produced by any non-scheduled, intermittent, short-term construction or demolition operation (less than 10 days) or by any repetitively scheduled and relatively long-term construction or demolition operation (10 days or more). The City allows for an exemption if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts.[2]

Table 13-4: City of Oakland Construction Noise Standards at Receiving Property Line (dBA) [1]

	Maximum Allowable Noise Level (dBA)	
Receiving Land Use	**Weekdays 7 a.m.-7 p.m.**	**Weekends 9 a.m.-8 p.m.**
Less than 10 days		
Residential	80	65
Commercial, Industrial	85	70
More than 10 Days		
Residential	65	55
Commercial, Industrial	70	60

1: If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

Operational Noise (Chapter 17.120.050 of the Oakland Planning Code)

The Planning Code also regulates operational noise from stationary sources. **Table 13-5** presents maximum allowable receiving noise standards applicable to long-term exposure for residential and civic land uses, for noise from stationary noise sources (not transportation noise). For example, between 7:00 AM and 10:00 PM, residential and civic land uses, including schools, may only be exposed to noises up to 60 dBA for a period of 20 cumulative minutes in a one-hour time period, and a maximum of 80 dBA.

[2] The acoustical analysis must identify, at a minimum, (a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and (b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

Table 13-5: City of Oakland Operational Noise Standards at Receiving Property Line (dBA)[1]

Receiving Land Use	Cumulative No. of Minutes in 1-Hr Period [2]	Maximum Allowable Noise Level (dBA)	
		Daytime 7 a.m.-10 p.m.	Nighttime 10 p.m.-7 a.m.
Residential and Civic[3]	20 (L_{33})	60	45
	10 ($L_{16.7}$)	65	50
	5 ($L_{8.3}$)	70	55
	1 ($L_{1.7}$)	75	60
	0 (L_{max})	80	65

Source: OMC Section 17.120.050

Notes:

1. These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
2. L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.
3. Legal residences, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses.

Nuisance Noise (Section 8.18.020, Persistent Noises a Nuisance)

The City of Oakland also regulates noise through enforcement of its Noise Ordinance, which is found in Sections 8.18 and 17.120 of the Oakland Municipal Code. Per Chapter 8.18.020, the persistent maintenance or emission of any noise or sound produced by human, animal or mechanical means, between the hours of 9:00 PM and 7:00 AM which disturbs the peace or comfort, or is injurious to the health of any person shall constitute a nuisance. Failure to comply with the following provisions shall constitute a nuisance.

A. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

B. Unnecessary idling of internal combustion engines is prohibited.

C. All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

D. Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

E. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Groundborne Vibrations (Chapter 17.120.060 of the Oakland Planning Code)

Pursuant to Chapter 17.120.060 of the Oakland Planning Code, all activities (except those located within the M-40 zone or in the M-30 zone, and more than 400 feet from any legal residentially occupied property) shall be so operated as not to create a vibration which is perceptible without instruments by the average person at or beyond any lot line of the lot containing such activities. Ground vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempted from this standard.

Standard Conditions of Approval

The City of Oakland's Standard Conditions of Approval (SCAs) relevant to reducing noise and vibration impacts applicable to the Project are listed below. If the Project is approved, all applicable SCAs would be adopted as conditions of approval, as applicable, to help ensure less-than-significant impacts from noise and

vibration. The SCAs are incorporated and required as part of all approved projects, so they are not listed as mitigation measures.

SCA Noise-1, Construction Days/Hours

Applies to: All construction projects involving construction

The project applicant shall comply with the following restrictions concerning construction days and hours:

1. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
2. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
3. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Noise-2, Construction Noise

Applies to: All projects involving construction

The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

1. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
2. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
3. Applicant shall use temporary power poles instead of generators where feasible

4. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
5. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Noise-3, Extreme Construction Noise

Applies to: All projects involving construction. The Construction Noise Management Plan may be required prior to project approval

Construction Noise Management Plan Required: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

1. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
2. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
3. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
4. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and
5. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Public Notification Required: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Noise-4, Project-Specific Construction Noise Reduction Measures

Applies to: All projects for which a noise study was prepared during the project review process that resulted in preliminary recommended noise reduction measures to address specific adjacent sensitive receptors/ or businesses that may be impacted by construction noise more than typical (e.g. pre-school activity, meditation center, skilled nursing facility, etc.)

The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on adjacent sensitive receptors or businesses. The project applicant shall implement the approved Plan during construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Noise-5, Construction Noise Complaints

Applies to: All major development projects, specifically those involving construction of 50 or more residential dwelling units, construction of 50,000 sq. ft. or more of nonresidential floor area, or CEQA review (e.g., negative declaration, mitigated negative declaration, or EIR)

The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

1. Designation of an on-site construction complaint and enforcement manager for the project;
2. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;
3. Protocols for receiving, responding to, and tracking received complaints; and
4. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

SCA Noise-6, Exposure to Community Noise

Applies to: All projects for which a noise study was performed during the project review process and the project exposure to community noise is Conditionally Acceptable, Normally Unacceptable, or Clearly Unacceptable per the land use compatibility guidelines of the Noise Element of the Oakland General Plan

The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following:

1. 45 dBA: Residential activities, civic activities, hotels
2. 50 dBA: Administrative offices; group assembly activities
3. 55 dBA: Commercial activities

4. 65 dBA: Industrial activities

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Noise-7, Operational Noise

Applies to: All projects

Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Noise-8: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities

Applies to: All projects involving construction that includes the use of heavy off-road equipment to perform earthwork in close proximity to adjacent properties that contain buildings near the adjoining property line or adjacent to vibration sensitive activities where vibration could substantially interfere with normal operations

The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

When Required: Prior to construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

This section discusses potential impacts from noise and vibration that could result from the Project. It presents the thresholds of significance, describes the approach to the analysis, and identifies potential impacts and mitigation measures, as appropriate.

Thresholds of Significance

The Project would have a significant impact on the environment if it would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. For purposes of this EIR, this threshold is further defined as follows:

    a) Temporary Noise Increase. Construction noise impacts would be considered significant if project construction were to exceed the City of Oakland's Construction or Demolition Noise Performance Standards as indicated in Table 13-4, for activities that occur for more than 10 days (i.e., 65 dBA at residential uses during weekday daytime hours and 55 dBA during daytime hours

on weekends). The City allows for an exemption if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts.

b) Operational Noise in Excess of Standards. A significant impact would be identified if project operations were to exceed the noise level standards specified in Table 13-5, adjusted down by 5 dBA to account for noise sources consisting primarily of speech or music.

c) Permanent Noise Increase. A significant permanent noise increase would occur if the noise level increase is 5 dBA Ldn or greater, with a future ambient noise level of less than 60 dBA Ldn - or if the noise level increase is 3 dBA Ldn or greater, with a future ambient noise level of 60 dBA Ldn or greater.

2. Generate excessive groundborne vibration or groundborne noise levels. For purposes of this EIR, this threshold is further defined as follows:

    a) During either project construction or project operation, expose persons to or generate groundborne vibration that exceeds 0.3 in/sec PPV, which would have the potential to result in cosmetic damage to older residential buildings.

3. For a project located within an airport land use plan, in the vicinity of a private airstrip, or where such a plan has not been adopted within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

The Project is not located within the vicinity of a private airstrip or a public airport and would not expose people residing or working in the project area to excessive aircraft noise levels. Therefore, impacts related to this threshold do not apply, and this threshold is not carried further in this analysis.

Construction Noise

Noise-1: With implementation of Oakland's standard noise controls, and recognizing that noise generated by construction activities would occur over a temporary period, the temporary increase in ambient noise levels during construction would be less than significant. (**Less than Significant**)

Construction of the Project is anticipated to last approximately 13 months,[3] and would include demolition of existing development, site preparation, grading and excavation, trenching and foundations, building construction, paving, and construction of the pedestrian tunnel undercrossing. Pile driving is not anticipated for Project construction. Tunnel excavation will be conducted using a jacked box (jack and bore) methodology and will not include the use of explosives. The North Campus will continue to operate during construction at the South Campus (the Project site). Due to the availability of funding, it is likely that construction of the Performing Arts Center building will be constructed after the other elements of the Project.

Noise impacts resulting from this construction will depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, the distance between construction noise sources and noise-sensitive receptors, any shielding provided by intervening structures or terrain, and ambient noise levels. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time.

Each of the Project's construction phases would include a different mix of operating equipment. The highest noise levels from this equipment are typically generated during demolition of existing structures, when impact tools are used (e.g., jackhammers, concrete saws, hoe rams). Site grading and excavation activities

[3] For purposes of this analysis, construction is expected to occur from April 2021 through May 2022

would also generate high noise levels, as these phases of construction will likely require the simultaneous use of multiple pieces of heavy equipment, such as dozers, excavators, scrapers and loaders. Lower noise levels result from construction activities when less heavy equipment is required to complete the tasks.

Typical construction noise levels at a distance of 50 feet are shown in Tables **13-6 and 13-7**. Table 13-6 illustrates the average noise level range generated by typical construction phases, and Table 13-7 shows the maximum noise level range for different types of individual construction equipment. Typical noise levels shown in Table 13-7 are generally consistent with construction noise levels as calculated for projects using the Federal Highway Administration (FHWA) Roadway Construction Noise Model, including the anticipated equipment that would be used for each typical phase of projects. Most demolition and construction noise falls within a range of between 80 to 90 dBA at a distance of 50 feet from the source.

Table 13-6: Typical Range of Noise Levels at 50 Feet from Construction Sites (dBA Leq)

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Parking Garage, Recreation, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Source: United States Environmental Protection Agency, 1973, Legal Compilation on Noise, Vol. 1, p. 2-104.

I - All pertinent equipment present at site.

II - Minimum required equipment present at site.

Table 13-7: Typical Construction Equipment Noise Levels (at 50 feet)

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous*
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor3	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous

Table 13-7: Typical Construction Equipment Noise Levels (at 50 feet)

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous*
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Grad-all	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous

Notes:

*Impact activities impact the ground or construction surface, such as pile driving, while continuous activities emit more constant noise, such as construction vehicles.

1. Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.

2, Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

3. Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

Source: FHWA

The City of Oakland's Construction and Demolition Noise Performance Standards for activities that occur for more than 10 days, or any repetitively scheduled and relatively long-term construction or demolition operation, is 70 dBA at a receiving commercial use, and 65 dBA at a receiving residential uses during weekday daytime hours. **Table 13-8** shows Project-specific construction noise levels calculated using the Federal Highway Administration (FHWA) software, Roadway Construction Noise Model (RCNM).

Table 13-8: Calculated Construction Noise Levels for Each Stage of Project Construction

	Construction Phase	At Distance of 50 ft.	
		L_{eq}, dBA	L_{max}, dBA
South Campus	Demolition (20 days)	86	90
	Site Preparation (5 days)	84	84
	Grading & Excavation (8 days)	85	85
	Trenching & Foundation (8 days)	78	81
	Building – Exterior (130 days)	82	82
	Paving (18 days)	85	90
Pedestrian Undercrossing	Site Preparation (1 day)	83	85
	Grading & Excavation (2 days)	85	90
	Trenching & Foundation (2 days)	79	81
	Tunnel Construction (100 days)	83	83
	Paving (5 days)	85	90

Source: Illingworth & Rodkin, June 2020

The Project does not propose to use any equipment classified as extreme noise generators (i.e., construction equipment that would generate noise levels greater than 90 dBA at a distance of 50 feet, such as pile drivers or impact hammers) under typical construction conditions, or at nominal distances of 50 feet or less from adjacent residences.

At 50 feet from construction noise sources, maximum instantaneous noise levels generated during the Project's construction phases on the South Campus are calculated to range from 81 to 90 dBA Lmax. Residence that back up adjacent to the Project site and within approximately 50 feet of construction would be subject to hourly average noise levels calculated to range from 78 to 86 dBA Leq. These noise levels would typically drop off at a rate of about 6 decibels per doubling of distance from the construction noise source. Shielding by terrain and intervening structures would reduce construction noise levels at further distant residences by between 5 to 20 dBA, depending on the location of the receptor and of the construction activity. However, without further noise attenuation, the Project's construction noise would exceed the performance standard of the City Noise Ordinance (i.e., 65 dBA at residential properties) at unshielded residences located within 500 feet of construction activities, and especially at immediately adjacent residences.

Residences that adjoin the Project site to the northeast, east, southeast, south and southwest are located as close as about 130 feet from construction of the proposed pedestrian tunnel undercrossing of Lincoln Avenue. Topography and intervening existing structures would provide acoustical to residences in some areas during much of the tunnel construction, while other locations would be unshielded from construction noise at the tunnel undercrossing.

Standard Conditions of Approval

Pursuant to ***SCA Noise-1***, the Project's general construction activities would be limited to:

- between 7:00 a.m. and 7:00 p.m. Monday through Friday

- Saturdays between the hours of 9:00 to 5:00, and only for those construction activities that occur within the interior of a building with the doors and windows closed
- No construction will be allowed on Sundays or federal holidays

Implementation of ***SCA Noise-2 and SCA Noise-3*** will require the Project applicant to implement practical noise reduction measures to control and reduce noise emitted by construction equipment using best-available noise controls. ***SCA Noise-4*** requires the Project applicant to submit a Construction Noise Management Plan containing a set of Project-specific noise attenuation measures to further reduce construction noise impacts on adjacent sensitive receptors.

The noise study prepared for this EIR includes the following additional recommended noise reduction measures to address Project-specific construction period noise impacts to adjacent sensitive receptors and to minimizes the noise impact at the adjacent property boundaries wherever possible:

- Use of concrete saws (the only equipment anticipated to be used at the site and that would generate Lmax levels of 90 dBA Leq or more) shall be limited to the hours between 8:00 am and 4:00 pm on weekdays.
- If the geotechnical and structural requirements of the Project require pile or pier foundations at the Performing Art Center building, implement “quiet” pile driving technology such as pre-drilling of piles, where feasible
- Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
- Evaluate the feasibility of noise controls such as sound blankets at the adjacent sensitive receivers to temporarily improve the noise reduction capability of adjacent buildings
- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds), wherever feasible.
- Except as provided herein, impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for Project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. This muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used (such as drills rather than impact equipment) whenever such procedures are available and consistent with construction procedures.
- Use existing or temporary electrical power poles instead of generators
- Locate stationary noise sources as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- Construction equipment shall be positioned as far from noise sensitive receptors as possible. Stage large equipment, compressors, or generators at least 25 feet from the site perimeters when work is not being done near these areas.
- Prohibit unnecessary idling of internal combustion engines.
- Erect temporary plywood noise barriers around the construction site when construction is located adjacent to property lines shared with residential uses.
- Utilize noise control blankets on the building structures as the buildings are erected.

- The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

Pursuant to ***SCA Noise-5***, the Project applicant is required to establish procedures for responding to and tracking complaints received pertaining to construction noise. The noise study prepared for this EIR recommends the following measures and practices to be implemented before e and during construction:

- Work with adjoining properties to determine the best days and times to conduct heavy construction located within 50 feet of shared property lines
- Conduct a preconstruction meeting with the City of Oakland and the contractors to identify potential sources of noise and how to mitigate them
- Notify property owners and occupants located within 300 feet of construction activities at least 14 calendar days prior to commencement of construction.
- Post a large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures and phone numbers for the complaint manager and City Code Enforcement unit
- Designate an on-site construction complaint and enforcement manager for the project
- Maintain a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request
- Construction noise monitoring should be undertaken if reliable noise complaints are received during demolition, excavation, and/or construction activities. Noise levels should be monitored relative to ground level outdoor use areas and/or the worst-case ground level façade window exposure, at the location from which the noise complaints originate. Integrated average (Leq) noise level measurements on an hourly basis should be made for those activities that generated the complaint. If the measured noise levels during this test are found to exceed the City's construction noise performance standards, an acoustical professional should be retained to specify additional noise attenuation measures to reduce noise levels to City standards. These measures may include operational considerations, the use of additional ground level noise barriers or noise control blanketing of the building structure.

The use of practical noise controls on construction equipment has been found to reduce noise levels by 5 to 10 dBA. Assuming an average noise reduction of 8 dBA, construction (other than use of concrete saws) is anticipated to meet the 65 dBA performance threshold at distances of 200 feet or greater, or where the noise receptors are located in shielded areas. However, construction noise would remain well above ambient daytime noise levels in the adjoining neighborhoods, especially at those residences that are immediately adjacent to the Project site.

The Oakland Municipal Code standards that pertain to construction noise (OMC Section 17.120.050(G): Temporary Construction and Demolition Noise) allow for an exemption to the otherwise applicable threshold of 65 dBA as the maximum allowable construction noise over more than 10 days, if an acoustical analysis is performed and that acoustic analysis recommends measures to reduce construction noise impacts. The recommendations listed above pursuant to SCA Noise-1 through Noise-5 would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance. With implementation of these noise controls, and recognizing that noise generated by construction activities would occur over a temporary period, the temporary increase in ambient noise levels during construction would be less than significant.

Mitigation Measures

None needed, and no further measures available

Daily Operational Noise

Noise-2: The Project's elements would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the City of Oakland Noise Ordinance, and would not result in a significant permanent noise increase of 5 dBA Ldn or greater over ambient noise conditions. (**Less than Significant**)

Outdoor noise-generating activities anticipated to occur throughout the South Campus (the Project site) include outdoor classes, social gatherings and classes at the Commons space, outdoor recess activities, parking lot activities, noise from the dust collector at Building 2, audible crosswalks, and noise associated with loading dock activities at the Performance Art Center building. Indoor events are not anticipated to be audible off-site. There are no nighttime (10:00 pm to 7:00 am) outdoor events proposed pursuant to the Project.

A significant noise impact resulting from the Project would occur if the Project's operations were to generate noise levels that would exceed the noise level standards of the Oakland Noise Ordinance (as specified in Table 13-5). For noise sources that consist primarily of speech or music with discernable meaning, the analysis presented in this EIR has conservatively adjusted these noise level standards down by 5 dBA (i.e., the EIR threshold for this type of noise is 5 dBA lower than the Ordinance).

Outdoor Classroom

The School anticipates holding certain classes outdoors, either at the Commons or in the existing grove of trees in the southeastern portion of the site (Outdoor Classroom). Activities at the Outdoor Classroom would involve one teacher and up to 15 students speaking at normal voice levels during school hours (8:30 am to 3:30 pm). Approximately five one-hour long classes per day are anticipated.

Noise modeling was conducted using the SoundPLAN model, assuming a noise source calibrated to a normal conversation level of 60 dBA Leq at 3 feet. Resulting noise levels are below 30 dBA at all surrounding land uses. Outdoor classroom activity noise would be lower than existing noise levels generated on local roadways and residential activities, and would be below the established daytime thresholds. The outdoor classroom would not generate significant noise impacts on adjacent residences.

Daily Use of the Commons

Daily use of the Commons would be similar to that of the Outdoor Classroom, with up to two school classes occurring simultaneously within this outdoor space. With two classes, activities would involve two teachers and up to 30 total students speaking at normal voice levels during school hours (8:30 am to 3:30 pm). Approximately five 1-hour long class periods per day are anticipated, with two classes occurring simultaneously during all periods.

Noise modeling in SoundPLAN, assuming four noise sources calibrated to a normal conversation level of 60 dBA Leq at 3 feet, resulted in noise levels below 20 dBA at all surrounding land uses. Typical outdoor classroom activity occurring in the Commons would generate noise at levels below ambient levels generated on local roadways and residential activities, and below the daytime thresholds. Use of the Commons space for outdoor classrooms would not generate significant noise impacts on adjacent residences.

Recess Activities

Informal play during school recess would be held in the existing recreation field at the southerly portion of the Campus. Recess would involve an average of 30, and no more than 40 students on the field at a time,

with up to 4 adults/teachers. Five one-hour recess periods are assumed per day, during the school hours (8:30 am to 3:30 pm).

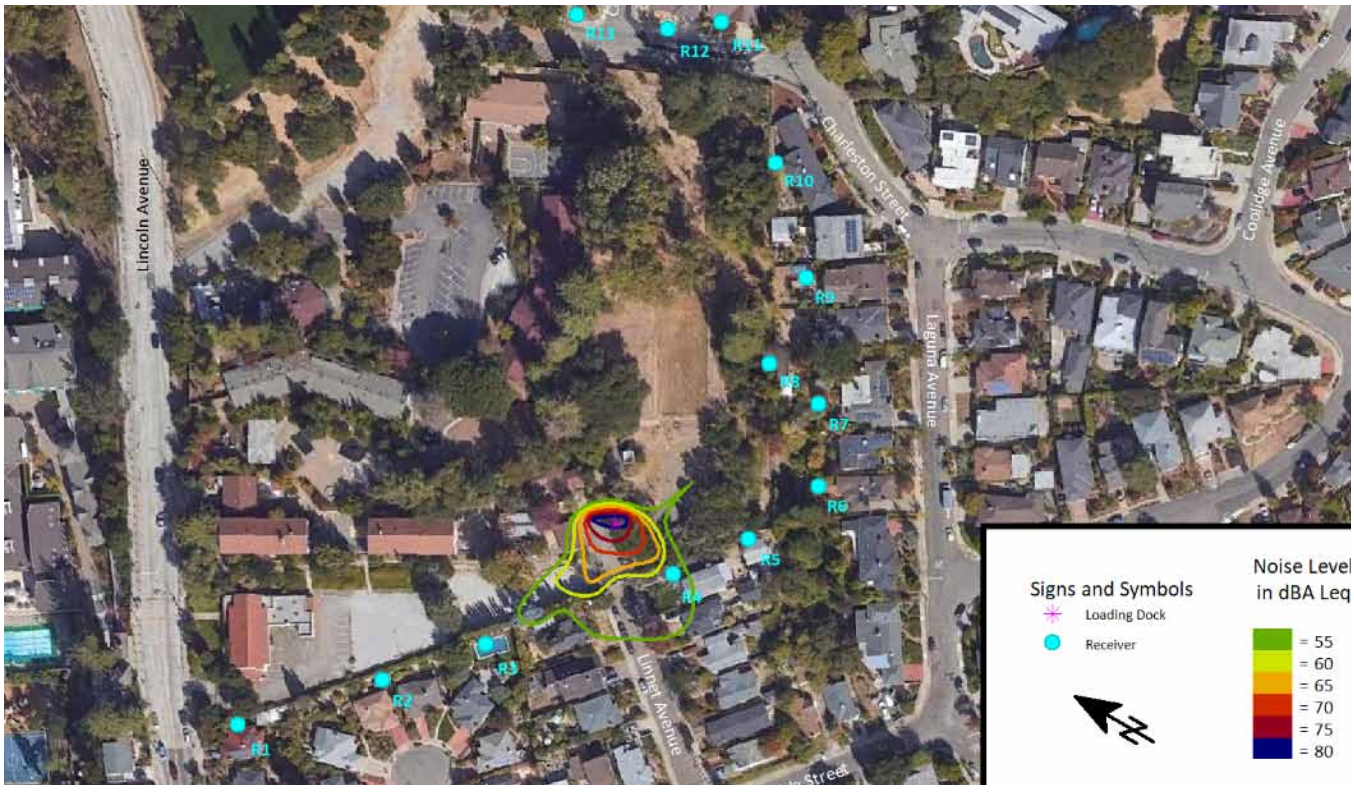
Based on noise monitoring conducted by the EIR noise consultant at other schools in the Bay Area, a noise level of 59 dBA at a distance of 50 feet from the center of activities was assumed for recess activities. Noise modeling in SoundPLAN was used to calculate noise levels generated by recess activities at the nearest sensitive receptors (adjacent residences). Resulting noise levels are summarized in **Table 13-9**, along with the applicable noise standards. City standards according to the Ordinance were conservatively adjusted down by 5 dBA to account for the speech content of the activity (i.e., a more sensitive threshold for this type of noise source). As indicated in Table 13-9 and shown on **Figure 13-5**, noise generated by recess activities is not expected to exceed the applicable thresholds at any adjacent residences, and this impact would not be significant.

Table 13-9: Calculated Noise Parameters during Recess

Location	Worst-Case Hour - Noise Levels (dBA)				
	L_{33}	L_{17}	L_8	L_2	L_{max}
R1: Residence on Lincoln Avenue	14	15	18	23	29
R2: Residence on Alida Court	17	18	21	26	32
R3: Residence on Alida Court	20	21	24	29	35
R4: Residence on Linnet Avenue	39	40	43	48	54
R5: Residence on Linnet Avenue	45	46	49	54	60
R6: Residence on Laguna Avenue	44	45	48	53	59
R7: Residence on Laguna Avenue	48	49	52	57	63
R8: Residence on Laguna Avenue	52	53	56	61	67
R9: Residence on Laguna Avenue	49	50	53	58	64
R10: Residence on Charleston Street	48	49	52	57	63
R11: Residence on Charleston Street	43	44	47	52	58
R12: Residence on Charleston Street	43	44	47	52	58
R13: Residence on Charleston Street	42	43	46	51	57
Adjusted Daytime Residential Standards	*55*	*60*	*65*	*70*	*75*

Source: Illingworth & Rodkin, Inc., July 2020

Estimated Hourly Average Leq Noise Contours during Recess



Estimated Hourly Average Leq Noise Contours at Performing Art Center Loading Dock

Figure 13-5
Noise Contours, Typical Daily Activities Proposed

Source: Illingworth & Rodkin, Inc., July 2020

Dust Collector

The School intends to use portions of Building 2 as an instructional shop/maker space. This use will necessitate installation of a dust collection system on the interior of the building. The dust collector would be installed on the interior of Building 2, near the east side. Door and window openings would be located near the dust collector, but all doors and windows would be closed during operation of the dust collector. Indoor operation of the duct collector with windows and doors closed is not anticipated to be audible off-site. This is a less than significant impact.

Parking Lot

The Project includes a redesign of the existing 129 paved parking spaces that currently exist on the South Campus (Project site) to add 25 more on-site parking spaces, for a net of 154 total parking spaces on the South Campus.[4] Of the new parking spaces to be located on the Project site, the closest parking spaces would be located approximately 100 feet from the nearest existing residence to the northeast, and about 200 feet to the nearest residence to the southeast. Noise associated with use of the parking lots includes vehicular circulation, engines, car alarms, squealing tires, door slams and human voices. These sounds can typically reach maximum levels of 50 to 60 dBA Lmax at a distance of 50 feet. Parking lot noise can be expected to generate maximum noise levels in the range of 46 to 56 dBA Lmax at a distance of 100 feet, and 40 to 50 dBA Lmax at 200 feet (not accounting for differences in terrain). The total duration of noise from these intermittent maximum sounds in the parking lot would be more than five minutes but less than 15 minutes in any hour (a 17-minute duration (L17) is used as the applicable regulatory threshold for this analysis. The hourly average noise level resulting from all these noise-generating activities in a small parking lot would be anticipated to reach 40 dBA Leq at a distance of 50 feet from the parking area. The maximum (L17) and average noise levels generated in the parking lot would be lower than ambient levels generated on local roadways and residential activities, and below the daytime noise thresholds. Increased use of the on-site parking areas for 25 additional parking spaces would not generate significant noise impacts on adjacent residences.

Audible Crosswalk Signal

Currently, there are two audible crosswalk signals for pedestrian crossings of Lincoln Avenue – one at mid-block just uphill of the School Gatehouse, and one at the entrance to the North Campus parking lot near the soccer field. Pursuant to the Project, the existing downhill crossing signal near the gatehouse would be replaced with new signals at the entrance and exit of the Project's proposed Loop Road. The new crossing signal at the lower Loop Road driveway would be approximately 30 feet from the nearest residence on Lincoln Avenue.

These crosswalk devices typically include volume control options, and noise levels generated by these signals fall well below City of Oakland Noise Ordinance limits. However, due to the tonal and repetitive nature of such sounds, the crosswalk signal may be annoying to nearby residents even if their noise level is below the ambient noise generated by traffic along Lincoln Avenue. Although this crosswalk noise is not considered a significant impact under CEQA, the acoustic professionals that prepared this section of the EIR recommend the following "good neighbor practices", as developed under the sponsorship of the National Cooperative Highway Research Program (NCHRP), and following the requirements of the Manual on Uniform Traffic Control Devices:

[4] To meet Campus-wide parking demand of 344 total off-street parking spaces at full enrollment, the School also proposes to either add 36 stacked parking spaces at the North Campus, or to reduce parking demand by prohibiting some or all students from driving to school. The impact of the stacked parking spaces at the North Campus are not analyzed in detail in this EIR.

Recommendation Noise-1, Audible Pedestrian Crosswalk Signals. During installation the audible pedestrian crosswalk signal at the lower driveway of the Loop Road, the volume levels should be set according to the following guidance:

a) The WALK indication must be audible from the beginning of the associated crosswalk.

b) The pushbutton locator tones must be responsive to ambient sound levels and audible at a distance of 6 to 12 feet from the pushbutton, or to the building line, whichever is less.

c) The audible pedestrian crossing signal microphone should be mounted as close as possible to the position of the pedestrian who is waiting to cross the associated street.

d) Manufacturers typically set a default maximum and minimum output level on signal devices. The settings should be checked.

e) At no time should sound be more than 5 dB above ambient sound (except by special actuation for audible beaconing).

f) The sound level of the crosswalk signal speakers must be carefully set and evaluated at the time of installation, and then checked at a time with different traffic volumes to assure that settings are correct. It is better to install pedestrian signals with volumes that may be too low and adjust upwards as needed. If volumes are set too high initially, problems can arise with neighboring residents.

g) Audible pedestrian crosswalk signals that respond to ambient sound are available. However, pre-set automatic volume adjustment or automatic gain controls cannot assure that the volume meets the criterion above. With the selection of signals that respond to ambient sound, the above practices should be undertaken at several time during the daytime and nighttime period to ensure that the response is appropriate to meet the needs of the pedestrians, while not causing conflicts with adjacent neighbors.

Noise impacts of the audible crosswalk at this traffic signal location would be less than significant.

Loading Dock Activity

A loading dock for the Performing Arts Center building is proposed to be located at the southeast corner of this new building. Noise generated by loading dock activities can be expected to include back-up alarms and truck engine noise. Trucks used for deliveries are anticipated to be no greater than 26 feet in length, and pickup trucks will likely be more commonly used. It is assumed there may be one delivery per day on average, occurring between the hours of 9:00 a.m. and 5:00 p.m. on Monday through Saturday. It is also assumed that noise from back-up alarms will occur for fewer than 5 cumulative minutes in any hour.

As a delivery truck is maneuvered through the loading dock area and is unloaded, it is anticipated to generate a noise level of about 75 dBA Leq at a distance of 50 feet. Maximum noise levels would be about 14 dBA higher (or 89 dBA Lmax). As indicated in **Table 13-10** and shown on **Figure 13-5**, noise generated by loading dock activities is not expected to exceed the applicable thresholds at any of the closest residences to the south (R3, R4, and R5), and this impact would not be significant.

Table 13-10: Calculated Noise Parameters during Loading Dock Activity

Location	Worst Hour Noise Levels, dBA				
	L_{33}	L_{17}	L_8	L_2	L_{max}
R1: Residence on Lincoln Avenue	34	35	38	43	49
R2: Residence on Alida Court	28	29	32	37	43
R3: Residence on Alida Court	48	49	52	57	63
R4: Residence on Linnet Avenue	59	60	63	68	74
R5: Residence on Linnet Avenue	42	43	46	51	57
R6: Residence on Laguna Avenue	29	30	33	38	44
R7: Residence on Laguna Avenue	25	26	29	34	40
R8: Residence on Laguna Avenue	27	28	31	36	42
R9: Residence on Laguna Avenue	24	25	28	33	39
R10: Residence on Charleston Street	21	22	25	30	36
R11: Residence on Charleston Street	23	24	27	32	38
R12: Residence on Charleston Street	23	24	27	32	38
R13: Residence on Charleston Street	23	24	27	32	38
Daytime Residential Standards	*60*	*65*	*70*	*75*	*80*

Source: Illingworth & Rodkin, Inc., July 2020

Standard Conditions of Approval

Pursuant to ***SCA Noise-7***, all daily operational noise generated by the Project must comply with the performance standards of Chapter 17.120 of the Oakland Planning Code. As analyzed above, the typical noise levels generated by daily operations at the new School campus (i.e., noise from the Outdoor Classroom, outdoor use of the Commons area, use of the recess area, parking lot activities, noise from the dust collector at Building 2, audible crosswalks and intermittent loading dock activities) all comply with these noise standards.

The analysis presented above does not account for the Project's proposal to construct an 8-foot high wall on the north side of the proposed parking lot, which would attenuate all noises generated by daily Project operation at those residence located behind and below the elevation of this fence, and noise generated from all daily operations of the Project would be less than significant. As a good neighbor measure, the School should implement best management practices for this loading dock, including prohibiting unnecessary idling of delivery vehicles, and avoid noise generating events such as slamming of gates and loading doors, and intentional dropping of materials.

Noise from Special Events

Noise-3: Noise levels during graduation and other large outdoor events held at the Commons and during nighttime informal outdoor gatherings after Performing Arts Center events could exceed City noise level standards. All other proposed school activities are anticipated to meet City noise standards. (**Less than Significant with Mitigation**)

The school anticipates that certain Special Events that have been occurring on the North Campus (pursuant to a limited Special Event schedule as defined in the prior 2016 PUD) would now occur at the South Campus. These Special Event s would include high school graduation and lower grade level promotion ceremonies, Special Events held at the Performing Arts Center building, and social events to be held at the renovated Building 0 near Lincoln Avenue. Special Events to be held indoors are not anticipated to be audible off-site, and no outdoor Special Events would occur at nighttime (between 10:00 pm to 7:00 am).

A significant impact from Special Events would be identified if these events were to generate noise levels that would exceed the noise level standards of the Oakland Noise Ordinance (per OMC Section 17.120.050). For noise sources that consist primarily of speech or music with discernable meaning, these noise standards have been adjusted down by 5 dBA. Whereas OMC Section 17.120.050 specifically provides that these standards apply to noise levels "inherently and regularly generated by activities across real property lines", this analysis conservatively applies these standards to non-regular events such as graduation ceremonies, special events at the Performing Arts Center, and events at the Building 0 deck.

Graduation Ceremonies Held in the Commons

The School proposes to use the Project's Commons area for school graduation ceremonies and school promotion events. The School's largest such event is upper school graduation, held in midday during a single weekend each June. Approximately 800 to 1,000 people are anticipated to attend future upper school graduations. Noise from these graduation events would include amplified speech through a public address (PA) system, as well as crowd noise for the attendees.

The Project sponsors have assumed use of amplified speech during these ceremonies, using compact directional-line array speakers. The proposed design of the amplified speaker array system assumes the speakers are directed at three points in the audience, one pair of speakers for the front, one pair for the middle, and one pair for the back rows of the audience. The speakers are proposed to be affixed to Building 2, at a point one-foot below the top of the building, and set to reach a level of 75 dBA at the back of the audience.

Based on noise measurements conducted at various other events and ceremonies at Bay Area high schools, the variation in spectator noise depends primarily on the number of attendees, and level of excitement generated by the event. For example, crowd noise generated by 1,000 spectators at a high school football game have been found to generate noise levels of about 67 dBA Leq at a distance of 225 feet from the center of the stands.[5] Alternatively, actual crowd noise was measured at a prior 2019 Head-Royce high school graduation event, which was held indoors and with only 500 people in attendance. This event resulted in crowd noise measurements that were as much as 7 dBA less than the football game crowd. [6]

To obtain the most realistic estimate of the noise levels generated by an outdoor high school graduation event held at the Commons area of the proposed South Campus, the following parameters were used:

- Crowd noise from the 2019 Head-Royce high school graduation event was used, but adjusted upward by 3 dBA to account for the increased number of attendees (generally following a relationship of a 3-dBA increase in sound level for each doubling in attendance).[7]

[5] Noise measurements made by Illingworth & Rodkin, Inc., the acoustic professionals that authored the Noise Study for this EIR. The Illingworth & Rodkin Noise Study (see Appendix 13) was originally conducted using these very conservative high school football game crowd noise measurements.

[6] Salter Associate, 2019 (see **Appendix 13B**)

[7] As confirmed by an additional third-party peer review consultant, RGD Acoustics (see **Appendix 13C**). RGD Acoustics agreed that the crowd noise from the 2019 Salter measurements, as adjusted for a larger crowd size, more accurately represented the crowd noise for a graduation event, rather than a football game crowd noise measurement.

- This crowd noise was combined with sound levels calculated to be generated by the Project sponsor's proposed PA system (i.e., directional-array speakers at the front of the audience, calibrated to reach a level of 75 dBA at the last row of the audience). [8]

The calculated L_{33} noise values (20 cumulative minutes in a 1-hour period) for this scenario are summarized in **Table 13-11**, and compared to applicable Oakland Noise Ordinance standards. Per OMC Section 17.120.050, the maximum allowable noise level at the receiving property line has been conservatively adjusted down by 5 dBA to account for noise consisting primarily of speech or music.

Table 13-11: Calculated Noise Parameters during 1,000-Spectator Graduation Event

Location	Worst Hour, L_{33} Noise Levels, dBA		
	Crowd Noise Only	PA Noise Only	Combined Noise Levels
R1: Residence on Lincoln Avenue	37	38	41
R2: Residence on Alida Court	51	44	52
R3: Residence on Alida Court	52	45	53
R4: Residence on Linnet Avenue	35	38	40
R5: Residence on Linnet Avenue	33	33	36
R6: Residence on Laguna Avenue	48	35	48
R7: Residence on Laguna Avenue	52	40	52
R8: Residence on Laguna Avenue	53	44	53
R9: Residence on Laguna Avenue	52	54	**56**
R10: Residence on Charleston Street	49	**56**	**57**
R11: Residence on Charleston Street	44	42	46
R12: Residence on Charleston Street	43	43	46
R13: Residence on Charleston Street	49	**60**	**60**
Adjusted Daytime Residential Standard	*55*	*55*	*55*

Source: Illingworth & Rodkin, July 2020 and October 2021

As shown in Table 13-11, the noise levels generated by the crowd during an upper school graduation event with 1,000 spectators would be the dominant noise source at several of the identified receptor locations, but would not exceed the adjusted maximum allowable noise level standards specified by the City of Oakland Noise Ordinance for daytime periods (7:00 am to 10:00 pm) at any of these sensitive receptor locations. However, noise levels generated by the PA system as proposed would be the dominant noise source at several of the other receptor locations, and this PA system noise would exceed the adjusted maximum allowable noise level standard at residences along Charleston Street to the east (receptor R10), and along Carmelita Place to the northeast (receptor R13). SoundPLAN Version V8.2 (a sophisticated three-dimensional noise mapping software that takes the characteristics of the noise source and the geometry of the receivers, surrounding terrain and any intervening structures into account), was used to calculate the noise contours

[8] As individually calculated for PA sound levels only, Illingworth and Rodkin, October 2019

resulting from this PA system, utilizing the topography of the site and buildings in the surrounding area.[9] The resulting Leq noise contours for the PA system and receptor locations are shown in **Figure 13-6**.

When combined together during the graduation event, the crowd noise and the PA system noise (see Table 13-11) is expected to exceed the adjusted maximum allowable noise level standard for at least 20 cumulative minutes in a 1-hour period at residences along Charleston Street to the east (receptors R9 and R10), and along Carmelita Place to the northeast (receptor R13).

Lower and middle school promotion ceremonies have significantly lower attendance than that of upper school graduation ceremonies. Crowd noise levels generated during lower attendance events would be lower (generally following a relationship of 3-dBA reduction in level for each halving of attendance). Assuming an attendance of 500 spectators for middle and lower school promotion, and an adjusted speaker system array for the smaller audience, the PA system's noise levels would only be anticipated to exceed the adjusted noise level standard at one residence to the north along Charleston Street (R13).

As demonstrated above, noise levels generated during large graduation ceremonies and promotion events held in the Commons are anticipated to exceed the adjusted daytime thresholds established by the City of Oakland Noise Ordinance at nearby residences. These three events (high school graduation and middle and lower school promotions) would occur only once each per year, and would only occur during daytime hours. Nevertheless, because these special events are projected to exceed the noise standard, they would be considered significant noise impacts.

[9] Many of the residences nearest the Project's Commons area are shielded from noise at the Commons by existing and proposed new buildings.

Figure 13-6
Estimated Noise Contours Generated by Amplified Sound during an Outdoor High School Graduation Event

Source: Illingworth & Rodkin, July 2021

Special Events at the Performing Arts Center

Regular performing art classes and certain Special Events would be held indoors at the Performing Arts Center during both daytime and evening hours. No nighttime (10:00 pm to 7:00 am) events, classes or activities are proposed. Daily use of the facility would include band, orchestra, dance, and choir practice without amplification. It is anticipated that 25 classes would be held in the facility per day, spread between 5 classrooms, each having 30 to 40 students and a teacher. Typical non-amplified noise from these classes is not anticipated to be audible at off-site locations.

Special Events, where visitors and parents are invited to attend, are scheduled throughout the school year. These Special Events may include up to 43 evening Special Events (held between 7:00 pm to 9:30 pm), 27 daytime Saturday Special Events (held between 9:00 am to 6:00 pm), 5 Saturday evening Special Events (held between 6:00 pm to 9:30 pm), 5 daytime Sunday events (held 9:00 am to 6:00 pm), and 5 single-day weekday summer events (held 9:00 am to 6:00 pm), for a total of 85 events per year.[10]

A maximum attendance of 450 persons is anticipated at these events, based on the seating capacity of the Performing Arts Center. Amplification would be used inside the facility. Based on noise measurements conducted at various other Special Events and ceremonies at other Bay Area high schools,[11] where noise levels were monitored at locations adjacent to the facility and in the surrounding neighborhoods, indoor special event activities were not perceivable at the nearest residential property lines and did not affect the measured noise levels in quiet residential areas.

However, it is anticipated that informal gatherings of up to 400 people may occur outside the Performing Arts Center entrance for up to 1 hour following each special event, as performers and attendees socialize and discuss the event. Although Special Events would take place during daytime and evening hours, ending by 9:30 pm), the informal gatherings could potentially extend later into the evening/nighttime. These informal gatherings would not include any amplification or formal entertainment (e.g., music). Noise modeling was conducted using SoundPLAN, assuming a noise source calibrated to a moderately-sized outdoor event with raised group conversation levels of 64 dBA Leq at 50 feet, and spectral content similar to that measured for the high school graduation event. Noise levels at the closest residences to the south of a post-event gathering area are calculated to range from 35 to 45 dBA Leq during periods of excited conversation.

Noise levels are summarized in **Table 13-12**, and compared to the applicable Oakland noise standards, which were adjusted down by 5 dBA to account for the speech content of the activity. The Leq noise contours and receptor locations are shown graphically in **Figure 13-7**.

[10] City of Oakland, PUD Conditions of Approval, 2018

[11] Noise measurements made by Illingworth & Rodkin, Inc., the acoustic professionals that authored the Noise Study for this EIR

Table 13-12: Calculated Noise Levels during Gatherings after PAC Events

Location	Worst Hour Noise Levels, dBA				
	L_{33}	L_{17}	L_8	L_2	L_{max}
R1: Residence on Lincoln Avenue	20	22	25	29	38
R2: Residence on Alida Court	35	37	40	44	53
R3: Residence on Alida Court	**43**	45	48	52	**61**
R4: Residence on Linnet Avenue	22	24	27	31	40
R5: Residence on Linnet Avenue	18	20	23	27	36
R6: Residence on Laguna Avenue	16	18	21	25	34
R7: Residence on Laguna Avenue	25	27	30	34	43
R8: Residence on Laguna Avenue	26	28	31	35	44
R9: Residence on Laguna Avenue	28	30	33	37	46
R10: Residence on Charleston Street	27	29	32	36	45
R11: Residence on Charleston Street	15	17	20	24	33
R12: Residence on Charleston Street	17	19	22	26	35
R13: Residence on Charleston Street	33	35	38	42	51
Adjusted Daytime Residential Standards:	*55*	*60*	*65*	*70*	*75*
Adjusted Nighttime Residential Standards:	*40*	*45*	*50*	*55*	*60*

Source: Illingworth & Rodkin, July 2020

As shown in Table 13-12, noise levels during gatherings after a Special Event at the Performing Arts Center would be similar to, or lower in level than existing daytime noise levels at these residences, and would be below the adjusted daytime thresholds. However, noise levels could exceed the nighttime standard and the adjusted nighttime standards at residences on Alida Court (receptor R-3) if the activity occurred after 10:00 p.m. (i.e., as compared to the more stringent nighttime standard), and gatherings extending into nighttime hours would be a potentially significant impact.

Estimated Hourly Average Leq Noise Contours - Post Performing Art Center Events

Estimated Hourly Average Leq Noise Contours - Social Events at Building 0 Deck

Figure 13-7
Noise Contours, Other Special Events

Source: Illingworth & Rodkin, July 2020

Events at the Building 0 Deck

The School proposes to use the outdoor on the west side of Building 0 for certain indoor and outdoor social gatherings (e.g., School open house events) of 50 to 100 people. One gathering per month is anticipated, with a duration of approximately 2 hours during the school day (8:30 am to 3:30 pm).

Noise modeling was conducted using the SoundPLAN model, assuming a noise source calibrated to a raised conversation level of 67 dBA Leq at 3 feet, and spectral content similar to that measured for school graduation event. Assuming a noise drop off rate of 6 dBA per doubling of distance, this would equate to 43 dBA at a distance of 50 feet, which is 21 dBA lower than the noise level calculated for Special Event gatherings events at the Performing Arts Center. A lower noise source level is assumed for the social gatherings at Building 0 than for outdoor gatherings after the Art Center events due to the smaller size of the gatherings and the expectation that events at Building 0 are meant to be informational events rather than social events, and participants would be less likely to raise their voices for conversation. Noise levels at the closest residences to the south of Building 0 are calculated to range from 39 to 47 dBA Leq during periods when attendees are utilizing the outdoor deck area. Noise levels from these events at Building 0 are summarized in **Table 13-13**, along with the applicable noise standards (which are adjusted down by 5 dBA to account for the speech content of the activity). The Leq noise contours and receptor locations are also shown on **Figure 13-7**.

Table 13-13: Calculated Noise Parameters during Social Gatherings at Building 0

Location	Worst Hour Noise Levels, dBA				
	L_{33}	L_{17}	L_8	L_2	L_{max}
R1: Residence on Lincoln Avenue	43	45	48	52	61
R2: Residence on Alida Court	45	47	50	54	63
R3: Residence on Alida Court	37	39	42	46	55
R4: Residence on Linnet Avenue	23	25	28	32	41
R5: Residence on Linnet Avenue	14	16	19	23	32
R6: Residence on Laguna Avenue	12	14	17	21	30
R7: Residence on Laguna Avenue	5	7	10	14	23
R8: Residence on Laguna Avenue	5	7	10	14	23
R9: Residence on Laguna Avenue	4	6	9	13	22
R10: Residence on Charleston Street	3	5	8	12	21
R11: Residence on Charleston Street	1	3	6	10	19
R12: Residence on Charleston Street	2	4	7	11	20
R13: Residence on Charleston Street	7	9	12	16	25
Adjusted Daytime Residential Standards:	*55*	*60*	*65*	*70*	*75*

Source: Illingworth & Rodkin, Inc., July 2020

As indicated above, no exceedance of the noise standards is anticipated to occur during indoor/outdoor social gatherings held at the Building 0 deck. Noise levels would be similar to or lower in level than existing

daytime noise levels at the adjacent residences, and would be below the adjusted daytime thresholds. This is a less than significant impact.

Mitigation Measures

As indicated in the analysis above, noise levels generated during high school graduation ceremonies in the outdoor Commons are anticipated to exceed the adjusted daytime thresholds established by the City of Oakland Noise Ordinance at nearby residences. The primary contributor of these noise level exceedances is the Project's proposed PA system. When combined with crowd noise, noise levels generated during a graduation ceremony would exceed established thresholds at residences along Charleston Street to the east (receptors R9 and R10), and along Carmelita Place to the northeast (receptor R13). To address these noise impacts, the following mitigation measures are recommended.

Mitigation Measure Noise-3A, Sound System Design Parameters. For those outdoor special events such as graduation ceremonies (high school, middle school and elementary school) to be held at the Commons area of the proposed South Campus, Head-Royce School shall have an acoustic engineer design and install a speaker array system designed to lower the noise "spillover" from the system to no greater than between 52 and 53 dBA L_{eq} at the southerly and easterly property lines. Examples of such a speaker array could include placing greater numbers of speakers at positions closer to the attendees (e.g., at the sides of the audience seating, rather than being elevated above the front stage), and elevating the speakers so that they are directed downward toward the attendees, rather than out across the entire Commons.

Mitigation Measure Noise-3B, Special Event Notifications and Restrictions. The following requirements pertaining to School-sponsored Special Events at the Project site shall be implemented:

a) Ensure that all evening events at the Performing Arts Center are completed by 9:00 pm, with all post event gatherings, event traffic, and exterior clean-up activities completed by 10:00 pm.

b) Notify residences in the surrounding area of scheduled large outdoor events, including upper school graduation and lower and middle school promotion. Notification should be given at the time of the release of the annual school calendar and again within a few weeks of the event.

Resulting Level of Significance

Limiting outdoor activity on the South Campus to no later than 10:00 p.m. would avoid the more stringent nighttime noise thresholds, and (for other than very infrequent graduation ceremonies), Special Event noise would not exceed the applicable daytime noise thresholds.

By designing the PA sound system used at special graduation events to minimize noise "spillover" as defined by the 52 to 53 dBA Leq standard at the property line established per Mitigation Measure Noise-3A, the resulting noise levels at all identified sensitive receptors would meet applicable noise thresholds (see **Table 13-14**). These measures would reduce the noise impacts associated with large Special Events to levels of less than significant.

Table 13-14: Effects of Mitigation by Reducing PA Sound System Noise (L_{33})

Locations Where Project Noise Levels Exceeded Standards	Project, as Proposed			Project, as Mitigated		
	Crowd Noise	Project PA System Noise	Total Noise	Crowd Noise	Reduced PA System Noise	Mitigated Noise Levels
R9: Residence on Laguna Avenue	51	54	**56**	51	53	55
R10: Residence on Charleston Street	49	**56**	**57**	49	53	55
R13: Residence on Charleston Street	49	**60**	**60**	50	53	55
Adjusted Daytime Residential Standard			*55*			*55*

Source: Illingworth & Rodkin, July 2020 and October 2021

Notifying the surrounding neighborhood of upcoming graduation and promotion ceremonies would reduce the annoyance that these neighbors may feel towards these infrequent (only three such graduation and promotion ceremonies over the course of a year) events.

Traffic Noise

Noise-4: Noise levels generated by traffic attributed to the Project would not substantially increase ambient traffic noise or ambient noise levels at nearby residences. (**Less than Significant**)

Vehicular access to the School will remain from Lincoln Avenue. No vehicular access to the South Campus will be allowed from Charleston Street or Linnet Avenue. During peak periods on school days, primary pick-up and drop-off activities (except for bus loading and unloading) will occur internal to the South Campus.

Ambient noise levels in the surrounding area are generally below 60 dBA Ldn. Therefore, a significant traffic noise increase would be identified if the Project were to generate traffic noise resulting in a 5-dBA permanent increase in ambient noise levels in the Project vicinity.

Traffic Noise on Surrounding Public Streets

Based on November 2018 data obtained from the traffic study prepared for this EIR (Fehr & Peers, 2019), the School currently has 894 students and 158 faculty and staff for a total School population of 1,052. The Project would increase the population to a maximum enrollment of 1,250 students and 189 faculty and staff, for a total population of 1,439, which is about 37 percent higher than the current population. With an increase in students and staff, School-generated traffic volumes would also increase. Existing traffic volumes were provided at seven intersections along Lincoln Avenue. Based on the Project's preliminary transportation assessment, the Project is estimated to generate 270 additional morning peak hour trips, 108 additional afternoon peak hour trips, and an additionally 600 daily trips. All trips are anticipated to be along Lincoln Avenue. Existing traffic volumes along Lincoln Avenue range from 706 to 1,347 vehicle during the morning peak hour depending on location along the corridor, and from 601 to 1,141 during the afternoon peak hour.

By comparing existing to existing plus Project traffic volumes and assuming a conservative worst-case scenario whereby all peak hour trips generated by the Project travel the entire Lincoln Avenue corridor from east of Mountain Boulevard to west of Potomac Street, traffic noise levels along Lincoln Avenue are calculated to increase by 1 dBA over existing conditions. Project-generated traffic is not anticipated to result in noise increases of 5 dBA or more along the existing roadway network, and this is a less than significant impact.

As further discussed below, the Project also proposes a new Loop Road that would accommodate all School drop-off and pick-up activities on-site within the South Campus. This new Loop Road would eliminate the

School's current circulation plan, whereby westbound drivers desiring to turn around on Lincoln are directed to turn left on Alida, right on Laguna, right again on Potomac, and then another right turn onto Lincoln Avenue. The Project's proposed Loop Road would result in a lowering of School-related traffic through these surrounding neighborhood streets, and a commensurate lowering of traffic noise on this neighborhood.

On-Site Circulation (Loop Road)

The Project proposes a new internal Loop Road running within the perimeter of the South Campus, providing approximately 1,000 linear feet of on-Campus, off-street queuing space and providing distinct drop-off and pick-up points for the upper school and the lower and middle school students. Residences adjoin the proposed location of the Loop Road to the southwest and are located as close as about 50 feet to the south and 70 feet to the northeast.

Based on the information from the traffic study used for this EIR (Fehr & Peers, 2020), a total of 385 student drop-offs and 385 pick-ups are anticipated to utilize the Loop Road each school day. Of these trips, approximately 343 would occur during the morning peak hour and 135 would occur during the afternoon peak hour. Speeds along this roadway are anticipated to be below 20 mph. Traffic noise modeling was conducted using the Federal Highway Administration's Traffic Noise Model (TNM). Based on the traffic noise modeling results, hourly average traffic noise levels of 52 dBA Leq and 48 dBA Leq would be anticipated during the morning (8:00 to 9:00 am) and afternoon (3:15 to 4:15 pm) peak hours, respectively, at a distance of 50 feet, not taking into account any noise shielding. Traffic noise levels during periods for after-school pick-ups (4:15 to 5:15 pm) and sports/clubs pick-ups (5:15 to 6:15 pm) would be about 47 dBA Leq at 50 feet. Traffic noise levels for periods of early arrivals (7:00 to 8:00 am) and Kindergarten pick-up (2:15 to 3:15 pm) would be 43 dBA Leq at 50 feet. Noise levels during other periods during the day and during evening and nighttime hours would be negligible. Noise levels generated by vehicle circulation along the Loop Road at all times during the day would be similar or lower in level than existing noise levels, would be below the daytime threshold, and would be less than significant.

The Project proposes to construct a 6-foot high wall along the property line separating the Loop Road from the adjacent residences. Assuming the 6-foot height of the wall is relative to the ground elevation of the Loop Road, the wall would be anticipated to provide 5 to 6 dBA of additional noise reduction to the adjacent shielded residences.

Groundborne Vibration

Noise 5: Construction-related vibration levels are not anticipated to exceed 0.3 in/sec PPV at off-site structures, but could exceed the historic building threshold of 0.25 in/sec at on-site historic buildings. (**Less than Significant with Mitigation**)

Construction activities associated with the Project would include demolition of certain existing site improvements, site preparation, grading and excavation, trenching and foundation work, new building construction, paving, and construction of the underground pedestrian crossing using a jacked-box methodology. Pile driving, which typically produces the highest vibration levels, is not anticipated be used for Project construction, and explosives will not be uses for excavation of the pedestrian undercrossing or any other component of the Project.

Demolition and construction activities often generate perceptible vibration at levels that could affect nearby structures, when heavy equipment or impact tools (e.g., jackhammers, pile drivers, hoe rams) are used in the vicinity of sensitive land uses. Building damage generally falls into three categories: a) cosmetic damage (also known as threshold damage) is defined as hairline cracking in plaster, the opening of old cracks, the loosening of paint or the dislodging of loose objects; b) minor damage is defined as hairline cracking in masonry or the loosening of plaster; and c) major structural damage is defined as wide cracking or the shifting of foundation or bearing walls. Due to the short-term nature of Project construction activity, the primary concern is the

potential to damage a structure. The City of Oakland does not establish a vibration limit for construction. As shown in **Table 13-15**, the California Department of Transportation recommends a vibration limit of 0.25 in/sec PPV to minimize the potential for cosmetic damage to sensitive historic structures, and 0.3 in/sec PPV as the threshold at which there is a risk of damage to older residential structures. There are no off-site historic properties located near the Project site. Therefore, groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in a significant vibration impact to off-site structures. On-site Buildings 0, 1, and 2 are historic buildings (see the Cultural Resources chapter of this EIR). Although impacts of a project to on-site properties is not normally considered under CEQA, this analysis uses the more conservative threshold of 0.25 in/sec PPV threshold (for cosmetic damage to sensitive historic structures) to minimize potential damage to these on-site historic structures.

Construction activities generating groundborne vibrations could be located as close as 30 feet from residences to the southwest, 50 feet from residences to the southeast, and 70 feet from residences to the north. Construction activities would also occur adjacent to on-site historic structures.

Table 13-15 presents construction vibration levels at a reference distance of 25 feet from the vibration source, and at various distances from the construction equipment that are representative of nearby residences and historic structures. Vibration levels would vary depending on soil conditions, construction methods and equipment used. Vibration levels are highest close to the source, and attenuate with increasing distance at a rate expressed as: $(D_{ref}/D)*1.1$, where D is the distance from the source in feet, and Dref is the reference distance of 25 feet.

Table 13-15: Vibration Levels for Construction Equipment at Various Distances

Equipment		PPV at 10 ft. (in/sec)	PPV at 25 ft. (in/sec)	PPV at 50 ft. (in/sec)	PPV at 70 ft. (in/sec)
Clam shovel drop		0.553	0.202	0.094	0.065
Hydro-Mill (slurry wall)	0.022	0.008	0.004	0.003	0.003
	0.047	0.017	0.008	0.006	0.006
Vibratory Roller		0.575	0.210	0.098	0.068
Hoe Ram		0.244	0.089	0.042	0.029
Large bulldozer		0.244	0.089	0.042	0.029
Caisson drilling		0.244	0.089	0.042	0.029
Loaded trucks		0.208	0.076	0.035	0.024
Jackhammer		0.096	0.035	0.016	0.011
Small bulldozer		0.008	0.003	0.001	0.001

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006, modified by Illingworth & Rodkin, Inc., June 2020.

Heavy construction located within 25 feet of any structure would have the potential to exceed the historic structure vibration threshold of 0.25 in/sec PPV, and heavy construction located within 18 feet of any structure would have the potential to exceed the normal/conventional construction threshold of 0.3 in/sec PPV. There are no off-site structures located within these threshold distances. Vibration levels would be lower as construction is further away from nearby structures, or when lower-vibration construction equipment and methods are used. Vibration generated by construction activities would, at times, be

perceptible inside nearby structures, but is not be expected to result in any architectural damage to surrounding buildings. The effects of construction-related groundborne vibrations to off-site buildings would be less than significant.

On-site historic structures could be exposed to vibration levels exceeding the 0.25 in/sec PPV vibration threshold when construction is located within 25 feet. This would apply to on-site historic Buildings 0, 1, and 2.

Based on the construction feasibility evaluation conducted for the pedestrian undercrossing (McMillen Jacobs, 2019), construction using a jacked box method is not anticipated to produce vibration levels that would adversely impact nearby residences or on-Campus structures. The jacking processes would involve slow advancement of the tunnel using hydraulic equipment. Excavation of the ground in front of the advancing box will be by hydraulic excavator-type equipment. Vibrations from this equipment would be similar to those generated from typical roadway construction.

Mitigation Measures

Mitigation Measure Noise-5, Vibration Reduction near Historic Structures. Although impacts to on-site properties would not normally be considered an impact under CEQA, the following practices are recommended to minimize damage to on-site historic structures.

a) Avoid the use of vibratory rollers and other heavy construction equipment within 20 feet of on-site Buildings 0, 1, and 2.

b) Use smaller equipment to minimize vibration levels below the limits.

c) Select demolition methods not involving impact tools.

d) Avoid dropping heavy objects or materials near on-site Buildings 0, 1, and 2.

Resulting Level of Significance

With implementation of the practices identified in Mitigation Measure Noise-5, construction-related vibration levels near on-site historic structures would be less than the historic structure threshold of 0.25 in/sec., and would minimize potential damage to on-site historic structures to a less than significant level.

Cumulative Noise Effects

The geographic context for the analysis of cumulative noise impacts is generally the range within which Project-generated noise can contribute to other existing or expected future noise sources. Other than traffic noise on Lincoln Avenue and the existing North Campus north of Lincoln Avenue, there are no other significant noise-generating activities in the surrounding site context. Noise generated by the Mormon Temple and the Greek Orthodox Church near Highway 13 are too distant and do not typically generate noise at levels that would combine with noise from the Project site. All uses in the vicinity are required to comply with the applicable City Noise Ordinance standards, which provide limits on noise levels that are considered acceptable on an individual and cumulative basis.

The analysis of Project noise impacts (above) considers the effects of each individual new noise source, finding such impacts to be either less than significant or able to be reduced to less than significant levels with implementation of mitigation measures. However, some school events could potentially take place simultaneously during school hours. This includes daily use of outdoor classrooms, daily use of the outdoor Commons and recess activities, operation of the dust collector (which would be indoors and not audible off-site), and gatherings on the deck at Building (which are proposed once per month). Potential cumulative noise levels generated during the simultaneous occurrence of all of these daily school hour activities and

events are summarized in **Table 13-16**, along with the applicable Oakland noise standards, which were adjusted down by 5 dBA to account for the speech content of the activities.

Table 13-16: Calculated Noise Parameters with all Daily School Hour Events and Activities Occurring Simultaneously

Location	Worst Hour Noise Levels, dBA				
	L_{33}	L_{17}	L_8	L_2	L_{max}
R1: Residence on Lincoln Avenue	43	45	48	52	61
R2: Residence on Alida Court	45	47	50	54	63
R3: Residence on Alida Court	37	39	42	46	55
R4: Residence on Linnet Avenue	39	40	43	48	54
R5: Residence on Linnet Avenue	45	46	49	54	60
R6: Residence on Laguna Avenue	44	45	48	53	59
R7: Residence on Laguna Avenue	48	49	52	57	63
R8: Residence on Laguna Avenue	52	53	56	61	67
R9: Residence on Laguna Avenue	49	50	53	58	64
R10: Residence on Charleston Street	48	49	52	57	63
R11: Residence on Charleston Street	43	44	47	52	58
R12: Residence on Charleston Street	43	44	47	52	58
R13: Residence on Charleston Street	42	43	46	51	57
Adjusted Daytime Residential Standards:	*55*	*60*	*65*	*70*	*75*

Source: Illingworth & Rodkin, Inc., July 2020

A comparison of the results of all daily school-hour events and activities occurring simultaneously (as presented in Table 13-15) indicates that the cumulative noise generated by simultaneous school-hour activities is no greater than the loudest noise levels generated by each of these activities individually, at each receptor location. As indicated in Table 13-15, no cumulative noise exceedances are anticipated to occur as a result of these cumulative school hour activities. Cumulative daily noise levels would be below the adjusted daytime thresholds of 55 dBA as established by the City of Oakland, and this would be a less than significant cumulative effect.

Under City of Oakland CEQA thresholds, a project's contribution to a cumulative increase in ambient noise is considered significant if there is an expected cumulative permanent increase of 5 dBA in ambient noise levels in the project vicinity (including the project), and 3 dBA of that permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project). A 3 dBA change is considered a just-perceivable difference, and is therefore used to determine if Project-related increases in noise are cumulative considerable. Project-related noise includes both Project-generated vehicle trips and Project operational noise.

As indicated in the analysis of the Project's contribution to traffic noise (Impact Noise-4, above), Project-related traffic volumes (assuming a conservative worst-case scenario whereby all peak hour trips generated by the Project travel the entire Lincoln Avenue corridor from east of Mountain Boulevard to west of Potomac

Street) are calculated to contribute a 1 dBA increase in traffic noise along Lincoln Avenue. Therefore, the Project would contribute less than a 3 dBA increase in traffic noise under any cumulative scenario, and Project-generated traffic would not result in a cumulatively significant increase in traffic noise along the Lincoln Avenue corridor.

During the peak student arrival period in the morning, cumulative noise sources attributed to the Project include increased traffic on Lincoln Avenue, on-site traffic on the Loop Road, and noise associated with parking activities. Noise Receptor R-1 (the residence on Lincoln Avenue closest to the lower Loop Road exit) will be exposed to the maximum noise levels from each of these sources during the "worst-case" morning peak hour period. Based on the information presented above, this residence will be exposed to noise levels of approximately 55 dBA from additional Project-generated traffic on Lincoln Avenue, 52 dBA from traffic noise along the Loop Road, and approximately 40 dBA from nearby parking lot noise. These noise sources combine to generate a cumulative noise level of approximately 57 DBA at this residence – less than the conservatively applied 20-minute threshold of 60 dBA. These noise sources, when combined with the existing approximately 61 dBA of traffic noise along Lincoln Avenue, result in a total noise level of approximately 62.4 dBA (or an increase of approximately 1.4 dBA), which is less than the 3 dBA increase threshold for cumulative noise levels.

Furthermore, the Project proposes to construct a 6-foot high wall along the property line separating the Loop Road from the adjacent residences. Assuming the 6-foot height of the wall is relative to the ground elevation of the Loop Road, the wall would be anticipated to provide 5 to 6 dBA of additional noise reduction to the adjacent shielded residence.

The Project would not generate noise at levels that would contribute to a cumulatively significant increase in ambient noise levels without the Project.

Non-CEQA Noise Consideration

Site constraints such as exposure to excessive levels of existing noise and vibration are not considered a potential impact of the Project under CEQA. Therefore, this section of the Noise chapter of this EIR addresses noise and land use compatibility of the Project for consistency with the policies set forth in the Oakland General Plan, but not as a CEQA topic.

Noise and Land Use Compatibility

The applicable General Plan policies presented in detail in the Regulatory section of this chapter, but can be summarized as:

- The Oakland General Plan specifies a 'normally acceptable' exterior noise level of 60 dBA Ldn for school land uses.

Future exterior noise levels at the Project site would continue to result primarily from local and distant traffic and on-site activities. As described in the Existing Setting, the noise environment at the Project site ranges from 51 to 53 dBA Ldn in areas adjacent to Lincoln Avenue, with lower environmental noise levels in areas that are further back and/or shielded from the roadway. Noise levels are not anticipated to exceed 60 dBA Ldn at any proposed exterior use areas and would be considered 'normally acceptable' throughout the site. An acceptable exterior noise environment would yield acceptable interior noise levels assuming standard construction methods.

14

Transportation

This chapter evaluates the potential impacts of the Project related to transportation and circulation. This chapter describes existing transportation routes and systems in the Project Area and evaluates the extent to which development of the Project may cause substantial transportation-related impacts. The analysis was conducted in compliance with City of Oakland Transportation Impact Review Guidelines dated April 2017, as effective at the time of the Notice of Preparation (NOP) of this EIR.

In recent months, travel behavior has changed at a global level due to the COVID-19 pandemic. In the City of Oakland and the surrounding areas, travel patterns (both amount and mode of trips) have changed significantly since the "shelter-in-place" order was issued on March 17, 2020. Unless otherwise noted, the existing conditions presented in this section, such as transit schedules and vehicle miles traveled (VMT) data, are based on data collection or observations prior to the start of the pandemic. The impact analysis presented in this section is generally based on the assumption that long-term travel behavior characteristics would be similar to conditions prior to the start of the pandemic, because, at present, the medium- or long-term effects of the COVID-19 pandemic on travel behavior are uncertain and it would be speculative to estimate any potential long-term or permanent changes.

Environmental Setting

The existing transportation-related context in which the proposed Project would be implemented is described below, beginning with a description of the study area and street network serving the Project site. Existing transit, bicycle, and pedestrian facilities are also described. This subsection also discusses planned transportation changes near the site.

Existing Roadway Network

Existing regional freeway access to the Project site is provided via Interstate 580 (I-580) and State Route 13 (SR 13). Lincoln Avenue provides direct vehicular access to the site. Roadways serving the Project's study area are described below. The reported annual average daily traffic volumes (AADT) were obtained from Caltrans' Traffic Volumes on the State Highway System (2018).

I-580 is an eight-lane east-west freeway in the vicinity of the Project. It extends between US 101 in Marin County, and I-5 south of Tracy. Access between I-580 and the Project site is provided through interchanges at Coolidge and Fruitvale Avenues. Trucks are prohibited on I-580 between Grand Avenue and the City of Oakland city limit with San Leandro. The AADT on I-580 between the Coolidge Avenue and Fruitvale Avenue Interchanges is about 162,100 vehicles per day.

SR 13 is a four-lane north-south freeway in the vicinity of the Project. It extends between the City of Berkeley in the north, and I-580 in the south. Access between SR 13 and the Project site is provided through an interchange at Lincoln Avenue. The AADT on SR 13 just north of Lincoln Avenue Interchange is about 63,000 vehicles per day.

Lincoln Avenue is a two-lane street adjacent to the Project. It extends between SR 13 in the east and Champion Street in the west. East of SR 13, Lincoln Avenue continues as Joaquin Miller Road through the Oakland Hills.

Whittle Avenue is a residential street that extends from Fruitvale Avenue/Lyman Road in the southwest, is generally parallel with Lincoln Avenue, and ends in a cul-de-sac just north of the School. Whittle Avenue is partially behind the School's existing Campus and provides parking and service vehicle access to Head Royce School through Funston Place.

Monterey Boulevard is a frontage road along the west side of SR 13, and between Park Boulevard to the north and just south of Redwood Road in the south. In the vicinity of the School, Monterey Boulevard is a two-lane street.

Alida Street is a residential street west of the School and extends from Lincoln Avenue southeast through the neighborhood for about six blocks; then it turns southwestward and becomes Barner Avenue.

Laguna Avenue is a residential street south of the School and generally parallel to Lincoln Avenue that extends between and Montana Street in the west and Charleston Street in the east.

Potomac Street is a residential street west of the School and Alida Street that extends between Lincoln and Laguna Avenues.

Maiden Lane is a residential street east of the School and west of SR 13 that extends between Lincoln Avenue in the northwest and Monterey Boulevard in the southeast.

Existing Transit Services

Transit service providers in the vicinity of the proposed Project include Bay Area Rapid Transit (BART) and the Alameda-Contra Costa Transit (AC Transit).

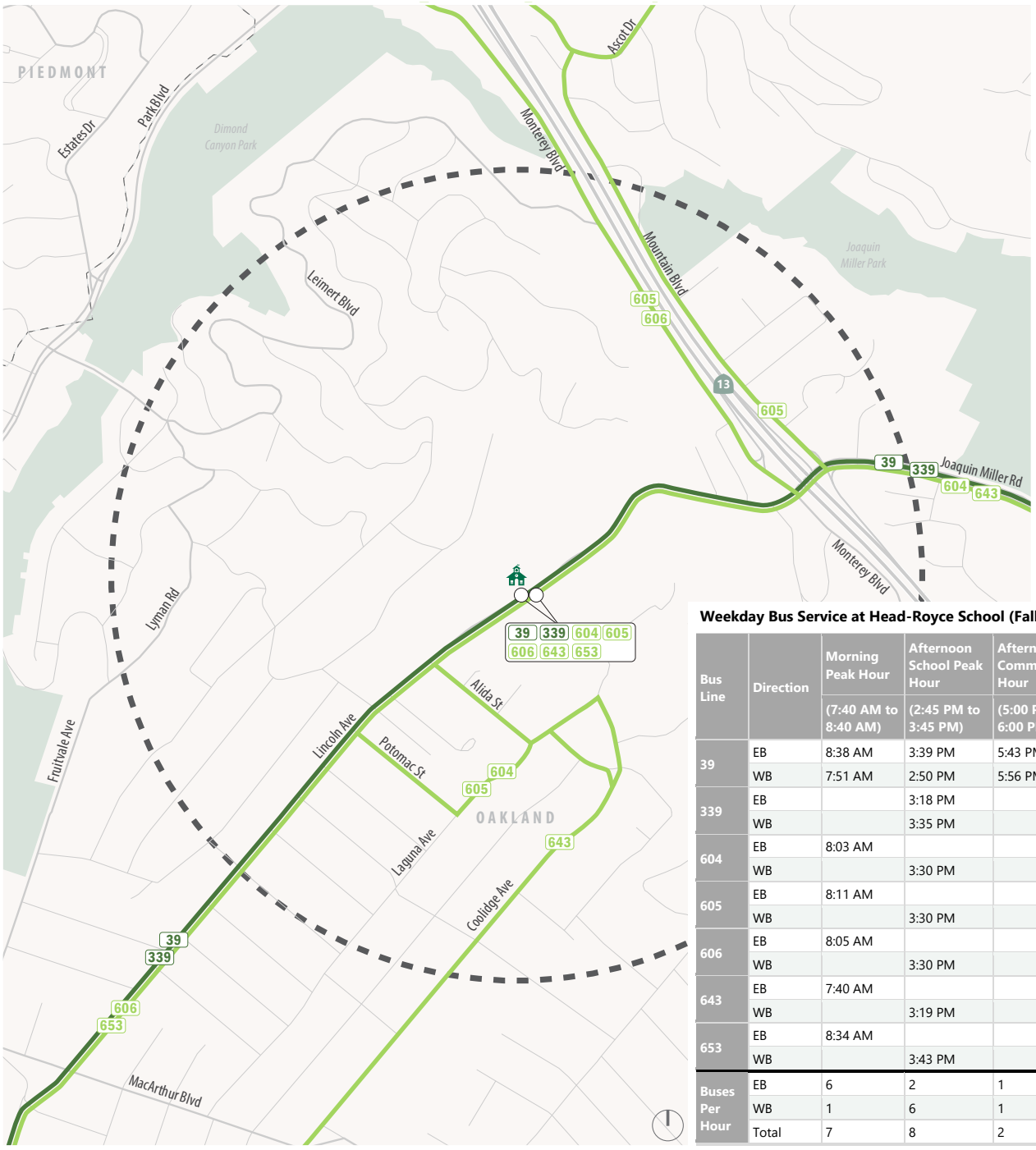
BART

BART provides regional rail service throughout the East Bay and across the Bay in San Francisco and northern San Mateo County. The average system-wide weekday ridership in 2019 was about 411,000. The BART station most likely to serve the Project site is the Fruitvale Station, about three miles southwest of the Project site. This station is served by the Dublin/Pleasanton-Daly City, Richmond- Berryessa/North San Jose, and Berryessa/North San Jose-Daly City lines.

AC Transit

AC Transit is the primary bus service provider in the City of Oakland and surrounding communities. It provides local service as well as Transbay service to destinations in San Francisco, San Mateo and Santa Clara Counties. AC Transit reports serving about 175,000 riders on a typical weekday in fiscal year 2018-2019.

AC Transit Line 39/339, as well as five other AC Transit bus lines dedicated for public school routes, operate along Lincoln Avenue, with bus stops adjacent to the Project site (see **Figure 14-1)**. Although the dedicated school routes have stops on Lincoln Avenue adjacent to the Head-Royce School, they typically do not serve the Head-Royce School population. These lines primarily provide bus service for the students who live in the area and attend nearby public schools. Although these AC Transit bus lines do provide for transit serves at high frequencies during school-related peak hours, which coincide with typical AM peak hours, they do not provide frequent bus service during the typical PM peak hours.



Weekday Bus Service at Head-Royce School (Fall 2019)

Bus Line	Direction	Morning Peak Hour (7:40 AM to 8:40 AM)	Afternoon School Peak Hour (2:45 PM to 3:45 PM)	Afternoon Commute Peak Hour (5:00 PM to 6:00 PM)
39	EB	8:38 AM	3:39 PM	5:43 PM
	WB	7:51 AM	2:50 PM	5:56 PM
339	EB		3:18 PM	
	WB		3:35 PM	
604	EB	8:03 AM		
	WB		3:30 PM	
605	EB	8:11 AM		
	WB		3:30 PM	
606	EB	8:05 AM		
	WB		3:30 PM	
643	EB	7:40 AM		
	WB		3:19 PM	
653	EB	8:34 AM		
	WB		3:43 PM	
Buses Per Hour	EB	6	2	1
	WB	1	6	1
	Total	7	8	2

Note: *Transit service as of Fall 2019.*

Head-Royce School

1/2-Mile Buffer

Regular Local AC Transit Bus Service

School Only AC Transit Bus Service

Figure 14-1
Transit Service Within 1/2 Mile of Head-Royce School

Source: Fehr & Peers, from AC Transit, August 2021

The bus stops at the Project site are on Lincoln Avenue adjacent to the School. The bus stop on westbound Lincoln Avenue is just east of the current Head-Royce School main entrance and the signalized midblock crossing, and the bus stop on eastbound Lincoln Avenue is about 170 feet east of the signalized midblock crossing. Both bus stops are served by the bus lines shown on Figure 14-1. The two bus stops on Lincoln Avenue serving the Project site do not provide any amenities.

Existing Bicycle Network

The City of Oakland 2019 Bike Plan (Let's Bike Oakland) identifies the following bicycle facility types.

- ***Class 1 Paths*** are located off-street and can serve both bicyclists and pedestrians. Recreational trails can be considered Class 1 facilities. Class 1 paths are typically eight to ten feet wide excluding shoulders and are generally paved.
- ***Class 2 Bicycle Lanes*** provide a dedicated area for bicyclists within the paved street width using striping and appropriate signage. These facilities are typically five to six feet wide.
- ***Class 2B Buffered Bicycle*** Lanes provide a dedicated area for bicyclists within the paved street, separated from the motor vehicle travel lanes by a painted buffer.
- ***Class 3 Bicycle Routes*** are located along streets that do not provide enough width for dedicated bicycle lanes. The street is then designated as a bicycle route, using signage that informs drivers to expect bicyclists.
- ***Class 3A Arterial Bicycle Routes*** are located along some arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. Speed limits as low as 25 miles per hour (mph), and shared-lane bicycle stencils, wide curb lanes, and signage are used to encourage shared use.
- ***Class 3B Neighborhood Bike Routes*** are located along residential streets with low traffic volumes. Assignment of right-of-way to the route, traffic calming measures and bicycle traffic signal actuation are used to prioritize through-trips for bicycles.
- ***Class 4 Protected Bicycle Lanes***, also known as cycle tracks, these facilities provide space that is exclusively for bicyclists and separated from motor vehicle travel lanes, parking lanes, and sidewalks. Parked cars, curbs, bollards, or planter boxes provide physical separation between bicyclists and moving cars. Where on-street parking is allowed, it is placed between the bikeway and the travel lanes (rather than between the bikeway and the sidewalk, as is typical for Class 2 bicycle lanes).

There are no existing bicycle facilities adjacent to the Project site. The nearest existing bicycle facilities are Class 3 Bicycle Routes along Monterey Boulevard, about 0.3 miles east of the Project site.

Existing Pedestrian Network

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Most streets in the vicinity of the Project site, including Lincoln Avenue, provide sidewalks along both sides of the street. The sidewalks on both sides of Lincoln Avenue along the School frontage provide concrete bollards at the edge of the sidewalk.

Two signals along the School frontage on Lincoln Avenue, at the Lot F Driveway on the east edge of the School campus, and about 850 feet to the west at the main School entrance/gatehouse provide for protected pedestrian crossing of Lincoln Avenue. The signal on Lincoln Avenue at the Lot F Driveway provides pedestrian signal heads, a ladder striped crosswalk, and curb-ramps without truncated domes at both sides of the crosswalk. The signal on Lincoln Avenue at the main School driveway is a midblock signal that primarily serves pedestrian crossings, and provides a striped crosswalk with curb ramps and truncated domes on both sides of the street.

Existing School Operations

Various aspects of the existing school operations related to transportation are described below.

Access and Circulation

Currently, the street frontage along Lincoln Avenue is used for morning drop offs and afternoon pick-ups. Morning drop offs are allowed on both sides of the street; however, afternoon pick-ups by private vehicles are only allowed on the north side of the street. Passenger loading for private buses occur at a designated space on the north side of Lincoln Avenue adjacent to the main gate. AC Transit bus stops are provided on both sides of the street. A midblock signal on Lincoln Avenue adjacent to the main gate allows for protected pedestrian crossing of the street.

Parents wishing to turn around on Lincoln Avenue before or after dropping off or picking-up their students are directed to use the "Loops" east and west of the School. Drivers on westbound Lincoln Avenue (downhill) who wish to return to eastbound Lincoln Avenue towards SR 13 are directed to turn left on Alida Street, then right on Laguna Street, right on Potomac Street and then right on Lincoln Avenue to head eastbound (uphill). Drivers on eastbound Lincoln Avenue (uphill) who wish to return to westbound Lincoln Avenue towards I-580 are directed to turn right on Maiden Lane, then left on Monterey Boulevard before turning left on westbound (downhill) Lincoln Avenue.

Primary pedestrian and cyclist access for the school is through the main gate on Lincoln Avenue. The Whittle Avenue gate on the north side of the existing Campus can also be accessed by pedestrians and cyclists by request.

Parking

Pursuant to the 2016 PUD Conditions of Approval (Condition of Approval #20, Parking Requirement and Shared Parking), the School is required to provide a minimum of 157 off-street parking spaces at the maximum enrollment of 906 students, and in all cases shall, at a minimum, maintain sufficient off-street parking to meet Oakland Planning Code section 17.116.070(C).[1] These spaces may be provided either at 4315 Lincoln (the existing Campus) or 4368 Lincoln Avenue (the former Lincoln site), provided that the spaces used at the former Lincoln site are not already allocated to Lincoln's permit governing uses at that site. Head-Royce School may use surplus parking at the former Lincoln site (4368 Lincoln Avenue), the Greek Orthodox Church, Cerebral Palsy Center, Mormon Temple or other off-site locations for additional parking, provided that use of these facilities for parking is not in fulfillment of the School's obligation to provide 157 off-street parking spaces at maximum enrollment, and are not required or needed for the uses governing those sites.

A total of 283 off-street parking spaces exist between the current Campus and the former Lincoln site in the following facilities:

- Lot E is in the existing Campus and accessed through Whittle Avenue, which is a residential street on the north side of the existing Campus. It provides 20 of the School's required parking spaces, which are assigned to faculty/staff.

[1] Pursuant to OMC 17.116.070(C), the minimum number of parking spaces for a Community Education/high school is to be prescribed by the Director of City Planning pursuant to Section 17.116.040. In the case of activities for which the Director of City Planning is required to prescribe a number of parking spaces or loading berths, he or she shall base his or her determination on the traffic generation of the activities, the amount and frequency of loading operations thereof, the time of operation of the activities, their location, and such other factors as affect the need for off-street parking or loading. At his or her discretion, the Director of City Planning may require the applicant to provide an analysis of parking demand and capacity from an independent professional. Any such determination shall be subject to appeal pursuant to the administrative appeal procedure in Chapter 17.132.

- Lot F is in the existing Campus and accessed through a signalized intersection on Lincoln Avenue on the east side of the School. It provides 134 of the School's required parking spaces, which are assigned to faculty/staff and also used by students and visitors.
- Lots A through C are in the former Lincoln site and accessed through a stop-controlled driveway on Lincoln Avenue north of the main gate. The three lots combined provide 67 surplus spaces, which are mostly assigned to faculty/staff, with limited spaces available for visitors.
- Lot D is in the former Lincoln site and accessed through a stop-controlled driveway on Lincoln Avenue south of the main gate. It provides 62 surplus spaces which are designated for faculty/staff.

Transportation Demand Management (TDM)

Head-Royce School is required to maintain a Transportation Demand Management (TDM) plan to (1) ensure effective and efficient drop off/pick-up processes, (2) implement parking management strategies to minimize parking on the adjacent residential streets, and (3) reduce single-student and single parent/student driving trips.

The TDM Plan strategies that reduce driving trips include:

- Five dedicated school buses operated by a private contractor serving the following areas:
    - "Local" Oakland areas including Montclair, Upper Rockridge, Piedmont Pines, Diamond Canyon Park District, and Redwood Heights
    - City of Alameda and the Glenview District
    - Contra Costa County
    - North Berkeley and El Cerrito
    - Southern Alameda County
- Discounted AC Transit 31-Day Youth bus passes that allow unlimited rides on local AC Transit buses, including the school routes serving Head-Royce School.
- Carpool ride-matching services for parents, students, and faculty/staff
- Preferential parking spaces available to students and faculty/staff who drive a carpool of three or more

The 2016 Conditions of Approval for Head-Royce School requires the TDM Plan to achieve a 30 percent non-single occupant vehicle (SOV) mode share for students.

Geographic Distribution of the School Population

Based on current home ZIP code data for students and faculty/staff provided by the Head-Royce School, **Figure 14-1** shows the geographic distribution of students and faculty/staff homes by ZIP code. The ZIP codes nearest to Head-Royce School have the highest percentage of students and faculty/staff. About 50 percent of students and faculty/staff live within 10 miles of the Head-Royce School, while over 80 percent live within 20 miles, and all live within 30 miles.

Existing Mode Share

The current travel mode shares for Head-Royce School students and faculty/staff were estimated based on data provided by Head-Royce School, recorded observations by the School traffic monitor in November 2018, data collected by Fehr & Peers along the School frontage in November 2019, and Alameda-Contra Costa Transit (AC Transit) stop-level ridership in Spring 2019. **Table 14-1** summarizes the mode share for students, faculty/staff, and the overall population of the School.

Table 14-1: Student and Faculty/Staff Travel Mode Shares

	Students		Faculty/Staff		Combined	
Mode	**Percent**	**Persons**	**Percent**	**Persons**	**Percent**	**Persons**
Drop off/Pick-up (Carpool)[1]	21%	190	0%	-	18%	190
Drop off/Pick-up (SOV)[1]	20%	179	0%	-	17%	179
On-site Parking (Carpool)[2]	5%	44	20%	32	7%	76
On-site Parking (SOV)[3]	8%	68	72%	114	17%	182
Private Bus[4]	34%	308	1%	1	29%	309
Public Bus[5]	9%	80	1%	1	8%	81
Bike[1]	1%	6	3%	4	1%	10
Walk[1]	2%	19	4%	6	2%	25
Total	**100%**	**894**	**100%**	**158**	**100%**	**1,052**

Notes:

SOV = Single Occupant Vehicle (includes drop off/pick-up trips with a single-student)

1. Based on the Head-Royce School traffic monitor observations in November 2018 and confirmed by count data collected in November 2019
2. Based on the number of students and faculty/staff carpool parking permits provided by Head-Royce School
3. Based on data provided by Head-Royce School and the available parking supply
4. Based on data provided by Head-Royce School in November 2018
5. Based on the Head-Royce School traffic monitor observations and confirmed by AC Transit stop-level ridership data

Source: Fehr & Peers 2020.

Currently, about 42 percent of students use either a private or public bus, about 41 percent are dropped off and picked-up, about 13 percent drive and park on-site, and about three percent walk or bike. About 93 percent of the faculty/staff drive and park in either single-occupant or carpool vehicles, with the rest using buses, walking or biking to and from the School. Overall, about 28 percent of the student population and about 35 percent of the total population relies on single-occupant vehicles (including single student with parent), and about 72 percent of the students and 65 percent of the total population uses non-single occupant vehicles, substantially exceeding the 30 percent non-SOV mode share goal for students established in the Head-Royce School TDM Plan.

Vehicle Miles Traveled (VMT)

Vehicle miles traveled (VMT) refers to the amount and distance of automobile travel attributable to a project. In 2013, Governor Brown signed Senate Bill (SB) 743, which added Public Resources Code Section 21099 to CEQA, to change the way that transportation impacts are analyzed under CEQA to better align local environmental review with statewide objectives to reduce greenhouse gas (GHG) emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce VMT in California.

In 2016, Oakland adopted VMT thresholds to implement the directive from SB 743 (discussed in more detail below in the regulatory framework section. SB 743 recommends VMT as an appropriate measure for assessing the transportation impact of a project on the environment. SB 743 states that VMT is a more appropriate measure than automobile delay, and that automobile delay as measured by intersection level of service (LOS) is not an impact on the environment. Automobile delay is a measure of travel speed. Increased

travel speed increases safety hazards and encourages automobile use, which increases GHG emissions and air quality impacts. SB 743 specifically targets automobile LOS as an inappropriate measure of environmental impact and encourages the use of VMT as an appropriate replacement measure. Consistent with SB 743, the latest CEQA Guidelines from the State Office of Planning and Research (OPR) published in December 2018 require the use of VMT and prohibit the use of LOS or other congestion-based metrics in CEQA documents after July 2020.

Increased VMT leads to several direct and indirect impacts to the environment and human health. Among other effects, increasing VMT on the roadway network leads to increased emissions of air pollutants, including GHGs, as well as increased consumption of energy. Transportation is associated with more GHG emissions than any other sector in California. As documented in the City of Oakland Equitable Climate Action Plan (July 2020), 67 percent of Oakland's local GHG emissions are produced by transportation. Thus, reducing VMT per capita is the most effective means of reducing GHG emissions per capita.

VMT Estimation for Existing Head-Royce School

Typically, a travel demand model, such as the Alameda County Transportation Commission (CTC) Travel Demand Model, is used to estimate VMT for development projects. Due to its unique use and characteristics, the Alameda CTC Model cannot be used to estimate VMT for the Head-Royce School. Thus, the existing VMT for the Head-Royce School is estimated based on the current mode share and home ZIP code data described earlier.

Table 14-2 summarizes the VMT calculation under Existing conditions. The table starts by estimating the person trips by travel mode and distance from the School, converts the person trips to Person Miles Traveled (PMT) and then VMT, as described below.

Travel mode allocations were based on the availability of travel modes for each ZIP code. For example, all the walk and bike trips were allocated to the ZIP codes within five miles of the Head-Royce School. The bus trips were allocated based on the overlap between the private and public bus service areas and the home ZIP code locations, with most bus trips allocated to ZIP codes within 10 miles of the Head-Royce School. All ZIP codes outside of a reasonable walk or bike distance and with no bus stops were allocated to either drop off/pick-up or on-site parking trips based on their respective mode shares.

Table 14-2: Existing VMT Estimation

Mode	Home Distance from Head-Royce School				Total
	Less than 5-Mile	5 to 10-Mile	10 to 20-Mile	More than 20-Mile	
Person Trips					
Drop off/Pick-up	63	131	400	147	741
On-site Parking	45	94	287	105	531
Private Bus	240	270	90	-	600
Public Bus	128	30	-	-	158
Bike	20	-	-	-	20
Walk	50	-	-	-	50
Total	**546**	**525**	**777**	**252**	**2,100**
Person Miles Traveled					
Drop off/Pick-up	310	1,250	7,500	4,440	13,500
On-site Parking	230	890	5,370	3,180	9,670
Private Bus	1,200	2,580	1,690	-	5,470
Public Bus	640	290	-	-	930
Bike	100	-	-	-	100
Walk	250	-	-	-	250
Total	**2,730**	**5,010**	**14,560**	**7,620**	**29,920**
Vehicle Mile Traveled					
Drop off/Pick-up	460	1,860	11,140	6,590	20,050
On-Site Parking	200	760	4,580	2,710	8,250
Total VMT	660	2,620	15,720	9,300	**28,300**
Total Population					1,052
VMT per Population					**26.9**

Source: Fehr & Peers, 2020.

Person trips were converted to person-miles-traveled (PMT) using network distances estimated in Geographic Information System (GIS) software based on the shortest path along the roadway between the home ZIP codes and the Head-Royce School site.

PMT was converted to VMT using an average vehicle occupancy of 1.3 for all vehicle trips, which assumes that all carpool trips have two students or faculty/staff in the vehicle, which is consistent with the observations at the site. Drop off/pick-up trips were assumed to have twice the VMT as on-site parking trips since this analysis assumes that these vehicles would return home after drop off in the morning and would travel from home to school for pick-ups in the afternoons and evenings.

As shown in Table 14-3, the total daily VMT under existing conditions is estimated to be about 28,300, which corresponds to about 26.9 VMT per person.

Planned Transportation Network Changes

The City of Oakland 2019 Bike Plan proposes the following improvements to the bicycle facilities in the Project vicinity:

- Class 2 Bike Lane along Joaquin Miller Road between Monterey Boulevard and Mountain Boulevard
- Class 4 Protected Bicycle Lanes along Joaquin Miller Road east of SR 13
- Class 3B Neighborhood Bike Route along Tiffin Road north of Lincoln Avenue and Potomac Street south of Lincoln Avenue that would ultimately connect Park Boulevard in the north to Mills College in the south
- Class 3B Neighborhood Bike Route along Lyman Road west of Tiffen Road, which would continue on Fruitvale Avenue and connect to the planned Class 2 bicycle lanes on Fruitvale Avenue west of I-580

These projects are not assumed in the EIR analysis because they are not funded.

No other transportation network changes are planned in the vicinity of the Project. Therefore, no changes are assumed in the analysis of future conditions in this EIR.

Regulatory Framework

The existing plans, policies, and regulations that relate and apply to the Project are described below.

State Regulations

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law, building on legislative changes from SB 375, AB 32, and AB 1358. SB 743 began the process to modify how impacts to the transportation system are assessed for purposes of CEQA compliance. These changes include the elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. SB 743 includes amendments that revise the definition of "infill opportunity zones" to allow cities and counties to opt out of traditional LOS standards established by congestion management programs (CMPs) and require OPR to update the CEQA Guidelines and establish criteria for determining the significance of transportation impacts of projects within transit priority areas.

As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses." The final guidelines were finalized in December 2018 and took effect statewide in July 2020.

Oakland Plans and Policies

The Oakland General Plan comprises numerous elements, and those containing policies relevant to transportation resources primarily are in the Land Use and Transportation Element (LUTE). The goals and policies contained in the various General Plan Elements are often competing. In reviewing a project for conformity with the General Plan, the City is required to 'balance' the competing goals and policies. This project is reviewed for compliance with the following local plans and policies:

- General Plan LUTE
- City of Oakland 2017 Pedestrian Master Plan, *Oakland Walks!* (incorporated into the City's General Plan)
- City of Oakland 2019 Bike Plan, *Let's Bike Oakland!*

- City of Oakland 2020 Equitable Climate Action Plan
- City of Oakland Public Transit and Alternative Modes Policy
- City of Oakland Complete Streets Policy
- City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards
- September 21, 2016, City of Oakland Planning Commission, update to Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines aligning with Senate Bill 743, the *Transportation Impact Review Guidelines*

Oakland General Plan

The General Plan is a comprehensive plan for the growth and development of the City. The General Plan includes policies related to land use and circulation; housing; recreation; conservation and open space; noise; environmental hazards; and historic resources. These topics are addressed within individual elements of the General Plan: Land Use and Transportation; Pedestrian Master Plan; Bicycle Master Plan; Housing; Historic Preservation; Open Space; Conservation; Recreation; Noise; and Safety. Each is addressed separately below.

The General Plan states the following regarding a project's consistency with the General Plan in the context of CEQA:

> *The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Quality Act (CEQA).*

Land Use and Transportation Element

The City of Oakland, through various policy documents, states a strong preference for encouraging use of pedestrian, bicycle, and transit travel modes. The following policies are included in the LUTE:

> *LUTE Policy Framework, Encouraging Alternative Means of Transportation: "A key challenge for Oakland is to encourage commuters to carpool or use alternative modes of transportation, including bicycling or walking. The Policy Framework proposes that congestion be lessened by promoting alternative means of transportation, such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. The City will continue to work closely with local and regional transit providers to increase accessibility to transit and improve intermodal transportation connections and facilities. Additionally, policies support the introduction of light rail and trolley buses along appropriate arterials in heavily traveled corridors, and expanded use of ferries in the bay and estuary."*

- *Policy T3.5, Including Bikeways and Pedestrian Walks*: The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- *Policy T3.6, Encouraging Transit*: The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated "transit streets" as shown on the Transportation Plan. (Policies T3.6 and T3.7 are based on the City Council's passage of "Transit First" policy in October 1996.)
- *Policy T3.7, Resolving Transportation Conflicts* - The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles, giving due consideration to the environmental, public safety, economic development, health and social equity impacts.

- *Policy T4.1, Incorporating Design Features for Alternative Travel* - The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

Pedestrian Master Plan

Oakland's Pedestrian Master Plan, *Oakland Walks!* was adopted in 2017 and identifies policies and implementation measures that promote a walkable City. The plan's vision is built around four pillars:

- Holistic Community Safety – Make Oakland's pedestrian environment safe and welcoming.
- Equity – Recognizing a historical pattern of disinvestment, focus investment and resources to create equitable, accessible walking conditions to meet the needs of Oakland's diverse communities.
- Responsiveness – Develop and provide tools to ensure that Oakland creates and maintains a vibrant pedestrian environment.
- Vitality – Ensure that Oakland's pedestrian environment is welcoming, well connected, supports the local economy, and sustains healthy communities.

Within these four pillars, *Oakland Walks!* strives for five outcomes and within each are several actions.

- *Outcome 1 Increase Pedestrian Safety* – There are ten actions within this outcome. The City will install pedestrian safety improvements in high injury corridors, develop new policies, adopt Vision Zero, upgrade signals and other infrastructure, work to reduce vehicle speeds, improve lighting, and explore ways to equitably enforce traffic laws.
- *Outcome 2 Create Streets and Places that Promote Walking* – There are nine actions within this outcome. The City will integrate safety into the design of new streets, incorporate art into pedestrian infrastructure, plant more street trees, repair sidewalks, install accessible curb ramps and other features to improve the pedestrian environment for vulnerable populations, and provide public open space in underutilized roadways. The City will also pursue citywide programs and partnerships with nonprofits and community groups to promote walking.
- *Outcome 3 Improve Walkability to Key Destinations* – There are six actions within this outcome. The City will develop a prioritization strategy to best focus the benefits of the Safe Routes to School program, establish a similar program focused on first and last mile access to transit, support wayfinding efforts that can be used by vulnerable populations, and identify strategies for improving the walking environment in and near Caltrans-owned rights-of-way, such as underneath freeway overpasses, on and off ramps, and streets where the surface grade is un-even due to railroad tracks. Additionally, the City will use Walk Score® to improve walkability to key destinations and to enhance areas where car-ownership and usage is lower than the citywide average.
- *Outcome 4 Engage the Oakland Community in Creating Vibrant Pedestrian Environments* – There are five actions within this outcome. The City will reinvigorate existing communication methods and establish new protocols for engaging about pedestrian projects and enabling community-determined pedestrian projects. The City will also partner with groups that specialize in addressing specific vulnerable populations, for example, the Mayor's Commission on Persons with Disabilities, to understand to the experiences of persons with disabilities.
- *Outcome 5 Improve Metrics, Evaluations, Funding, and Tools for Creating Pedestrian Environments* – There are nine actions within this outcome. The City will develop and implement a host of data collection, data analysis, and data reporting efforts, as well as ensure adequate staff training in pedestrian design standards to ensure that the Plan implementation is efficient, accountable, effective, and equitably distributed.

2019 Oakland Bike Plan

In May of 2019, the Oakland City Council adopted the 2019 Oakland Bike Plan, *Let's Bike Oakland!* and ncorporated the Plan into the adopted General Plan. The adopted Plan identifies programs and projects to improve the bike-ability of Oakland, and includes four main goals regarding access, health and safety, affordability and collaboration. Each goal outlines specific objectives and actions related to the goal. The following actions are applicable to the project:

- *Access Goal, Objective A*: Increase access to jobs, education, retail, park and libraries, schools, recreational centers, transit, and other neighborhood destinations
    - Action A2: Increase the supply of bicycle parking at neighborhood destinations like schools, medical centers, grocery stores, and government offices
    - Action A3: Evaluate the potential to combine transportation-impact fees for new developments within the same neighborhood to provide continuous, high-quality bicycle facilities
- *Access Goal, Objective C*: Support public transit service
    - Action C1: Design bikeways that provide first and last mile connections to transit
- *Health & Safety Goal, Objective C*: Reduce air pollution, asthma rates and greenhouse gas emissions
    - Action C1: Build a bicycle network that encourages Oaklanders to choose modes of transportation other than driving by providing low-stress facilities and integrating bikes with transit
    - Action C2: Achieve a 20 percent reduction in vehicle miles traveled annually as residents, workers and visitors meet daily needs by walking, bicycling and using transit, consistent with the City's Energy and Climate Action Plan (2018)
- *Affordability Goal, Objective A*: Reduce the overall household costs for all Oaklanders
    - Action A1: Build a bicycle network that provides low-stress bicycle facilities for people in low-income neighborhoods, encouraging the use of bicycling as low-cost transportation
- *Affordability Goal, Objective B*: Reduce long-term transportation costs by reducing the need for vehicle ownership or for parking in new developments
    - Action B1: Update the Oakland Planning Code to eliminate parking minimums
    - Action B2: Revise the menu of Transportation Demand Management options to include bike share passes, fix-it stations and hydration stations
    - Action B3: Update Oakland's Bicycle Parking Ordinance to determine whether they reflect the type and quantity of parking needed in new developments and major renovations
    - Action B4: Update the Oakland Planning Code to require end-of-trip facilities such as showers and changing rooms in major non-residential developments

City of Oakland Equitable Climate Action Plan

The City of Oakland adopted the Oakland 2030 Equitable Climate Action Plan (ECAP) in July 2020 (City Council Resolution 87397 C.M.S.), a comprehensive equity-focused plan to achieve the 2030 GHG reduction target and increase Oakland's resilience to the impacts of the climate crisis. Since cars and trucks account for two-thirds of local emissions in Oakland, the ECAP has a focus on transportation and land use policies. The following actions are applicable to the project:

- Action TLU-1: Align All Planning Policies & Regulations with ECAP Goals and Priorities

  - Remove parking minimums and establish parking maximums where feasible, ensuring public safety and accessibility.
  - Require transit passes bundled with all new major developments.

- Action TLU-2: Align Permit and Project Approvals with ECAP Priorities. Amend Standard Conditions of Approval (SCAs), as well as mitigation measures and other permit conditions, to align with the City's GHG reduction priorities stated in this ECAP. Explore, through the Planning Commission, adoption of a threshold of significance for GHG impacts to align with this ECAP. In applying conditions on permits and project approvals, ensure that all cost-effective strategies to reduce GHG emissions from buildings and transportation are required or otherwise included in project designs, including infrastructure improvements like bicycle corridor enhancements, wider sidewalks, crossing improvements, public transit improvements, street trees and urban greening, and green stormwater infrastructure. Where onsite project GHG reductions are not cost-effective, prioritize local projects benefiting frontline communities.
- Action TLU-4: Abundant, Affordable, and Accessible Public Transit. The City will work with public transit agencies to replace autos with public transit as a primary transportation mode for trips beyond walking distance, ensuring convenient, safe, and affordable public transit access within Oakland and to neighboring cities for all Oaklanders.
- Action TLU-5: Create a Zero Emission Vehicle (ZEV) Action Plan. By 2021, develop a ZEV Action Plan to increase adoption of electric vehicles and e-mobility while addressing equity concerns and prioritizing investment in frontline communities. The plan must set ambitious targets for ZEV infrastructure and must be coordinated with other land use and mobility options so that ZEV ownership is not necessary for access to ZEV trips, and ZEVs increase as a percentage of all vehicles while overall vehicle miles traveled decreases. The plan must address the following sectors: medium and heavy-duty vehicle electrification, including trucks and delivery vehicles; personal vehicle charging infrastructure in multifamily buildings, including affordable buildings; curbside charging; school and transit buses; and coordination with private and public fleet operators.
- Action TLU-8: Expand and Strengthen Transportation Demand Management (TDM) Requirements. Increase TDM performance requirements for new developments where feasible to support the mode shifts necessary to achieve a low carbon transportation system. Expand the TDM program to include requirements for existing employers. Fund ongoing monitoring and enforcement of TDM requirements.

City of Oakland Public Transit and Alternative Modes Policy

The City of Oakland adopted the Public Transit and Alternative Modes Policy, also known as the "Transit-First Policy," in October 2006 (City Council Resolution 73036 C.M.S.). This resolution supports public transit and other alternatives to single occupant vehicles and directs the LUTE to incorporate "various methods of expediting transit services on designated streets and encouraging greater transit use." The resolution also directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment, public safety, economic development, health, and social equity impacts.

City of Oakland Complete Street Policy

The City of Oakland adopted the Complete Street Policy to Further Ensure that Oakland Streets Provide Safe and Convenient Travel Options for all Users in January 2013 (City Council Resolution 84204 C.M.S.). This resolution, consistent with the California Complete Streets Act of 2008, directs the City of Oakland to plan, design, construct, operate, and maintain the street network in the City to accommodate safe, convenient,

comfortable travel for all modes, including pedestrians, bicyclists, transit users, motorists, trucks, and emergency vehicles.

City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) that directly pertain to transportation and circulation and that apply to the proposed Project are listed below. If the proposed Project is adopted by the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the proposed Project to help ensure no significant impacts. Because the SCAs are incorporated as part of the proposed Project, they are not listed as mitigation measures.

SCA Transportation-1: Construction Activity in the Public Right-of-Way

1. Obstruction Permit Required: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

   When Required: Prior to approval of construction-related permit

   Initial Approval: Department of Transportation

   Monitoring/Inspection: Department of Transportation

2. Traffic Control Plan Required: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction.

   Initial Approval: Department of Transportation

   Monitoring/Inspection: Department of Transportation

3. Repair of City Streets: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

   When Required: Prior to building permit final

   Monitoring/Inspection: Department of Transportation

SCA Transportation-2: Bicycle Parking

***Applies to**: All projects that require bicycle parking per chapter 17.117 of the Oakland Planning Code such as new non-residential construction of a certain size (see Code for size thresholds), additions to existing non-residential facilities (see Code for size thresholds), new residential units (in multi-family dwellings, see Code), or remodeling of existing facilities involving 10,000 square feet and valued at $250,000 or more*

The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Transportation-3: Transportation Improvements

***Applies to**: All projects for which a Transportation Impact Study was prepared during the project review process that contained recommended transportation improvements*

The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below:

4. 2070L Type Controller with cabinet accessory
5. GPS communication (clock)
6. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile)
7. Countdown pedestrian head module switch out
8. City Standard ADA wheelchair ramps
9. Video detection on existing (or new, if required)
10. Mast arm poles, full activation (where applicable)
11. Polara Push buttons (full activation)
12. Bicycle detection (full activation)
13. Pull boxes
14. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum
15. Conduit replacement contingency
16. Fiber switch
17. PTZ camera (where applicable)
18. Transit Signal Priority (TSP) equipment consistent with other signals along corridor
19. Signal timing plans for the signals in the coordination group
20. Bi-directional curb ramps (where feasible, and if project is on a street corner)
21. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)

When Required: Prior to building permit final or as otherwise specified

Initial Approval: Bureau of Building; Department of Transportation

Monitoring/Inspection: Bureau of Building

SCA Transportation-4: Transportation and Parking Demand Management

***Applies to**: All projects generating 50 or more net new a.m. or p.m. peak hour vehicle trips. The Transportation and Parking Demand Management Plan may be required prior to project approval.*

A. Transportation and Parking Demand Management (TDM) Plan Required: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.

1. The goals of the TDM Plan shall be the following:
    a. Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.
    b. Achieve the following project vehicle trip reductions (VTR): Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR, and Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR
    c. Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
    d. Enhance the City's transportation system, consistent with City policies and programs.
2. The TDM Plan should include the following:
    a. Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable.
    b. Proposed TDM strategies to achieve VTR goals (see below).
        i. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program.
        ii. The following TDM strategies must be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.
            1. Bus boarding bulbs or islands as required by Code or when: A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or a bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
            2. Bus shelter as required by Code or when: A stop with no shelter is located within the project frontage, or the project is located within 0.10 miles of a flag stop with 25 or more boardings per day
            3. Concrete bus pad as required by Code or when: A bus stop is located along the project frontage and a concrete bus pad does not already exist
            4. Curb extensions or bulb-outs as required by Code or when identified as an improvement within site analysis
            5. Implementation of a corridor-level bikeway improvement as required by Code or when: A buffered Class II or Class IV bikeway facility is in a local or county

adopted plan within 0.10 miles of the project location; and the project would generate 500 or more daily bicycle trips

6. Implementation of a corridor-level transit capital improvement as required by Code or when: A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and the project would generate 400 or more peak period transit trips
7. Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan: always required
8. Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) as required by Code or when: Improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
9. In-street bicycle corral as required by Code or when a project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
10. Intersection improvements (including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines) as required by Code or when identified as an improvement within site analysis
11. New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards - always required
12. No monthly permits and establish minimum price floor for public parking (may also provide a cash incentive or transit pass alternative to a free parking space in commercial properties) as required by Code or if proposed parking ratio exceeds 1:1000 sf. (commercial)
13. Parking garage is designed with retrofit capability as required by Code or optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)
14. Parking space reserved for car share as required by Code or when: a project is providing parking and the project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.
15. Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section - typically required
16. Pedestrian crossing Improvements as required by Code or when identified as an improvement within site analysis
17. Pedestrian-supportive signal changes as required by Code or when identified as an improvement within operations analysis
18. Real-time transit information system as required by Code or when: A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
19. Relocating bus stops to far side as required by Code or when a project is located within 0.10 mile of any active bus stop that is currently near-side

20. Signal upgrades (including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals) as required by Code or when Project size exceeds 100 residential units, 80,000 sf. of retail or 100,000 sf. of commercial; and Project frontage abuts an intersection with signal infrastructure older than 15 years
21. Transit queue jumps as required by Code or when identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
22. Trenching and placement of conduit for providing traffic signal interconnect as required by Code or when Project size exceeds 100 units, 80,000 sf. Of retail, or 100,000 sf. of commercial; and Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and a major transit improvement is identified within operations analysis requiring traffic signal interconnect
23. Unbundled parking as required by Code or if proposed parking ratio exceeds 1:1.25 (residential)

iii. Other TDM strategies to consider include, but are not limited to, the following:

1. Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
2. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
3. Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.
4. Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines and any applicable streetscape plan.
5. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.
6. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).
7. Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes.
8. Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3).

9. Guaranteed ride home program for employees, either through 511.org or through separate program.
10. Pre-tax commuter benefits (commuter checks) for employees.
11. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.
12. On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.
13. Distribution of information concerning alternative transportation options.
14. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
15. Parking management strategies including attendant/valet parking and shared parking spaces.
16. Requiring tenants to provide opportunities and the ability to work off-site.
17. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).
18. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

When Required: Prior to approval of planning application.

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

B. TDM Implementation – Physical Improvement Requirements: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.

When Required: Prior to building permit final

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

C. TDM Implementation – Operational Strategy Requirements: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of

the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

When Required: Ongoing

Initial Approval: Department of Transportation

Monitoring/Inspection: Department of Transportation

SCA Transportation-5: Transportation Impact Fee

***Applies to**: All projects subject to the Transportation Impact Fee Ordinance per OMC chap. 15.74*

The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).

When Required: Prior to issuance of building permit

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

SCA Transportation-6: Plug-In Electric Vehicle (PEV) Charging Infrastructure

***Applies to**: All new construction projects with (3) or more units that contain required onsite parking (1), or 11 or more parking spaces (2)*

1. PEV-Ready Parking Spaces: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.

   When Required: Prior to Issuance of Building Permit

   Initial Approval: Bureau of Building

   Monitoring/Inspection: Bureau of Building

2. PEV-Capable Parking Spaces: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces.

   When Required: Prior to Issuance of Building Permit

   Initial Approval: Bureau of Building

   Monitoring/Inspection: Bureau of Building

3. ADA-Accessible Spaces: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).

   When Required: Prior to Issuance of Building Permit

   Initial Approval: Bureau of Building

   Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

This section describes environmental impacts related to transportation and circulation that could result from the implementation of the proposed Project. The section begins with the City of Oakland's criteria of significance that establish the thresholds for determining whether an impact is significant. The next section identifies Project transportation characteristics, and the latter part of this section presents the impacts associated with the proposed Project and identifies SCAs and/or mitigation measures to address these impacts as needed.

Thresholds of Significance

The following thresholds are consistent with OPR guidance and with the City's Transportation Impact Review Guidelines. The Project would have a significant impact on the environment if it would:

1. Cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure.
2. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).
3. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas i.e., adding new mixed-flow lanes or adding new roadways to the network.

Generally, the City of Oakland uses the following thresholds of significance to determine if a project would generate substantial additional VMT (Criterion 1) and have a significant VMT impact:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.
- For retail projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.

However, these thresholds are not applicable to the proposed Project because of its unique use as a private K-12 school with regional draw, and a project-specific VMT analysis with a Project-specific VM Threshold is required.

Project-Specific VMT Threshold

Based on City Transportation Impact Review Guidelines (TIRG, Guideline 5.5), if a project is in a high-VMT area such as is the case for the Head-Royce School, transportation consultants performing CEQA analysis should "take into account the VMT reductions of TDM measures required through the Standard Conditions of Approval, and incorporated as project design features or program commitments." The City's SCAs (SCA Transportation-4, as identified in the Regulatory Setting) require a TDM program designed to achieve at least a 20 percent vehicle trip reduction rate. However, per the City's requirements for the 2016 Head-Royce School PUD Conditions of Approval, the School is required to achieve a 30 percent non-SOV mode share for students, once the School exceeds 900 students. Thus, this EIR uses the following threshold to determine if the proposed Project would cause a significant VMT impact:

- The Project would cause substantial additional VMT if it exceeds the existing VMT per school population, assuming a 30 percent non-single occupant vehicle mode share (i.e., the current TDM Plan requirement), minus 15 percent

Although the PUD Conditions of Approval requires the students to achieve a 30 percent non-SOV mode share, the VMT threshold conservatively applies the mode share requirement to the entire School population (students and faculty/staff).

Calculation of the Threshold

The current TDM Plan for the Head-Royce School is required to achieve a 30 percent non-single occupant vehicle mode share (including those trips with one student, dropped off by a separate driver).[2] As described in the Existing Setting Section, the Head-Royce School currently achieves an approximately 65 percent non-SOV mode share, which is equal to 691 of the total 1,052 students/faculty arriving by non-SOV means and only 361 student/faculty arriving by single-occupant vehicles. This exceeds the mode share requirement established by the City by 35 percent, or by 375 students/faculty members. The non-SOV mode shares that are used to achieve these current trip reductions include carpools (by both drop-off/pick-up and those who park at school), private bus, public bus, bike and walk.

If the School only achieved the 30 percent vehicle trip reduction rate as required, then only 316 students/ faculty (30 percent) would arrive and depart by non-SOV mode shares, and as many as 736 students/faculty (70 percent) would arrive/depart by single-occupant vehicles. This would represent an increase of 375 students/faculty arriving by SOV mode. Given that there are no additional parking spaces, all of the increase in SOV mode from the proposed School expansion would rely on drop-off/pick-up vehicles. As shown in **Table 14-3**, by proportionally decreasing the total number of current non-SOV mode trips as needed to only achieve a Schoolwide 30 percent non-SOV trip rate, and by increasing drop-off/pick up trips by this same amount, the total Schoolwide VMT would increase to 41,600 VMT, and the VMT/school population would increase to 39.5.

Table 14-3: Comparative VMT at 65% Existing vs. 30% Required non-SOV Mode Share

	Existing 65% Non-SOV Mode Share		At Required 30% Non-SOV Mode Share	
Travel Mode	**Population**		**Population**	
Drop-off/Pick-up	179		554	
Drive/Park	182		182	
SOV Modes:	361 (35%)	361	736 (70%)	736
Non-SOV Modes	691 (65%)		316 (30%)	
Total Population	**1,052**		**1,052**	
Total SOV VMT [1]		28,300		41,600
School Population		/ 1,052		/ 1,052
VMT/Population		**26.9**		**39.5**
Less 15%				**33.6**

Source: Fehr & Peers, November 2020

Notes:

1. Total VMT as a function of # of persons x trips/person (2 trips - 1 each way, 4 trips – 2 each way for drop-off) x miles per person-trip

Using the same methodology used to estimate the exiting VMT for the School (see prior Table 14-2), the VMT per total school population, assuming a 30 percent non-SOV mode share consistent with the current TDM

[2] City of Oakland, Head-Royce School 2016 PUD, Conditions of Approval (COA # 23), June 7, 2016

Plan requirement), would be 39.5 VMT/population. At 15 percent below this VMT rate, the Project-specific CEQA threshold for this EIR is 33.6 VMT/population.

How the Threshold Applies

The Project is defined as the net increase in School population from existing to buildout conditions. The total school population is defined as the total number of students and faculty/staff. The Project-specific CEQA threshold only applies to the Project, which is the net increase in School population; it does not apply to the existing school enrollment. **Table 14-4** summarizes the School population under current conditions and at Project buildout. Based on November 2018 data, the School currently has 894 students and 158 faculty/staff for a total population of 1,052. The Project would increase the population to a maximum enrollment of 1,250 students and 189 faculty/staff, for a total population of 1,439, which is about 37 percent higher than the current population. This analysis defines the Project as the increase between the current population and the maximum enrollment at Project buildout, which would consist of 356 students and 31 faculty/staff for a total population of 387 people.

Table 14-4: Enrollment and Employment Increase

Population Group	Existing (2018)	Project Buildout (Maximum Enrollment)	School Expansion Population	Project Percent
Students	894	1,250	356	40%
Faculty/Staff	158	189	31	20%
Total	**1,052**	**1,439**	**387**	**37%**

Source: Head-Royce School, November 2018.

Project Characteristics

Various aspects of the proposed Head-Royce School Expansion Project that affect transportation and circulation are described below. Chapter 3 (Project Description) provides more detail.

Vehicle Miles Traveled

Transp-1: The VMT per population generated by the Project would not exceed the Project-specific VMT threshold. (**Less than Significant**)

Table 14-5 summarizes the VMT calculation for the School at buildout conditions (i.e., at maximum enrollment and faculty), using the same methodology used to estimate the VMT under Existing conditions, and assuming that VMT at buildout conditions would have similar mode shares, operating conditions at the School, and a similar geographic distribution of the student and faculty/staff home locations.

Table 14-5: Project Buildout (Maximum Enrollment) VMT Estimation

Mode	Home Distance from Head-Royce School				Total
	Less than 5-Mile	5 to 10-Mile	10 to 20-Mile	More than 20-Mile	
Person Trips					
Drop off/Pick-up	77	179	563	207	1,025
On-site Parking	52	120	377	139	687
Private Bus	336	378	126	-	840
Public Bus	184	44	-	-	228
Bike	30	-	-	-	30
Walk	70	-	-	-	70
Total	749	720	1,066	346	2,880
Person Miles Traveled					
Drop off/Pick-up	390	1,710	10,550	6,260	18,910
On-site Parking	260	1,140	7,060	4,190	12,650
Private Bus	1,680	3,610	2,360	-	7,650
Public Bus	920	420	-	-	1,340
Bike	150	-	-	-	150
Walk	350	-	-	-	350
Total	3,750	6,880	19,970	10,450	41,050
Vehicle Mile Traveled					
Drop off/Pick-up	580	2,540	15,670	9,300	28,090
On-Site Parking	220	970	6,020	3,570	10,780
Total VMT	**800**	**3,510**	**21,690**	**12,870**	**38,870**
Total Population					1,439
VMT per Population					**27.0**

Source: Fehr & Peers, 2020.

As shown in Table 14-5, the total daily VMT under buildout conditions is estimated to be about 38,870 daily vehicle miles, which corresponds to approximately 27.0 VMT per population, similar to existing conditions.

VMT Estimate for Project

Table 14-6 summarizes the total VMT and VMT per population under both existing and buildout conditions. Table 14-6 also presents the total VMT and the VMT per population for the Project, which is the net difference between the existing and buildout conditions. The VMT per population for the Project is slightly higher than the existing conditions because the Project includes a higher proportion of students than faculty/staff, and students have higher VMT because the student drop off/pick-up trips are assumed to have twice the VMT as on-site parking trips (as described earlier).

Table 14-6: VMT per Population Summary

Scenario	VMT	School Population	VMT per Population
Existing Condition [1]	28,300	1,052	26.9
School Buildout (Maximum Enrollment) [2]	38,870	1,439	27.0
Project	**10,570**	**387**	**27.3**
VMT/Population, assuming 30% non-SOV mode share (per City requirements) as applied to current school population			39.5
VMT/Population Threshold (15% less than VMT/population at 30% non-SOV mode share)			33.6

Notes:

1. See Table 14-3 for details
2. See Table 14-5 for details.

Source: Fehr & Peers, 2020.

The threshold of significance for the Project is 15 percent below the VMT per total school population, assuming a 30 percent non-SOV mode share (consistent with the current TDM Plan requirement), or 33.6 VMT/population. The calculated VMT generated by the Project is approximately 27.3 VMT/population. Since the VMT generated by the Project is below the significance threshold, the Project would have a less than significant impact on VMT.

Mitigation Measures

None required.

Consistency with Plans and Policies addressing the Safety or Performance of the Circulation System

Transp-2: The Project would not conflict with plans, ordinances, or policies addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths (except for automobile level of service or other measures of vehicle delay – non CEQA impacts). (**Less than Significant**)

The Project would also modify access and circulation for the School. The primary changes proposed pursuant to the Project would consist of:

- Provision of a clockwise Loop Road along the perimeter of the proposed South Campus with an inbound driveway on Lincoln Avenue along the east (uphill) side of the proposed South Campus, and an outbound driveway along the west (downhill) side. Both driveways on Lincoln Avenue would be signalized. The Loop Road would provide access to 154 new parking spaces on the proposed South Campus and would accommodate all personal vehicle drop-offs and pick-ups at designated locations within the proposed South Campus.
- The provision of the Loop Road within the proposed South Campus would eliminate all personal vehicle drop-offs and pick-ups along Lincoln Avenue. Passenger loading for both public and private buses would remain on Lincoln Avenue. Provision of the Loop Road would also eliminate use of Alida Street and Maiden Lane for personal vehicle turnaround onto eastbound Lincoln Avenue.
- Construction of an underground pedestrian tunnel below Lincoln Avenue to connect the Existing and proposed South Campuses and reduce at-grade pedestrian crossings across Lincoln Avenue.

- Increasing the on-Campus parking supply by 22 percent, from 283 to 344 parking spaces, by reconfiguring the parking facilities in the proposed South Campus.

These Project improvements are consistent with applicable plans, ordinances and policies, and would not cause a significant impact by conflicting with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths.

The 1998 LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, state a strong preference for encouraging the use of non-automobile transportation modes such as transit, bicycling, and walking. The Project is consistent with these policies by adding new students to a school that has a current 65 percent non-SOV mode share and a 40 percent non-driving mode share. These current mode share rates exceed the School's required non-SOV mode share of 30 percent for students, as well as the City of Oakland's standard conditions which require a 20 percent vehicle trip reduction rate. It is expected that the additional students and faculty/staff associated with the Project would have similar access to the School's robust TDM Plan, and would achieve a similar mode share as the existing students and faculty.

Although the School population is expected to increase by 37 percent, the proposed on-site parking supply would only increase by 22 percent, which would provide fewer parking spaces per population and reduce the automobile trips generated by the Project. On-street parking on most streets surrounding the Head-Royce School is currently controlled by Residential Parking Permit (RPP), which limits parking for non-residents without a permit to two-hours during the day on weekdays. The RPP program is expected to continue on these streets, and use of on-street parking is not an option for most students and faculty/staff, further discouraging driving.

The Project is consistent with both the City's 2017 Pedestrian Master Plan and the 2019 Bike Plan, as neither of these Plans identify any planned improvements adjacent to the Head-Royce School site. The Project would not make any major modifications to existing pedestrian or bicycle facilities in the surrounding areas, and would not adversely affect installation of future facilities. The Project's proposed underground pedestrian tunnel below Lincoln Avenue would reduce at-grade pedestrian crossings across Lincoln Avenue, thereby enhancing pedestrian safety. The Project would also provide adequate short-term and long-term bicycle parking to satisfy City requirements.

Overall, the proposed Project would not conflict with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system. This is a less than significant impact.

Mitigation Measures

None required.

Induced Travel

Transp-3: The Project would not induce additional automobile travel by increasing physical street capacity in congested areas. (**Less than Significant**)

The modification to the roadway network as proposed by the Project consist of one new signal and left-turn and right-turn pockets on Lincoln Avenue at the inbound Loop Road, and modifications to the existing signal on Lincoln Avenue at the outbound Loop Road. Both signals would facilitate vehicular access into and out of the proposed Loop Road, which would provide access to the passenger loading areas and a parking lot. These modifications would not increase the capacity of the roadway network. The Project would not make any other modifications to the roadway network surrounding the Project site. Therefore, the Project would not increase the physical roadway capacity, would not add new roadways to the network, and would not induce additional automobile traffic. This is a less than significant impact.

Mitigation Measures

None required.

Cumulative Impacts

The cumulative Project-generated VMT per population is expected to remain similar to the current VMT per population, as presented in Table 14-7. The new school population representing the Project is expected to have a similar geographic distribution and similar mode share characteristics as the existing students and faculty, and the School would have similar operating conditions, including the continuation of TDM measures. The VMT impacts of the Project under cumulative conditions would be similar to VMT under current conditions. Therefore, all Project impacts would also be less than significant under cumulative conditions. No mitigation measures are required.

15

Utilities and Service Systems

This chapter of the EIR evaluates the potential impacts of the Project on utilities and service systems (water, wastewater, storm drainage, and electrical power, natural gas, and telecommunication facilities). This chapter describes the utility systems that serve the Project site, and evaluates the extent to which the Project may affect these utilities.

Existing Setting

Regional Water Supply

The Urban Water Management Planning Act is part of the California Water Code, stating that, "urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies." It is the state's policy to achieve conservation and efficient use of urban water supplies to protect both the people of the state and their water resources. The Act provides water utilities with an approach to assess their water resource needs and supplies by requiring that each urban water supplier providing more than 3,000 acre-feet of municipal water, or supplying water directly or indirectly to more than 3,000 customers annually, shall prepare, update and adopt an Urban Water Management Plan (UWMP) at least once every five years. The 2015 UWMP is the latest of the EBMUD UWMPs, designed to satisfy the requirements of the Urban Water Management Planning Act and provide the public with a report on EBMUD's progress on implementing conservation and water recycling programs, along with efforts to secure supplemental water supply sources.[1] The 2015 UWMP also includes data on EBMUD's progress on compliance with state law mandating that urban water agencies reduce water use to achieve a statewide reduction of 20% water use by the year 2020.

Water Supply Sources

The East Bay Municipal Utility District (EBMUD) is the water provider for the Head Royce School and for the former Lincoln site. The EBMUD water supply system collects, transmits, treats and distributes water to approximately 1.4 million people throughout Alameda County and Contra Costa County, including the City of Oakland. Based on historical averages, about 90 percent of the raw water entering EBMUD's system originates from the Mokelumne River watershed, and 10 percent originates as runoff from the watershed lands in the East Bay Area. The Mokelumne Aqueducts convey the Mokelumne River supply from Pardee Reservoir, across the Sacramento-San Joaquin River Delta, to local storage and treatment facilities. Local runoff from the East Bay area watersheds is stored in reservoirs within EBMUD's service area. The availability of water from local runoff depends on hydrologic conditions and reservoir storage availability. In dry years, evaporation can exceed runoff and result in a net loss of local supply. On average, local runoff supplies the East Bay with 15 to 25 MGD during normal hydrologic years, and with almost no runoff during dry hydrologic years.

[1] EBMUD, *Urban Water Management Plan*, July 2016

In the long term, EBMUD has determined that the Mokelumne River and local runoff water sources cannot meet EBMUD's projected customer demands during projected drought years, even with mandatory water use restrictions. Furthermore, EBMUD's Mokelumne River supply is expected to be reduced as demands on the Mokelumne River increase from the growing needs of users in Amador, Calaveras and San Joaquin counties, as these counties have water rights senior to those of EBMUD's. EBMUD began efforts to identify additional sources of supply to meet long-term demands in the mid-1960s. In 2006, EBMUD entered into contracts to provide for delivery of Central Valley Project water from the Sacramento River. This agreement provides for delivery of up to 133,000 AF of Central Valley Project water in a single qualifying year, not to exceed a total of 165,000 AF in three consecutive qualifying years. EBMUD generally qualifies for Central Valley Project water deliveries during dry periods, and thus constitutes a critical component of EBMUD's water supply reliability.

After treatment, water is distributed to the incorporated cities and unincorporated communities that EBMUD serves throughout Alameda and Contra Costa counties. EBMUD serves all of Oakland (including the Project site) with potable water, and also serves portions of the city with recycled water.

Water Demands

Historic water use (including metered and unmetered demands) within EBMUD's service area has not increased at the same rate as the number of new customer accounts. Outside of droughts, water demand has remained relatively stable. Several factors have contributed to keeping overall water demand from rising as might otherwise be anticipated, including:

- EBMUD's water recycling and conservation programs
- droughts and customer rationing
- changes in customer usage patterns or changes in customer class (i.e., a reduction in industrial and petroleum accounts, with increases in single and multi-family residential accounts), and
- legislative changes, including new plumbing efficiency standards, CALGreen model water efficiency landscape ordinances, and the 1992 and 2005 Federal Energy Policy Act

EBMUD uses its Water Supply Management Program 2040 (2040 WSMP) to assess water supply and demand over a 30-year planning period. The latest water demand projections are included in the 2040 Demand Study, completed as an element of the EBMUD 2040 WSMP.[2] The primary objective of the 2040 Demand Study was to project average annual water demands on the EBMUD water distribution system, out to the year 2040. The 2040 WSMP selected a planning horizon of year 2040 to provide a 35-year demand projection that provides a practical upper limit of land use information for use in reliable facility planning. The demand projections are an essential element for a number of EBMUD projects and programs, including aiding EBMUD in quantifying its water supply needs and raw water facility needs, assessing the need for improvements to its water treatment plant and distribution system facilities, and providing customers with water supply assessments (see related discussion under Impact Utilities-1).

The 2040 Demand Study includes land use data and use software tools to calculate both existing and future potable water demands. Existing water demands were calculated using EBMUD water consumption data for the base year (2005), organized by land use categories. Year 2005 data was selected because it was the last year of complete data that did not experience distribution system anomalies. Water demand factors were developed reflecting water consumption under average water-year conditions and production requirements, and adjustments were made to reflect changing conditions. The 2040 Demand Study aggregated the entire EBMUD service area into 11 study regions that reflect similar climates and historical spatial designations. The

[2] East Bay Municipal Utility District (EBMUD), *2040 Demand Study for the Water Supply Management Program 2040*, February 2009

EBMUD service area also has unique spatial divisions at the Oakland/Berkeley hills, and EBMUD data was separated into West of Hills and East of Hills areas. The Project site is located in the West of the Hills area, in Demand Region B: Oakland Hills.

EBMUD Baseline Water Demands

The 2040 Demand Study used GIS-based land use data to match 2005 aerial photographs, and land use categories were determined based on the General Plan land use categories of each city and county. A land use demand factor, expressed in gallons per day per acre (gpd/ac), was generated for each baseline land use, and consumption data referenced to meter locations was normalized for average conditions. These year 2005 baseline water demands were determined for each land use area to determine the water demand of each land use type. These water demands and acreages were aggregated by land use category and region, to generate a baseline of the average water demand per land use category, per region, and for the entire EBMUD service district.[3]

The entire EBMUD service district had an estimated year 2005 baseline water demand of 238 million gallons per day (MGD). With reductions for conservation efforts (-18 MGD), and for non-potable water use/reclaimed water (- 6 MGD), the total adjusted demand for the year 2005 baseline was 214 MGD. For the Oakland Hills region (Region B), the total adjusted 2005 baseline water demand was 10.6 MGD, including 207,509 gallons per day (gpd) for existing schools (ES), and 372,362 gpd for existing irrigated parks (EPI).[4]

Future (2040) EBMUD Water Demands

Future water demands were calculated in the 2040 Demand Study by applying adjustment factors for future conditions to each land use area. Primary adjustment factors for were created for two types of land use conditions.

- where existing land uses were not anticipated to change, but consumption patterns might change over time, reflecting changing demographic and economic conditions (e.g., greater numbers of people per households, employees per acre, or higher occupancy rates and more intense uses), and
- lands that will either be developed as a new use (formerly vacant land) or redeveloped, resulting in a change to its land use category

Adjustment factors were applied in the Demand Model to each land use area to create a future land-use assumption, future demand factors, and total water demands through year 2040. Overall, the 2040 Demand Study projected a shift in water demands from development of new lands east of the Oakland/Berkeley Hills, to infill and redevelopment sites on lands west of the Oakland/Berkeley Hills. Average annual demands were also adjusted to incorporate conservation and recycled water assumptions, resulting in significant decreases in the demand projections between 2010 and 2040.

The entire EBMUD service district has an estimated year 2040 water demand of 312 million gallons per day (MGD). With reductions for conservation efforts (-62 MGD), and for non-potable water use/reclaimed water (- 20 MGD), the total adjusted demand for the year 2040 is estimated to be 230 MGD.[5]

<u>Future Water Supply/Demand – “Need for Water”</u>

To estimate future water supply needs, EBMUD relied on the 2040 Water Demand Study’s projection of future water demands (adjusted to 230 MGD) as compared to EBMUD supplies, and identified the gap between the two values (the “Need for Water”). This “Need for Water” estimate was the basis for defining a

[3] EBMUD, 2040 Demand Study - Table 4.4: Base Year System Input (Adjusted) by Land Use and Region

[4] EBMUD, 2040 Demand Study - Figure 3.2: Existing Land Uses: 2005

[5] EBMUD 2040 Demand Study - Table 6.1: 2040 District-wide Demand Projections

portfolio (the WSMP 2040 Portfolio) of water supplies and consumption reductions needed to meet this need for water.

The 2040 WSMP concluded that EBMUD's existing water supplies are estimated to be sufficient to meet demand during the planning period (2010 to 2040) in normal and wet year conditions, but that additional solutions are needed to meet dry-year water needs through the year 2040. Increased water demand by other water agencies that rely on the Mokelumne Basin for their supply, expected growth within EBMUD's own service area, and potential impacts of climate change on river flow and customer demand, all mean that EBMUD cannot completely rely upon stored water in its reservoirs under drought conditions in the future. Thus, the WSMP 2040 was developed to counteract future dry-year water supply shortages. The WSMP 2040 Portfolio includes the following goals for rationing, conservation and recycled water use:

- increased rationing up to an average of 15%
- increased conservation by an additional 39 MGD
- increased use of recycled water by an additional 11 MGD

Rationing of up to 15% was chosen to allow the District flexibility in an emergency or to respond to the many unknown factors in the future. Maximum levels of conservation and recycled and raw water were chosen to maintain EBMUDs aggressive policies for overall demand management. The 2040 WSMP found that the combination of rationing, conservation, and raw and recycled water would satisfy increased customer demand, even during drought years, through 2040. Supplemental supply components will also be needed to keep rationing at a lower level, and to meet the need for water in drought years. EBMUD will continue to study several supplemental supply components as part of the WSMP 2040 Portfolio.

Wastewater Treatment and Disposal

EBMUD's Collection, Treatment and Disposal Systems

EBMUD's wastewater service district (known as Special District No. 1, or SD-1) was established as a separate wastewater district within EBMUD's water service area in 1944. SD-1 is governed by EBMUD's Board of Directors. It serves approximately 685,000 people in an 88 square-mile area of Alameda and Contra Costa counties along the east shore of the San Francisco Bay, extending from Richmond in the north to San Leandro in the south. SD-1 treats domestic, commercial, and industrial wastewater for the cities of Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont, and for the Stege Sanitary District, which includes El Cerrito, Kensington and parts of Richmond. Each of these communities operates sewer collection systems that discharge into one of five EBMUD sewer interceptors (Adeline, Alameda, North, South, and South Foothill).

EBMUD's wastewater interceptor system includes large diameter pipelines and pumping stations. The interceptors consist of 29 miles of reinforced concrete pipes ranging from 12 inches to 9 feet in diameter. They collect wastewater from approximately 1,400 miles of sewers owned and operated by the communities in the SD-1 service area. Fifteen pumping stations, ranging in capacity from 0.5 to 54.7 MGD, help to convey flows to the wastewater treatment plant.

Main Wastewater Treatment Plant

Wastewater collected by the interceptors flows to EBMUD's Main Wastewater Treatment Plant (MWWTP), which is located in Oakland near the foot of the Bay Bridge. The MWWTP can provide primary treatment for up to 320 MGD, and provides secondary treatment for a maximum flow of 168 MGD. The average annual daily flow, as reported in the 2015 EBMUD Urban Water Management Plan (UWMP) was 54 MGD. Based on 2017 data from May through September 2017, the average dry weather influent flow was 50 MGD.

Upon entering the MWWTP, wastewater is pre-chlorinated for odor control. Initial treatment includes screening that removes large objects and grit removal. Primary sedimentation then removes floating

materials, oils and greases, sand, silt, and organic solids heavy enough to settle. Secondary treatment using high-purity oxygen-activated sludge biologically removes most of the organic and chemical impurities that would deplete oxygen from the receiving waters if discharged and allowed to decompose naturally. Solids are pumped to digesters for stabilization and are then dewatered and hauled offsite. Methane generated by the digesters is used to produce renewable energy. The treated effluent is then disinfected, dechlorinated and discharged through an outfall one mile off the East Bay shore into San Francisco Bay.

Bay Discharge/ Disposal

Pursuant to its National Pollutant Elimination Discharge (NPDES permit (Order No. R2-2015-0018, CA0037702) as issued by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), the MWWTP has an average dry weather flow limitation of 120 MGD at its discharge to the Bay, subject to meeting specific individual effluent limitations and discharge specification (i.e., carbonaceous biological oxygen demand, total suspended solids, oil and grease, ph, residual chlorine, copper, cyanide, hex chlorobenzene, dioxin and total ammonia).

Recycled Water

In 1971, EBMUD constructed treatment facilities to maximize the use of recycled water for plant processes and landscape irrigation at its MWWTP and EBMUD continues to use recycled water for in-plant processes and landscape irrigation. EBMUD has a recycled water goal of producing up to 20 MGD of recycled water, system-wide. At the MWWTP, the East Bayshore Recycled Water Project is a multi-phased project that is expected to provide up to 2.3 MGD of tertiary-treated recycled water from the MWWTP to customers in parts of Alameda, Albany, Berkeley, Emeryville and Oakland. A 4.4-mile long recycled water transmission pipeline along I-80 and up to 24 miles of distribution pipelines will distribute the recycled water to customers. Currently, approximately 1.0 MGD is treated through microfiltration at the East Bayshore Recycled Water Facility to produce recycled water meeting the California State Water Resources Title 22 Code of Regulations. The recycled water service area currently includes Oakland and Emeryville. In the future, it may be expanded to include Albany, Berkeley and Alameda.

Stressing the importance of recycled water as part of the overall water supply picture, EBMUD's Board of Directors adopted the Non-Potable Water Policy 9.05 (amended March 26, 2013). The policy requires that EBMUD customers use non-potable water (recycled water and other non-potable water sources) for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health, and not injurious to plant life, fish or wildlife. It is EBMUD's current practice to promote recycled water to its customers for appropriate non-potable uses.

Future Projections

There are no current plans or identified needs to expand wastewater treatment capacity. However, many of the facilities at the MWWTP are aging and require repair and rehabilitation to maintain reliable service. Although the San Francisco Bay Is not currently identified as an impaired water body by elevated nutrient levels, recent monitoring suggests that its historic resilience to nutrient impairment is weakening. Effluent discharges from 37 separate Bay Area wastewater treatment plants are the major nutrient sources, accounting for more than 60 percent of the total nutrient load to the Bay. As the MWWTP discharges significant amount of nutrients to the Bay, a recently completed Nutrient Reduction Study, conducted in accordance with the (2014–2019) Nutrient Watershed Permit, included a conceptual-level estimate to implement full nutrient upgrades at the MWWTP. EBMUD is evaluating a wide range of nutrient reduction strategies to address potential future regulatory requirements.

Storm Drainage

The Project site is served by two separate storm drainage facilities, the City's underground stormdrain lines and an off-site drainage channel that is intermittently above ground and placed within an underground culvert.

The City's primary underground stormdrain main lines that serves the site are located primarily within the Lincoln Avenue right-of-way. The more westerly (uphill) stormdrain line collects runoff form the uphill portions of the Project site before turning north out of Lincoln Avenue and into the existing Head-Royce School Campus. These stormwater flows enter into the Whittle Avenue branch of Sausal Creek, which is an intermittently open creek and underground culvert or storm drain. A second underground stormdrain line extends uphill from the east within the Lincoln Avenue right-of-way and conveys runoff from the downhill portions of the Project site, through the City's underground stormwater system, which then flows downstream to the Laguna Creek Branch of Peralta Creek.

A separate stormwater channel is located outside of/downslope from the southern boundary of the proposed South Campus. This channel emerges from a culvert behind an adjacent residence along Laguna Avenue and travels southwest through the backyards of several residences before re-entering a culvert beneath Alida Street. The channel's vertical walls are lined with concrete and stone, and the bed is approximately 4 feet wide. The stormwater channel is situated in a topographically low position relative to the adjacent slopes. This channel conveys seasonal flows to the City's underground stormwater system via a downstream culvert near Alida Street, which then flows downstream to Laguna Creek Branch of Peralta Creek.

Solid Waste

California Waste Solutions (CWS) provides recycling services in the City of Oakland. As of July 1, 2015, CWS provides the entire city with residential recycling services, and offers rate-regulated commercial recycling services in an open commercial recycling market. Solid waste and yard trimmings within Oakland are collected by Waste Management of Alameda County. All of these materials are taken to the Davis Street Transfer Station in San Leandro.

Based on 2013 data (the most recent data published in the 2017 Alameda County Integrated Waste Management Plan), Davis Street Transfer Station output was 369,538 tons of municipal solid waste, and 157,570 tons of organics, or an average of 2,027 tons per day (over a 5-day per week basis). The Station's average daily outflow of 2,027 tons is well below the permit limit of 5,600 tons per day. Transfer operations at the Davis Street Transfer Station consists of receiving, weighing, compacting and loading waste into long-haul semi-transfer trailers for transport to the Altamont Landfill (66-mile round-trip). The average load for each of these vehicles is in the range of 21-25 tons. Transfer trailers typically operate five days per week.[6]

In 2017/2018, the Davis Street Transfer Station added organics facilities to the site. The organics facilities operate under an updated solid waste facility permit issued by CalRecycle. These new operations take place within the currently permitted 5,600 ton per day solid waste facility permit. The organics facilities include an organic materials recovery facility, an organic materials composting facility and an organic digester facility that includes energy production.[7]

In 2018, Oakland disposed of approximately 232,714 tons of solid waste, with 229,105 tons going to the Altamont Landfill.[8] Based on year 2013 data, the Altamont Landfill comprises approximately 2,170 acres, with

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[6] Alameda County Waste Management Authority (ACWMA), *Alameda County Integrated Waste Management Plan, Countywide Element*, as amended 2017, pg. II-26, -27

[7] Ibid

[8] https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility

472 acres of permitted landfill area and a total capacity for 87.1 million tons of landfilled materials. Altamont has a permitted maximum disposal capacity of 7,000 tons per day, with an average input of 4,511 tons per day. The Altamont Landfill is projected to have 40 million tons of remaining capacity, sufficient to operate until at least year 2037. [9]

AB 939, enacted in 1989, requires the Source Reduction and Recycling Element of each city and county to include an implementation schedule to divert at least 50 percent of solid waste from landfill disposal by the year 2000, and at least 75 percent by 2010. Oakland's per resident disposal target rate is 5.8 pounds per person per day (PPD) and it's per employee disposal target rate is 15.3 PPD. Since 2007, Oakland has consistently met its target rate, and in year 2018, (the most recent year for which data is available) the measured disposal rate was 4.3 PPD for residents and 9.4 PPD for employees, thereby meeting the City's target rates.[10]

Regulatory Setting

Federal Regulations

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA, 42 USC §§ 300f et seq.) is the primary federal law regulating drinking water quality; it establishes standards intended to protect public health, safety, and welfare. The U.S. Environmental Protection Agency (USEPA) implements the SDWA and delegates its authority to the State of California. The Clean Water Act (CWA, 33 United States Code [USC] §§ 1251 et seq.) is intended to restore and maintain the integrity of the nation's waters, including requirements for states to establish water quality standards to protect designated uses for all waters of the nation. Many aspects of the CWA have been delegated to the State, including the regulation of discharges from private industry and public facilities such as wastewater treatment plants.

The California Department of Health Services (DHS) regulates drinking water, implements the Safe Drinking Water Act and oversees public water systems in California. The State requires that public water systems meet two groups of water quality standards: primary and secondary drinking water standards. Primary drinking water standards, known as Maximum Contaminant Levels (MCLs), are legally enforceable standards that regulate contaminants which could threaten public health. Secondary drinking water standards are used to regulate contaminants that affect the taste, odor, and appearance of water, and are enforceable for new potable water sources. The California RWQCB, San Francisco Bay Region, has established water quality objectives to define the level of water quality to be maintained for designated beneficial uses. Water designated for uses such as domestic or municipal supply shall not contain concentrations of constituents in excess of the limits specified in Title 22 of the California Code of Regulations.

State Regulations

California Urban Water Management Planning Act

The California Urban Water Management Planning Act requires that an understanding of urban water demands and efficient use of water be actively pursued by water suppliers, including the requirement for every urban water supplier to periodically prepare and adopt an Urban Water Management Plan (UWMP). Each UWMP must describe the supplier's services area, identify and quantify existing and planned water sources, describe the reliability of water supplies, describe opportunities for exchanges or transfers of water,

9 ACWMA, 2017

10 https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports

quantify past, current and projected water use, and describe and evaluate the supplier's management strategies for water demand management. The UWMP must be updated every five years.

California State Senate Bill 7

Enacted in late 2009, Senate Bill 7 (SB 7) requires the State of California as a whole to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The law also requires the State to make incremental progress towards this goal, namely achieving a 10 percent per capita reduction in urban water use on or before December 31, 2015. To achieve these goals, the law includes a requirement that urban retail water suppliers would not be eligible for state water grants or loans on and after July 1, 2013, unless they demonstrate compliance with the water conservation requirements of the bill.

California State Senate Bill 610

California Senate Bill 610 (SB 610) of 2002 (codified in §10910 through §10915 of the California Water Code) requires local planning agencies to consider whether there are sufficient and reliable water supplies to serve proposed development projects of specified sizes (called water-demand projects) during the application and environmental review processes. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by water-demand projects, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under Water Code Section 10912(a) "water-demand project" means any of the following:

- a proposed residential development of more than 500 dwelling units
- a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- a proposed hotel or motel, or both, having more than 500 rooms
- a proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- a mixed-use project that includes one or more of the projects specified in this subdivision, or
- a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project

Assuming a total water demand of 190 gallons per day per dwelling unit (Oakland's citywide average), a "water-demand project" is calculated as a project with a water demand of approximately 95,000 gallons per day. As calculated in Impact Utilities-1 (below), the Project does not generate near this level of water demand, and no Water Supply Assessment is required or has been prepared for the Project.

California Recycled Water in Landscaping Act

The Recycled Water in Landscaping Act requires municipalities to adopt ordinances requiring use of recycled water for landscaping uses where recycled water of appropriate quality is made available.

Water Conservation Act of 2009 (SB 7)

The Water Conservation Act of 2009 (Water Code Division 6, Part 2.55) provides the regulatory framework to support a statewide reduction in urban per capita water use of 20 percent by the year 2020. Each urban

water supplier is required to determine its existing water use and 2020 target, and report this analysis in the water supplier's UWMP.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans and also mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. As required by AB 939, the City of Oakland has prepared a Source Reduction and Recycling Element (SRRE) which requires proposed development projects to undergo, as part of the required environmental review, an assessment of project impacts on the City's ability to maintain the mandated 50 percent waste diversion rates. With the passage of SB 1016 in 2006, the Per Capita Disposal Measurement System, only per capita disposal rates are measured to determine if jurisdiction's efforts are meeting the intent of AB 939. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas to be set aside for collecting and loading recyclable materials in development projects and for local agencies to adopt such an ordinance.

California Green Building Standards Code (CALGreen)

CALGreen is California's green building code and first in the nation state-mandated green building code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. The purpose of CALGreen is to improve public health, safety, and general welfare through enhanced design and construction of buildings using concepts which reduce negative impacts and promote those principles which have a positive environmental impact and encourage sustainable construction practices. CALGreen was adopted to address five divisions of building construction: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure on a statewide basis, unless otherwise indicated. Additions and alterations to existing buildings which increase the building's conditioned area, interior volume, or size are also covered by the scope of CALGreen.

CALGreen became mandatory on January 1, 2011, for new residential and commercial construction, and updates and changes through to the 2019 California Green Building Standards Code (CALGreen), Title 24, California Code of Regulations, became effective January 1, 2020.

Alameda County

Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan (last amended March 2017) is a state-mandated plan prepared by the Alameda County Waste Management Authority. The Plan identifies solid waste facilities and waste-sheds within Alameda County. It describes the countywide plan for reaching the state-mandated 50% recycling goal and the county-mandated 75% recycling goal. Waste reduction and disposal facilities in the county that require Solid Waste Facility Permits must conform to policies and siting criteria contained in the CoIWMP. The CoIWMP includes, by reference, source reduction and recycling elements, household hazardous waste elements and non-disposal facility elements for each city and the unincorporated county area, as well as a plan that describes countywide diversion programs and landfill disposal needs.

Alameda County Waste Reduction and Recycling Initiative (Measure D)

In addition to AB 939, the 1990 Voter Initiative Measure D (Alameda County Waste Reduction and Recycling Initiative) mandates all cities in Alameda County to divert 75 percent of their solid waste from landfills by the year 2010.

City of Oakland

City of Oakland Water Reuse Ordinance

The City of Oakland adopted the Water Reuse Ordinance in January 2002, which applies to developments meeting all of the following criteria: 1) the site is located within an ordinance-designated Water Reuse Area; 2) the development requires land subdivision of five or more parcels; 3) new water hook-ups from the EBMUD are required; and 4) development includes common or shared areas that will be plumbed.

City of Oakland Sewer Lateral Ordinance

Ordinance No. 13080, adopted in 2011, amends the Oakland Municipal Code and extends the EBMUD Regional Private Sewer Lateral (PSL) Ordinance to apply to lower sewer laterals. EBMUD adopted the Regional PSL Ordinance in February 2010 and subsequently the City Council passed Ordinance No. 13025 C.M.S. in July 2010 adopting the EBMUD Regional PSL Ordinance. However, the ordinance covered only the upper portion of sewer laterals (that portion between the property line and the building). The United States Environmental Protection Agency (U.S. EPA) required Oakland to extend the EBMUD Regional PSL Ordinance to apply to lower laterals. Approval of Ordinance 13080 brought the City into compliance with the U.S. EPA mandate.

City of Oakland Waste Reduction and Recycling Plan

Oakland Municipal Code Chapter 15.34 requires building permit applications for new construction, demolition, or alterations (with a valuation of $50,000 or greater) to be accompanied by an approved Waste Reduction and Recycling Plan (WRRP). The WRRP is required to document the ways that the applicant will reduce the quantity of construction and demolition debris disposed at landfills by 65 percent or more. The City does not approve building permits for projects until the WRRP is approved.

City of Oakland Zero Waste Strategic Plan

In keeping with its goal of becoming a Sustainable City, the Oakland City Council adopted a Zero Waste Goal in March 2006. To reach that goal, Council directed staff to develop a Zero Waste Strategic Plan (November 28, 2006). The City of Oakland adopted a Zero Waste Goal in March 2004, and developed the Zero Waste Strategic Plan in November 2006. The main strategies outlined in the plan include: 1) expand and improve local and regional recycling and composting; 2) develop and adopt new rules and incentives to reduce waste disposal; 3) preserve land for sustainable development and green industry infrastructure; 4) advocate for manufacturer responsibility for produce waste, ban problem materials; and 5) educate, promote, and advocate a Zero Waste Sustainability Agenda. Oakland's Zero Waste Goal is to cut the City's current waste disposal of 400,000 tons per year to 40,000 tons per year – a 90% reduction, by year 2020.

City of Oakland General Plan

The City of Oakland General Plan Land Use and Transportation Element includes the following policies related to utilities and infrastructure:

- *Policy I/C 1.9*: Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable uses, improve the marketability of existing, vacant or

underutilized sites, and encourage future use and development of these areas with activities consistent with the goals of the General Plan.

- *Policy N.12.4*: Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions, such as limited visibility of the poles and wires makes this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground at the start.

City of Oakland Green Building Ordinance and Sustainable Green Building Requirements for Private Development

The City of Oakland adopted a Civic Green Building Ordinance in May 2005, requiring City owned and occupied buildings to meet specific green building standards set by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. In October 2010, the City adopted mandatory green building standards for private development projects. The intent of the mandatory green building standards is to integrate environmentally sustainable strategies in building construction and landscapes in the City of Oakland.

Standard Conditions of Approval

The City's Standard Conditions of Approval relevant to utilities and service systems are listed below. These Standard Conditions of Approval would be adopted as mandatory requirements of the Project should it be approved, and would ensure that significant impacts would not occur.

SCA Utilities-1, Water Efficient Landscape Ordinance

***Applies to**: New construction projects with an aggregate landscape area equal to or greater than 500 square feet ("new construction" means a new building with a landscape or other new landscape not associated with a building), and rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sq. ft. ("rehabilitated" means any re-landscaping project)*

The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. Prior to construction, the project applicant shall submit the Project Information (detailed below) and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance.

Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, including the following:

1. Project information (date, applicant and property owner name, project address, total landscape area, project type (new, rehabilitated, cemetery, or home owner installed), water supply type and water purveyor, checklist of documents in the package, project contact information, and applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."
2. Water Efficient Landscape Worksheet, including Hydro-zone Information Table and Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use
3. Soil Management Report
4. Landscape Design Plan

5. Irrigation Design Plan, and
6. Grading Plan

Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion, and landscape and irrigation maintenance schedule, for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Utilities-2, Green Building Requirements

Applies to: *New construction of non-residential buildings over 25,000 sq. ft. of total floor area, or major alterations (see Green Building definitions) over 25,000 sq. ft. of total floor area to a non-residential building*

Compliance with Green Building Requirements during Plan-Check: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code)

Compliance with Green Building Requirements during Construction: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.

Compliance with Green Building Requirements after Construction: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

When Required: Prior to approval of construction-related permit, during construction and prior to final approval

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Utilities-3, Sanitary Sewer System

Applies to*: All major development projects, specifically those involving construction of 50,000 square feet or more of non-residential floor area, or requiring CEQA review*

The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Department of Engineering and Construction

Monitoring/Inspection: N/A

SCA Utilities-4, Underground Utilities

***Applies to**: All construction projects*

The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling

***Applies to**: All construction projects*

The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

SCA Utilities-6, Recycling Collection and Storage Space

***Applies to**: All projects per Chapter of 17.118 of the Oakland Planning Code, including but not limited to any of the following that may apply to the Project; new commercial or industrial development, alterations to existing commercial or industrial development that increase the floor area by 30% or more, new public facilities, or alterations to areas of existing public facilities used for collecting and loading solid waste*

The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For non-residential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

SCA Utilities-7, Storm Drain System

***Applies to**: All major development projects, specifically those involving construction of 50 or more residential dwelling units, construction of 50,000 sq. ft. or more of non-residential floor area, or CEQA review (e.g., negative declaration, mitigated negative declaration, or EIR)*

The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

According to the City's Thresholds of Significance, the Project would have a significant impact on utilities and services systems if the Project:

1. Did not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years
2. Resulted in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments
3. Required or resulted in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects
4. Generated solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impaired the attainment of solid waste reduction goals, or
5. Does not comply with federal, state and local management and reduction statutes and regulations related to solid waste
6. Resulted in an environmental impact due to a wasteful, inefficient or unnecessary consumption of energy resources during project construction or operations, or conflicted with state or local plans for renewable energy or energy efficiency

Water Supplies

Utilities-1: Sufficient water supplies are available to serve the Project, as well as all other reasonably foreseeable future development during normal dry and multiple dry years. (**Less than Significant**)

Existing Water Demand, Head-Royce School Properties

According to EBMUD water service bills, the entire annual water demand for Head-Royce School was approximately 4.39 million gallons (MG)/year in 2019, or an average of approximately 12,032 gallons per day (gpd) as averaged over 365 calendar days.[11] This water demand included all outdoor irrigation of the existing

[11] Provided by Head-Royce School, based on total 2019 EBMUD water service bills

Campus, irrigation of the Head-Royce soccer field, and outdoor irrigation of the former Lincoln site. This water demand also includes all interior domestic water consumption (e.g., drinking fountains, kitchens and toilets) for 881 students and 165 faculty/staff members. This actual water use can be compared to EBMUD's 2040 Demand Study assumptions for these School properties. The EMBUD 2040 Demand Study assumes the following water demands for the School properties, under the baseline 2005 and projected year 2040 conditions: [12, 13]

- The Head-Royce School's existing Campus is identified as an "Existing School", with an estimated demand of 703 gpd/acre x 5.5 acres, or approximately 3,870 gpd.
- The Head-Royce School soccer field is identified as an "Existing Park – Irrigated", with an estimated water demand of 730 gpd/acre x 8.2 acres, or approximately 5,990 gpd.[14]
- The former Lincoln site is identified as an "Existing School" (as was the case in 2005, when the site was occupied by Lincoln), with an estimated demand of 703 gpd/acre x 7.9 acres, or approximately 5,550 gpd.

The EBMUD 2040 Demand Study estimated the total water demand for these three School properties at approximately 15,410 gpd, or approximately 3,380 gpd more than actual use.

Estimated Water Demand – Project

The increment of new water demand attributed to the Project is the interior domestic water consumption attributed to the increase in students and faculty associated with the Project, plus the increment of additional outdoor irrigation attributed to the increased permeable (landscaped) surfaces at the proposed South Campus.

To estimate the increase in interior domestic water consumption, EBMUD water bills for the existing Campus during the period of mid-December 2019 through mid-February 2020 were reviewed.[15] This period was characterized by wet weather, and little to no outdoor irrigation occurred during this time. Therefore, all water use during this period can conservatively be assumed to be domestic water consumption. EBMUD water bill for all water meters on the existing Campus show a total water consumption of approximately 331,365 gallons of water during this 10-week, 70-day period. The Head-Royce School calendar shows that school was closed for the holidays during 3 weeks of this 10-week billing period, so this water consumption is conservatively estimated to have occurred over a period of 7 weeks, or 49 calendar days, resulting in an average water consumption of 6,760 gallons per calendar day. This water consumption can be divided by

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12 EBMUD 2040 Demand Study - Figure 3.2: Existing Land Uses for 2005, and Figure 3.3: Changes in Land Uses, 2010 - 2040

13 Per EBMUD 2040 Demand Study (page 5-11), "*regardless of population projection increases and cycles of enrollment numbers, it is uncertain if overall elementary and high school public and private enrollment will increase or decrease by 2040. A review of historical school enrollment data and the lack of private school data do not present an apparent trend to justify adjusting the LUDs. The demand projections account for any increase in enrollment where there are land uses designated by General Plans for new development*." Additionally, per EBMUD 2040 Demand Study (page 5-11), "*LUDs for irrigated turf and schools were not adjusted partly because of the difficultly in isolating irrigation use. Schools have either one water meter for all uses, or a separate meter for irrigation, but the meters are often located in the same place on a street and not near the turf area, thus making it difficult to separate consumption patterns associated with irrigated turf. By reviewing the land use and meter location databases, it was estimated that about 9 mgd of 2005 irrigation consumption was associated with other land uses (irrigation meters were in polygons of land uses other than EPI).*"

14 Under a separate process outside of the Campus Master Plan and current PUD permit, Head-Royce School has applied for a permit to convert the existing natural turf field to an artificial turf surface. If approved and implemented, the School's overall water demand would be further reduced by not needing to irrigate this athletic field.

15 Head-Royce School, EBMUD water service bills for all six meters on the existing Campus, December 23, 2019 through February 22, 2020

1,046 people (881 students and 165 faculty/staff), to arrive at an estimate of the demand for on-Campus domestic water consumption, which is approximately 6.46 gallons per person/calendar day.

The increment of new water demand attributed to increased domestic water consumption of the Project can therefore be estimated by multiplying the 361 net new people attributable to the Project (344 new students and 17 faculty/staff), by the average on-Campus interior domestic water consumption per person of 6.46 gpd. This results in an increase of approximately 2,330 gpd of increased interior domestic water consumption as being attributed to the Project.

To estimate the increment of additional outdoor irrigation attributed to the increased landscaped areas at the proposed South Campus, the change in impervious surfaces resulting from the Project can be used. According to Table 3-4 of the Project Description, the Project will result in a net increase of approximately 0.4 acres of open space. Assuming all of this additional open space will be irrigated, and using the EBMUD 2040 Water Demand Study estimate of 730 gpd/acre for irrigation of "Existing Park-Irrigated" land use, the increased demand for outdoor irrigation at the proposed South Campus is estimated to be approximately 300 gpd.

The total increased water demand attributed to the Project is therefore the increased domestic water consumption attributed to the increase in students and faculty (2,330 gpd), plus the increment of additional outdoor irrigation attributed to the increased landscaped surfaces at the proposed South Campus (300 gpd), for a total of 2,630 gpd.

Water Supply/Demand

A comparison of the water demand assumptions of the EBMUD 2040 Demand Study, actual 2019 water demands, and projected future (Existing plus Project) water demands, are shown in the following **Table 15-1**.

Table 15-1, Comparison of Water Demands, EBMUD 2040 Water Demand Study vs. Existing plus Project Water Demand Estimates

EBMUD 2040 Water Demand Study [1]	Actual Water Demand, 2019 [2]	Increased Water Demand, Project	Total Estimated Demand (Existing plus Project)
15,410 gpd	12,030 gpd	2,630 gpd	14,660 gpd
	3,380 gpd less than 2040 Water Demand Estimate		750 gpd less than 2040 Water Demand Estimate

Sources: 1: EMBUD, 2040 Water Demand Study
2: Head-Royce School, 2019 water use form EBMUD water bills

As indicated above, the annual water demand for each of the three Head-Royce School properties (the existing Campus and soccer field and the former Lincoln site was approximately 12,030 gpd. With the estimated increase of 2,630 gpd attributed to the Project, the total water demands associated with all three properties (existing plus Project) is estimated at approximately 14,660 gpd, which is less than the approximately 15,360 gpd assumed in the EBMUD 2040 Demand Study. Thus, the water demands of the existing Head-Royce Campus, plus the additional demands of the Project, are fully assumed in the EBMUD Demand Study's projection of water demands by year 2040.

As noted in the Setting Section of this chapter of the EIR, the 2040 WSMP concluded that EBMUD's existing water supplies are estimated to be sufficient to meet projected demand to year 2040 in normal and wet year conditions, and that the combination of rationing, conservation, and raw and recycled water would satisfy increased customer demand, even during drought years through 2040. Supplemental water supplies will be

needed to keep rationing at a lower level and to meet the need for water in drought years, and EBMUD will continue to study several supplemental supply components as part of the WSMP 2040 Portfolio.

Water Supply Assessment

CEQA Guidelines section 15155 requires that the City prepare or have prepared a Water Supply Assessment for any "water-demand project", which is defined as any project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project (assumed to be approximately 95,000 gallons per day. With an increased water demand of approximately 2,660 gpd, the Project does not meet the definition of a "water-demand project" and no Water Supply Assessment is required or has been prepared. Rather, the water demands of the Project are assumed to be included in the EMBUD's Water Supply Management Program 2040 (2040 WSMP).

School Programs and Project Measures

The Project proposes to install a system for capturing rainwater from the rooftops of the new Performing Arts Center and Link Pavilion Buildings into above ground cisterns, below ground tanks, or in storage systems within the building footprints. The captured rainwater would become a supplemental water supply for on-site landscape irrigation, and potentially integrated into an on-site greywater system for toilet flushing in the new buildings, thereby reducing total water supply demands. The quantity of harvested rainwater captured by these systems is dependent on final designs, which have not yet been developed. Since no supplemental water supplies are required to maintain the School's water demand to below anticipated supplies, these systems will help offset the Project's water demands in accordance with EBMUD conservation goals, but quantification of this offset is not required for CEQA.

Regulatory Requirements

The EBMUD 2040 WSMP concludes that a combination of rationing, conservation, and raw and recycled water, plus supplemental supply components, will be needed to keep rationing at a lower level and will satisfy increased customer demand through 2040 in drought years. With implementation of ***SCA Utilities-1: Water Efficient Landscape Ordinance and Utilities-2: Green Building Requirements***, the Project will participate in required water conservation programs and practices. As with all land uses with the EBMUD service area, the Project may also be subject to water rationing as may be imposed by EBMUD during drought year conditions. Because the Project is not located within the EBMUD Recycled Water Project area (which generally includes portions of West Oakland, Downtown, and Jack London Square), the Project is not required to provide for the use of recycled water for feasible recycled water uses, as would otherwise be required pursuant to City SCAs and Section 16.08.030 of the Oakland Municipal Code.

Based on the above applicable SCAs and regulatory requirements, the Project will have sufficient water supplies available from EBMUD to serve its water demands and those of other reasonably foreseeable future development, during normal and multiple dry years.

Mitigation Measures

None needed

Wastewater Treatment and Disposal

Utilities-2: The Project would not result in a determination by the wastewater treatment provider (EBMUD) that it does not have adequate capacity to serve the Project's wastewater treatment demand, in addition to EBMUD's existing commitments. (**Less than Significant**)

The City of Oakland's 2008 *Sanitary Sewer Design Guidelines* include average daily flow rates for specific types of development. These design standards provide that an elementary/junior high school generates an

average daily flow rate of approximately 10 gallons per day/student, and that a high school generates an average daily flow rate of approximately 15 gallons per day/student.[16] These daily flow rates are not averaged over calendar days, but are actual daily demands (i.e., these rates do not account for weekend days when no school is in session).

Conservatively assuming that all 90 percent of the interior domestic water demand attributed to the Project results in wastewater, the increase in actual daily wastewater flow can be calculated as follows:

- 90% of the 331,365 gallons of domestic water demand between mid-December 2019 and mid-February 2020 = 298,230 gallons
- divided by 881 students = 338 gallons per student
- divided by 33 actual school days during the mid-December 2019 and mid-February 2020 school calendar = approximately 10.25 gallons per actual day per student

This calculated wastewater demand for the Head-Royce School is approximate to the City of Oakland's 2008 Sanitary Sewer Design Guidelines' estimate of wastewater flow rates for schools, of between 10 and 15 gallons per person. The Project proposes to add up to 344 additional students. At an average of 10.25 gallons per day per student, the increase in wastewater flow attributed to the Project is approximately 3,526 gallons per day.

Although the EBMUD MWWTP can provide primary treatment for up to 320 MGD, and secondary treatment for a maximum flow of 168 MGD, the latest NPDES permit issued by the RWQCB limits average dry weather flow discharge to the Bay to 120 MGD at its discharge point. Current (as of 2015) discharge rates from the MWWTP at the outfall were approximately 53.8 MGD, leaving a potential increase of up to 66.2 MDG of discharge capacity.

An increase of slightly over 3,500 gpd of wastewater as generated by the Project, represents a very small fraction (approximately 0.004 percent) of the remaining discharge capacity of the MWWTP. This minor increase in wastewater flows can be accommodated at the MWWTP, and is not substantial in the context of total wastewater flows processed at the MWWTP and disposed of into the Bay. EBMUD has sufficient capacity to treat and dispose wastewater flows from the Project, and construction of new wastewater treatment facilities or expansion of existing facilities would not be needed. As such, the Project would have a less than significant impact on wastewater treatment and disposal facilities.

Mitigation Measures

None needed

Stormwater Drainage

Utilities-3: The Project will not result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. (**Less than Significant**)

As indicated in the Project Description (see Table 3-4) of this EIR, the Project will remove 8 of the 12 existing buildings on the site, and will add new buildings and replace existing paved surfaces, resulting in a net decrease of approximately 15,000 square feet of impervious surface across the site as compared to pre-Project conditions.

The Project's Stormwater Plan indicates that 10-year peak flows from the site will be reduced to at least pre-project levels at all points of discharge, thereby slightly lowering the stormwater runoff into existing storm

[16] City of Oakland Department of Engineering and Construction, *Sanitary Sewer Design Standards*, Table 18, August 2008

drain facilities. As indicated in Table 11-1 of the Hydrology chapter, stormwater runoff contributing to adjacent off-site drainage channel will be reduced by approximately 1.16 cubic feet per second (cfs), runoff contributing to stormdrain within the Linnet right-of-way will be reduced by approximately 0.21 cfs, and runoff contributing to the stormdrain within the Lincoln Avenue right-of-way will be reduced by approximately 0.22 cfs. There will be a slight increase in runoff attributed to the new pedestrian tunnel (0.31 cfs) that will outflow into the existing Campus and its drainage area, but the net result will be an overall decrease of approximately 1.27 cfs of runoff from the site, post Project.

Since the Project will result in an overall reduction in stormwater flows from the site, the Project will similarly reduce (rather than increase) stormwater flows that contribute to the off-site drainage channel/creek, and to the City stormdrain systems within both the Linnet Road and Lincoln Avenue rights-of-way. As such, the Project's stormwater runoff will be able to rely on existing storm water infrastructure and will not result in the need for relocation or construction of new or expanded stormwater drainage facilities.

Regulatory Requirements

Pursuant to ***SCA Utilities-7, Storm Drain System***, the Project's preliminary storm drainage system has been designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. Final storm drain system designs will be reviewed for consistency with these Guidelines by the Bureau of Building prior to approval of any construction-related permit for the Project. Peak stormwater runoff from the Project site has been reduced through reductions in impervious surfaces to the maximum extent practicable, resulting in a reduction of approximately 8 percent as compared to the pre-Project condition.

Mitigation Measures

None required

Utility Service Connections

Utilities-4: The Project will require relocation or construction of new or expanded water distribution, wastewater collection, and electric power, natural gas and telecommunication facilities. The construction or relocation of these utility connections will not cause significant environmental effects. (**Less than Significant with SCAs**)

The Project will require new water services (domestic, fire and irrigation systems), sewer connections and stormdrain connections, and updated electrical, gas and communication system infrastructure (please also refer to the Hydrology chapter of this EIR for additional storm drainage topics):

- Water connections for domestic and fire supply will be provided from an existing EBMUD trunk line located within the Lincoln Avenue right-of-way, or from an existing on-site water line within the former Perkins Road right-of-way. New service laterals may require special connections including separate meters, piping, valves and backflow devices.
- Wastewater will be collected and conveyed into the existing City sewer line within the Lincoln Avenue right-of-way, and a new connection to an existing sewer line within the adjoining Linnet Avenue right-of-way.
- Storm drains will connect to existing storm drain mains primarily located within the Lincoln Avenue alignment, with a new on-site stormdrain line along the lower (westerly) portion of the new Loop Road.
- Electrical, gas and communication services will be routed from various points of connections along the property edge, with all required switches and equipment.

Regulatory Requirements

The relocation or construction of new utility connection will be required to comply with all construction-related SCAs as identified throughout this EIR, including SCA pertaining to asbestos in structures, potential discovery of archaeological resources, obtaining all construction-related permit, addressing hazardous materials during construction, hazardous building materials and site contamination, erosion and sedimentation controls, applicable Construction General Permit and NPDES C.3 Stormwater requirements, architectural copper, allowed construction days/hours, and construction noise.

Additionally, pursuant to ***SCA Utilities-3: Sanitary Sewer System***, the project applicant will be required to submit a Sanitary Sewer Impact Analysis to the City, including an estimate of pre-project and post-project wastewater flows from the Project site. If this analysis indicates a net increase in wastewater flow that exceeds the City's projected increase in wastewater flow in the sanitary sewer system, the Project applicant would be required to pay Sanitary Sewer Impact Fees in accordance with the City's Master Fee Schedule. Pursuant to ***SCA Utilities-4: Underground Utilities***, the project applicant will also be required to underground all new utilities serving the project (including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities). Utilities under the control of other agencies (such as PG&E) shall be placed underground if feasible, and all utilities shall be installed in accordance with standard specifications of the serving utilities.

With implementation of all applicable SCAs and regulatory requirements, the construction or relocation of utility connections will not cause significant environmental effects.

Mitigation Measures

None needed

Solid Waste

Utilities-5: The Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The Project would comply with federal, State and local management and reduction statutes and regulations related to solid waste. (**Less than Significant**)

CalRecycle provides estimated solid waste generation rates (the amount of waste created by different land use types), which can be used to estimate the impact of new developments on the local waste stream. These waste generation rates include all materials discarded, whether or not they are later recycled or disposed in a landfill. These waste generation rates are extracted from various sources, which are cited by CalRecycle. This data is not official CalRecycle information (it was developed by city and county planning and environmental departments), but is useful in providing a general level of information for planning purposes. According to these cited sources, a school can be estimated to generate between approximately 0.6 pounds of waste per person per day,[17] and 1 pound of waste per student per day.[18] Using these waste generation rates, The Project (at 344 additional students and 17 additional staff) may generate between 220 and 344 pounds of waste per day.

With an average output of 2,027 tons per day at the Davis Street Transfer Station, the Project's incremental contribution to total waste managed at the Transfer Station represents a very small fraction (approximately

[17] https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates, sourced to: Guide to Solid Waste and Recycling Plans for Development Projects (Santa Barbara County Public Works Department, citing SWANA Tech. Bull. 85-6; Recovery Sciences, 1987; and Matrix Mgmt. Group, "Best Management Practices Analysis for Solid Waste"

[18] https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates, sourced to: Draft Program EIR for Rye Canyon Business Park, Santa Clarita, citing SWANA Tech. Bull. 85-6; Recovery Sciences, 1987; and Santa Clarita SRRE 1990

0.008 percent) of the transfer station's average daily outflow. At the Altamont landfill, which has a permitted maximum disposal capacity of 7,000 tons per day, the Project's contribution to landfill capacity is too small to calculate. The Project's impact on the capacity of local solid waste infrastructure would be less than significant.

School Programs and Project Measures

As part of the Head-Royce Campus, the Project will participate in school-wide initiatives that include replacing general garbage bins with separate bins for organics (compost), recycling and garbage (refuse). Students will eat at the existing Jayhawk Cafe, which uses compostable utensils and cups, post-consumer recycled napkins and paper towels, and separated collection of food leftovers by organics, recyclable and garbage. The School also uses compost in the School garden that is derived from food waste from the Café.

Regulatory Requirements

During construction, the Project will result in construction debris and waste. Pursuant to ***SCA Utilities-5: Construction and Demolition Waste Reduction and Recycling***, the Project applicant will be required to prepare and implement a Construction and Demolition Waste Reduction and Recycling Plan, specifying the methods by which construction will provide for the diversion of construction and demolition debris from landfill disposal, in accordance with current City requirements.

During Project operations and pursuant to ***SCA Utilities-6, Recycling Collection and Storage Space***, the Project applicant will provide recycling collection and storage areas at the Project site that are in compliance with City Ordinance requirements.

With implementation of all regulatory requirements and the extension of School programs for waste diversion and source reduction, the Project will comply with federal, State and local management and reduction statutes and regulations related to solid waste, and will not impair attainment of citywide solid waste reduction goals.

Mitigation Measures

None needed

Energy

Utilities-6: The Project would not resulted in an environmental impact due to a wasteful, inefficient or unnecessary consumption of energy resources during project construction or operations, or conflicted with state or local plans for renewable energy or energy efficiency. **(Less than Significant**)

Based on the CalEEMod emissions calculator, the Project is estimated to result in a demand for approximately 132,000 kWh of electrical energy per year (or approximately 2.86 kWh/building square foot/year) and a demand for approximately 490,000 kBTUs of natural gas energy per year (or approximately 10.6 kBTUs/building square foot per year). According to one source, kindergarten through high school buildings in the United States use an average of 10 kWh of electricity and about 50 kBTUs of natural gas per building square foot annually.[19] The Project's projected energy use represents approximately 20% to 28% of the average energy demands of a typical school in the US, reflective of California's overall lower energy demands. The Project's total energy demands are generally in line with a more recent survey of San Francisco Unified School District buildings, which indicate those schools generate a demand for between 2 and 4.5 kWh/building square foot/year, and between 15 and 40 kBTUs/building square foot per year.[20] In a typical

[19] https://ouc.bizenergyadvisor.com/article/k-12-schools

[20] www.green-technology.org , School Energy Coalition, Getting Real: Zero Net Energy Schools in California

school building, space heating, cooling, lighting and water heating account for majority of school energy use, and office equipment such as computers and copiers constitute one of the top three electricity end uses.

This generalized date presented above demonstrates that Project will not consume energy resources in wasteful, inefficient or unnecessary manner. In addition, City of **Oakland SCA Utilities-2** requires that the Project comply with applicable requirements of the California Green Building Standards (CALGreen) as related to energy use (i.e., Title 24 standards). Further, the Project applicant's PUD permit proposal indicates the School's intent to pursue LEED Gold certification for the renovation of existing Buildings 0, 1 and 2, and to meet LEED Gold certification or equivalent for new construction of the Performing Arts Center and Link Pavilion. Strategies to meet these goals may include natural daylighting, use of renewable energy, thermal energy storage and rainwater harvesting.

With implementation of City of Oakland SCAs and the Project's intent to achieve/pursue LEED Gold standards, the Project will not conflicted with any state or local plans for renewable energy or energy efficiency, and energy impacts of the Project would be less than significant.

Mitigation Measures

None needed

Utilities – Cumulative

Utilities-6: The Project would not result in a significant contribution to any cumulative impacts on the utilities and infrastructure serving the site and the surrounding community. (**Less than Cumulatively Significant**)

Each of the analyses presented above compare the Project's potential impacts to utilities and utility infrastructure to overall cumulative demands:

- The water demands of the Project are added to the cumulative water demands of the entire EBMUD service district, and the analysis concludes that EBMUD's existing water supplies are estimated to be sufficient to meet projected demands of the Project and other reasonably foreseeable future cumulative development during normal and multiple dry years. The combination of rationing, conservation, and raw and recycled water would satisfy increased customer demand, even during drought years through 2040. Supplemental water supplies will be needed to keep rationing at a lower level and to meet the need for water in drought years, and EBMUD will continue to study several supplemental supply components as part of the WSMP 2040 Portfolio.
- The wastewater treatment and disposal demands of the Project are added to the cumulative wastewater treatment and disposal demands of the entire area tributary to the EBMUD MWWTP, and the analysis concludes that the Project would not result in a determination by the wastewater treatment provider (EBMUD) that it does not have adequate capacity to serve the Project's wastewater treatment demand, in addition to EBMUD's existing cumulative commitments.
- The stormwater analysis of the Project demonstrates that the Project will result in an overall reduction in stormwater flows from the site, thereby reducing (rather than increasing) cumulative stormwater flows that contribute to the off-site drainage channel/creek, and to the City stormdrain systems.
- The solid waste analysis finds that the Project would not generate solid waste in excess of State or local standards, or in excess of the cumulative capacity of local waste disposal infrastructure (transfer stations or landfill capacity), or otherwise impair the attainment of cumulative solid waste reduction goals.

16

Wildfire and Emergency Evacuation

This chapter of the EIR evaluates the potential impacts of the Project related to wildfire hazards and potential conflicts hazardous emergency access and evacuation plans. This chapter describes the existing wildfire hazard conditions in and near the Project, and evaluates the extent to which wildfire hazards may affect development of the Project, and the extent to which the Project may affect emergency evacuation planning for the area.

Information for this chapter of the EIR has been derived from the following primary sources:

- Wildland Res. Mgt., *Vegetation Management Plan and Fire Safety Phasing Plan for the Defensible Space of the Head-Royce School*, November 13, 2020 (**Appendix 16A**)
- Stephen Wong, Doctoral Candidate at the University of California, Berkeley, *Evacuation Planning Recommendations for Head-Royce School*, November 2, 2020 (**Appendix 16B)**

Environmental Setting

This section describes the environmental setting that is applicable to health and safety regarding hazards and hazardous materials associated with the Project area.

Wildland Fires

The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors.[1] Factors that increase an area's susceptibility to fire hazards include atmospheric conditions, slope, and vegetation type and condition. The CAL FIRE Hazard Severity Map for the City of Oakland (see **Figure 16-1**) identifies the Project site as being within a Very High Fire Hazard Severity Zone (VHFHSZ).[2]

The Wildland Urban Interface, or WUI is not a designation of potential wildfire severity, but rather a description of areas where urban development meets undeveloped lands at risk of wildfires. The pattern of development and land use within the City's VHFHSZ creates conditions that can be described as either a wildland urban interface (WUI) or a wildland urban intermix. The Project site is located within an area identified as a WUI, as shown on **Figure 16-2**.[3, 4]

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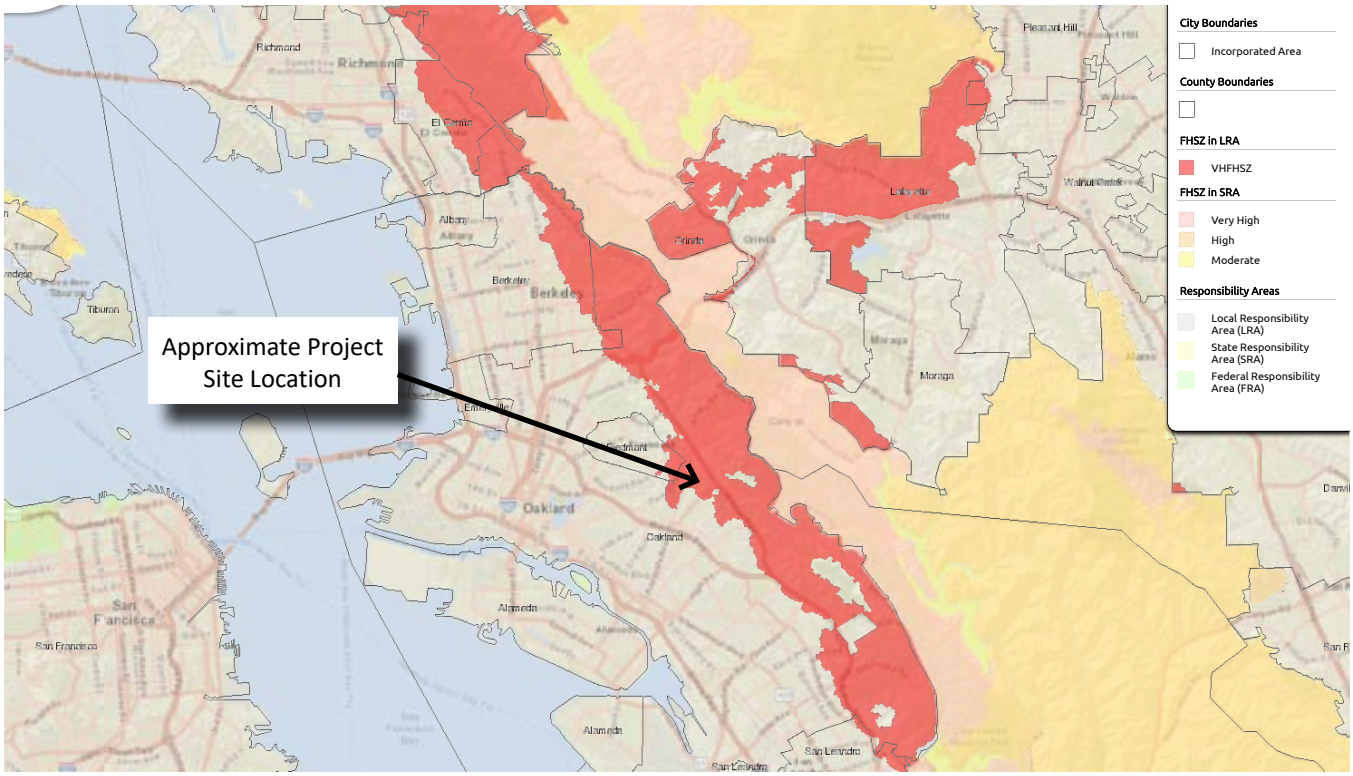
1 PRC 4201-4204 and Govt. Code 51175-89

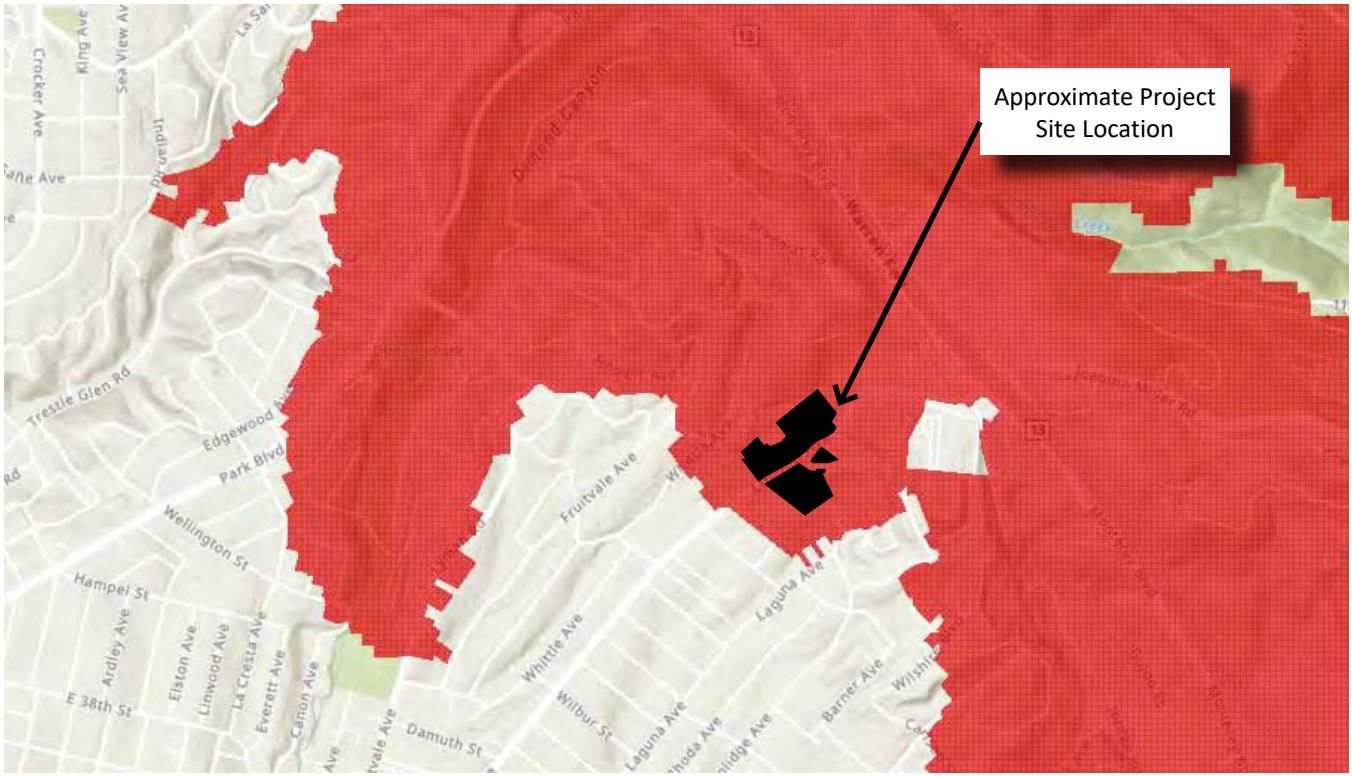
2 CalFire website access 2/18/20 at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

3 Accesses at: https://abag.ca.gov/our-work/resilience/data-research/wildfire

4 The current dataset for mapping the WUI is appropriate for displaying the overall pattern of WUI development at the county level, and comparing counties in terms of development patterns. Until the dataset is refined through a field review process, it is not suited for WUI designations for individual houses or neighborhoods.



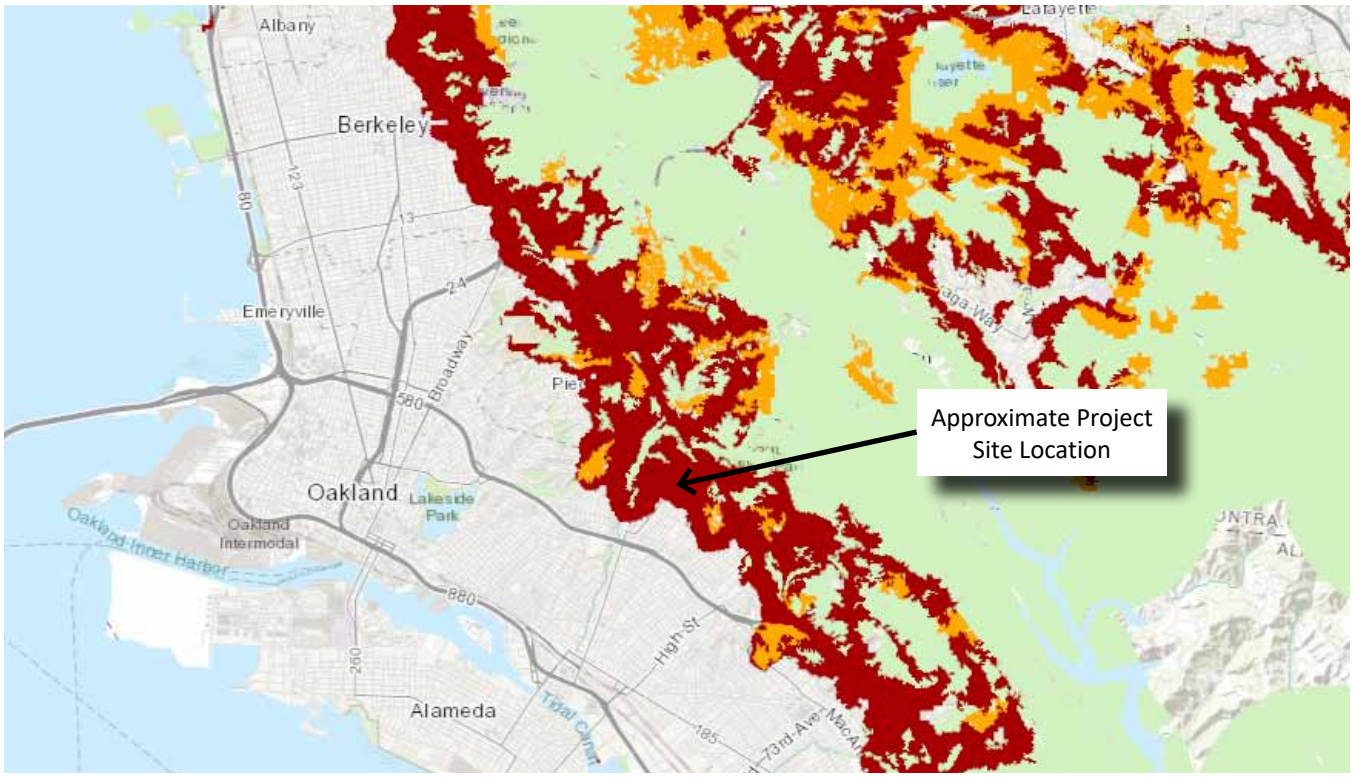
VHFHSZ, East Bay Hills



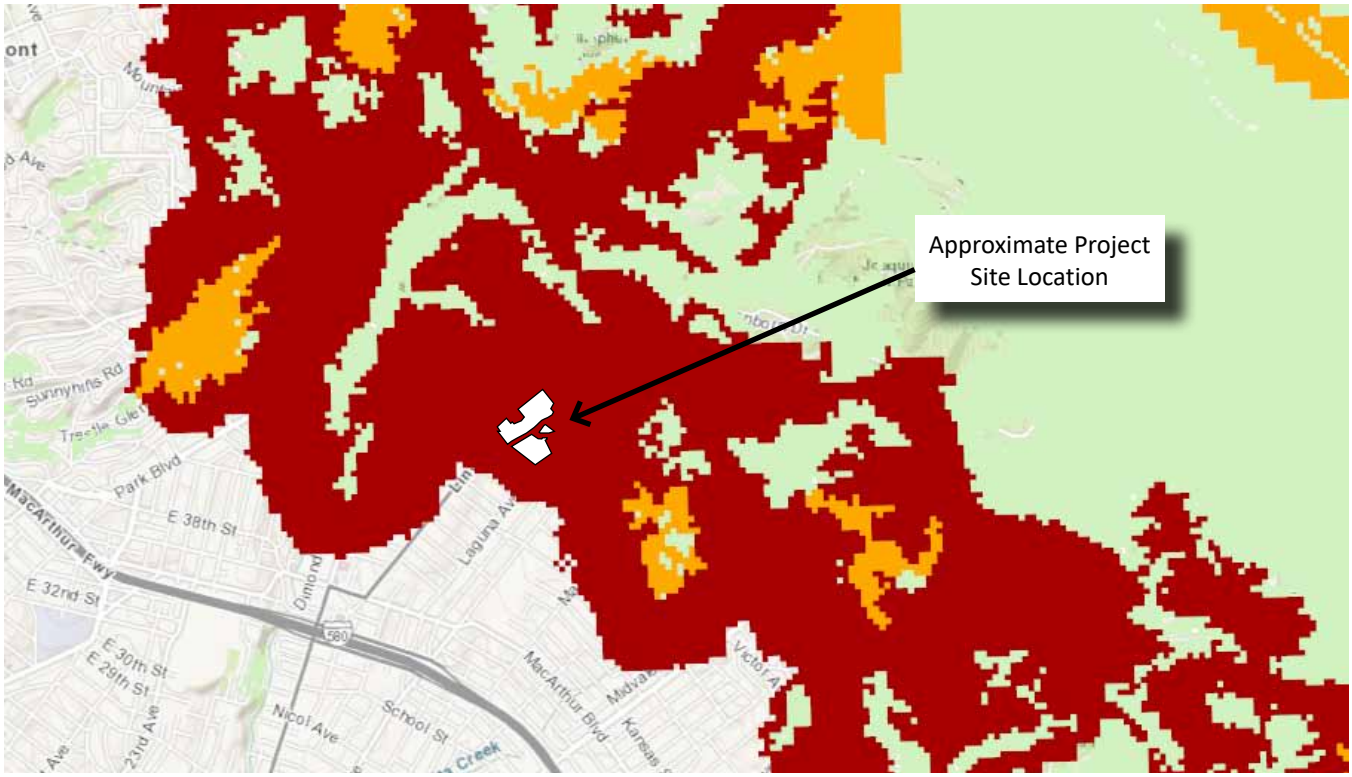
VHFHSZ, Project Site and VIcinity

Figure 16-1
Local (Oakland) Responsibility Area, Very High Fire Hazard Severity Zone (VHFSZ)

Source: CALFIRE, California Fire Hazard Severity Zone Viewer accessed: https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414



Wildland-Urban Interface Fire Threat, East Bay Hills



Wildland-Urban Interface Fire Threat, Project Site and Vicinity

Figure 16-2
Wildland-Urban Interface (WUI) Fire Threat

Source: ABAG, data produced by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program, accessed at: https://abag.ca.gov/our-work/resilience/data-research/wildfire

- The area where urban development abuts vegetative fuels is known as the wildland urban interface (WUI). This condition exists within the City's VHFHSZ where structures abut City parklands and open space. The wildland fire risk associated with WUI areas includes propagation of fire throughout WUI communities via house-to-house fire spread, landscaping-to-house fire spread, or ember intrusion.
- Those areas are where housing or other development intermingle with flammable vegetation are known as the wildland urban intermix. In the Intermix, wildland vegetation is continuous, and more than half of the land area is vegetated with combustible fuels. This condition exists throughout the City's VHFHSZ where smaller undeveloped lots consisting of vegetative fuels are situated between structures. The wildland fire risk associated with Intermix areas includes vegetation-to-house fire spread, or ember intrusion.

Fire Hazard Conditions Specific to the Project Site

Fire hazards are influenced by weather, topography and fuels. These fire hazard factors specific to the Project site are described below.[5]

Weather

Weather at the Head-Royce School is typical of the East Bay Hills. Temperatures are moderately hot during the summer, and rain ceases in May, to return only five to six months later. Fire season is at least six months long, and has recently been extended into to December. Winds carrying moisture form the ocean and Bay normally blow from the west, but occasionally, dry and hot northeast winds blow parallel to Highway 13, and more rarely, winds blow westerly from the east over the East Bay Hills. These westerly winds are associated with extreme fire danger and high ignition potential, and conditions where fires burn intensely and spread rapidly. They may also funnel down the canyon in which the Head-Royce School is located. Local weather conditions are conducive to wildfires for at last six months of each year, with the greatest risk occurring during the fall, when school is in full operation.

Topography

Topographically, the Head-Royce School properties are located on a west-facing slope below Highway 13, mid-slope on the Oakland Hills. On a more local scale, the Head-Royce Campus sits in a topographic bowl, or bottom of a canyon. The southwest-facing slopes in the northeast portion of the existing Campus are the steepest, at greater than 30% slope. The developed portion of the existing Campus is fairly flat, and the playing fields, pool and tennis courts completely so. Many of the instructional buildings and the Gymnasium are at the base of the topographic bowl, while the administrative buildings site higher on the existing Campus site, near Lincoln Avenue. The former Lincoln site is generally flat, and its topography poses no particular hazard for wildfires.

Vegetation

Vegetation throughout the Campus is a mixture of landscaping, with areas north of the soccer field at the existing Campus that can be characterized as wildlands. On-Campus landscaping is generally a mix of lawn and tended trees, with some shrubs used as visual barriers, and is generally located closer to existing structures. The wildlands encircle the upper portions of the Campus and extend to its outer boundaries. Each vegetation type burns differently during a wildfire.

- Grasses within the Campus can ignite easily, burn with little total heat output, but with long flame lengths and high rates of spread

[5] Wildland Res. Mgt., November 13, 2020

- Shrub or scrub vegetation types are not easily ignited, but burn with great intensity (typically with flames longer than 20 feet)
- Scattered woodlands and bay forests on the former Lincoln site produce fairly benign fire behavior under all but extreme conditions.
- The most hazardous vegetation, by far, are the areas containing non-native eucalyptus. These trees produce the greatest volume of dead material, which can be ignited year-round. Their fuel volume is arranged throughout the tree height, which promotes torching. When a tree torch, the fire defies containment, and spreads embers for thousands of feet, and can cause countless new ignitions. In addition to the threat caused by torching, these trees produce high levels of heat, and often at the same plane as those attempting access or egress.
- Riparian areas are usually not hazardous, although under extremely dry conditions, the high volume of fuel in riparian areas can burn with great intensity.

Building Susceptibility

All of the buildings on the proposed South Campus were built before state and local and the building codes required consideration of wildfire. Buildings in the existing Campus that were constructed since 2007 are generally ignition-resistant.

Emergency Evacuation

There are no officially designated emergency evacuation routes identified in the vicinity of the Head-Royce School. However, for any emergency evacuations that may occur as a result of a wildfire spreading into the Wildland Urban Interface, or an earthquake-induce fire that is generated along the Highway 13/Hayward fault, there are only a few clear and practical emergency evacuation routes available:

- Park Boulevard, downhill or to Highway 13 from near the Montclair commercial center
- Joaquin Miller Road, downhill to Highway 13, or continuing downhill via Lincoln Avenue
- Redwood Road, downhill to Highway 13, or continuing downhill via 35th Avenue, or
- Mountain Boulevard to Highway 13, or continuing downhill via Carson Road/High Street

The Project Site fronts immediately onto Lincoln Avenue, one of these practical emergency evacuation routes.

Regulatory Setting

This section provides an overview of the regulatory framework pertaining to wildfire protection and emergency evacuation planning applicable to the Project Site.

California Fire Code

The California Fire Code is part of the California Code of Regulations, Title 24, and applies to construction and design provisions for all structures, facilities and conditions arising after the adoption of this code, and certain existing structures, facilities and conditions that, in the opinion of the fire code official, constitute a distinct hazard to life or property. A change of occupancy of an existing building shall not be made unless the use or occupant is made to comply with the requirements of this code and the California Existing Building Code.

Chapter 49 - Requirements for Wildland-Urban Interface Fire Areas

The purpose of this Chapter of the Fire Code is to provide minimum standards to increase the ability of a building to resist the intrusion of flame or burning embers being projected by a vegetation fire and to contribute to a systematic reduction in conflagration losses through the use of performance and prescriptive requirements.

Section 4904: Fire Hazard Severity Zones

Pursuant to Section 4904 of the Fire Code, lands in the state are classified by the CDF Director (CAL FIRE) in accordance with the severity of wildfire hazard expected to prevail in those areas, and by the responsibility for fire protection, so that measures may be identified which will reduce the potential for losses to life, property and resources from wildfire. For those areas of the State that fall under State Responsibility, the Fire Hazard Severity Zones (FHSZs) are classified as Very High, High, or Moderate pursuant to California Public Resources Code Sections 4201 through 4204, and those areas of the State that are identified as a Local Agency Responsibility Very High Fire Hazard Severity Zones (e.g., all VHFHSZs within the City of Oakland) are classified pursuant to California Government Code Sections 51175 through 51189. These State government codes direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The resulting FHSZs define the application of various mitigation strategies to reduce risk associated with wildland fires. The model used to determine the extent of FHSZs is based on an analysis of potential fire behavior, fire probability predicated on frequency of fire weather, ignition patterns, expected rate of spread, ember (brand) production, and/or past fire history. Structures built in FHSZs are subject to more stringent fire hardening requirements than those that are not.

Oakland's VHFHSZ is a Local Agency VHFHSZ, and land within the City are considered a Local Responsibility Area (see Figure 16-1A). Oakland Fire Department (OFD) is the responsible agency for fire protection within the City's VHFHSZ. The Project site is located within the City of Oakland's VHFHSZ (see prior Figure 16-1).

Section 4905: Wildfire Protection Building Construction

Materials and construction methods for exterior wildfire exposure protection shall be applied within geographical areas where a wildfire burning in vegetative fuels may readily transmit fire to buildings and threaten to destroy life, overwhelm fire suppression capabilities, or result in large property losses. Within the limits established by law, construction methods intended to mitigate wildfire exposure shall comply with the wildfire protection building construction requirements contained in the California Building Standards Code, including California Building Code, Chapter 7A. These requirements establish minimum standards for the protection of life and property by increasing the ability of a building to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses, and apply to new buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area. Requirements include standards of material quality and ignition-resistant construction methods that pertain to roofing, vents, exterior coverings, exterior windows and door, decking and accessory structures.

Section 4906: Hazardous Vegetation and Fuel Management

Pursuant to this section, hazardous vegetation and fuels shall be managed to reduce the severity of potential exterior wildfire exposure to buildings and to reduce the risk of fire spreading to buildings as required by applicable laws and regulations. Buildings and structures located within lands designated as VHFHSZ by cities and other local agencies (such as the Project site) shall maintain required hazardous vegetation and fuel management in accordance with Public Resources Code Section 4291, California Code of Regulations Title 14 (see guidance for implementation in "General Guideline to Create Defensible Space"), California Government Code, Section 51182 and California Code of Regulations, Title 19 Division 1, Chapter 7, Subchapter 1, Section 3.07.

Section 4907: Defensible Space

Pursuant to this Section, defensible space will be maintained around all buildings and structures in the Very-high Fire Hazard Severity Zones of a Local Responsibility Areas (LRA) as outlined in Government Code 51175 through 51189, and any local ordinance of the authority having jurisdiction. Specifically, California Government Code section 51182 provides that:

> "*A person who owns, leases, controls, operates, or maintains an occupied dwelling or occupied structure in, upon, or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land, or land that is covered with flammable material, which area or land is within a very high fire hazard severity zone designated by the local agency, shall at all times maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line (except as provided in paragraph 2). The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure*."

This regulation does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation.

Chapter 9: Fire Protection and Life Safety Systems

This Chapter of the Fire Code provides specifications and details pertaining to automatic sprinkler systems, portable fire extinguishers, fire alarm and detections systems, smoke control systems, fire department connections, carbon monoxide detection and other systems to be incorporated into existing and new buildings, based on occupancy type. Determination of occupancy type for each building, and required fire protection and life safety systems within the Project will be determined by the City Building Services and Fire Department, but are assumed these requirements identified for Educational Group E occupancies, which include buildings or structures used by more than six persons at any one time for educational purposes through the 12th grade. Generally, an automatic sprinkler system shall be provided for all Group E occupancies for defined "fire areas" greater than 12,000 square feet in area.

Chapter 5: Fire Service Features

This Chapter of the Fire Code provides specifications and details pertaining to proposed fire apparatus access, the location of fire lanes, security gates across fire apparatus access roads, and construction documents and hydraulic calculations for fire hydrant systems. Construction documents for each of the fire service features shall be submitted to the Fire Department for review and approval prior to construction. Generally, provisions of this Chapter include the following specifications applicable to the Project:

- Fire apparatus access road shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building
- Required access roads from every building to a public street shall be all weather hard-surfaced (suitable for use by fire apparatus) right-of-way not less than 20 feet in width. Such right-of-way shall be unobstructed and maintained only as access to the public street.
- The fire code official is authorized to require the installation and maintenance of specialized gates or other approved barricades across fire apparatus access roads or other access ways. Every public and private school shall conform with Section 32020 of the Education Code which states:

  "*The governing board of every public school district, and the governing authority of every private school, which maintains any building used for the instruction or housing of school pupils on land entirely enclosed (except for building walls) by fences of walls, shall, through cooperation with the local law*

enforcement and fire-protection agencies having jurisdiction of the area, make provision for the erection of gates in such fences or walls. The gates shall be of sufficient size to permit the entrance of the ambulances, police equipment and fire-fighting apparatus used by the law enforcement and fire-protection agencies. There shall be no less than one such access gate and there shall be as many such gates as needed to assure access to all major buildings and ground areas. If such gates are to be equipped with locks, the locking devices shall be designed to permit ready entrance by the use of the chain or bolt-cutting devices with which the local law enforcement and fire-protection agencies may be equipped."

- An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises on which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction. Where a portion of the facility or building is more than 400 feet from a hydrant on a fire apparatus access road, on-site fire hydrants and mains shall be provided where required by the fire code official.

State Emergency Response Plan

The State of California Emergency Plan addresses California's response to emergency situations associated with natural disasters or human-caused emergencies. In accordance with the California Emergency Services Act, this Plan describes the methods for conducting emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, how resources are mobilized, how the public will be informed, and the process to ensure continuity of government during an emergency or disaster. The concepts presented in this plan include mitigation programs to reduce the vulnerabilities to disasters and preparedness activities to ensure the capabilities and resources are available for an effective response. To assist communities and governments to recover from a disaster, the plan outlines programs that promote a return to normalcy. The Plan incorporates and complies with the principles and requirements found in federal and state laws, regulations and guidelines. It is intended to conform to the requirements of California's Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS) and be consistent with federal emergency planning concepts such as the National Response Framework (NRF) and catastrophic concept of operations (CONOPS) documents developed jointly by the Federal Emergency Management Agency (FEMA) Region IX and the State. CONOPS are developed in support of the State Emergency Plan.[6]

As indicated in Section 6.3.3 of this Plan, wildfire hazard risk exposure is generally pervasive, with highest concentrations in southern California. Since 1954, 73 percent of presidentially- declared disasters in California were the result of wildfires. The California Fire Service Task Force on Climate Impacts was established in July 2014, with the objectives reviewing past recommendations and action plans, validating and prioritizing items that remain outstanding, and evaluating the most current climate threats, science, studies and recommendations. The Task Force will also, as necessary, develop new or updated recommendations related to wildfire preparedness and mitigation needed to successfully adapt to California's changing climate, aligning actions and recommendations with the State's climate adaptation strategy and related efforts.

City of Oakland Plans, Policies, Programs and Regulations

Oakland General Plan, Open Space Conservation and Recreation Element

The Open Space Conservation and Recreation Element of the City's General Plan is the official policy document addressing the management of open land, natural resources, and parks in Oakland. It includes policies regarding topics such as flood control and discharge, creek maintenance, tree removal, wildlife

[6] Accessed 11/5/2020 at: https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/California_State_Emergency_Plan_2017.pdf

corridors, and transportation management, among others. The element also discusses fire prevention measures, flammable vegetation control, fire-resistant landscape guidelines, and public education on fire suppression.

City of Oakland 2016–2021 Local Hazard Mitigation Plan

The Local Hazard Mitigation Plan, adopted June 7, 2016, is intended to assess the risks to the City and to the people of Oakland from natural and human-caused hazards. The Local Hazard Mitigation Plan reviews risks from hazards, including wildfire hazards, identifies mitigation measures to reduce those risks, and presents an implementation program for the next 5 years. The 2016–2021 Plan functions as an appendix to the 2004 Safety Element of the Oakland General Plan, is an update to the 2010–2015 Local Hazard Mitigation Plan, and complements the City's ongoing disaster, emergency, and resilience planning efforts. The City Administrator's office and the OFD's Emergency Management Services Division are responsible for monitoring mitigation measures and annual review of the Local Hazard Mitigation Plan in partnership with staff from the Planning and building Department. [7]

Revised Draft Vegetation Management Plan

This City of Oakland's 2019 Revised Draft Vegetation Management Plan is a draft document that describes the actions that the Oakland Fire Department (OFD) will continue to take over the 10-year Plan timeframe to reduce fire hazard on 1,924 acres of City-owned land and along 308 miles of roadway in the City of Oakland's designated Very High Fire Hazard Severity Zone (VHFHSZ). The VMP has been developed to meet its stated goals of reducing wildfire hazard on City-owned land and along critical access/egress routes, reducing the likelihood of ignitions and extreme fire behavior to enhance public and firefighter safety, avoiding or minimizing impacts to natural resources, and contributing to regional efforts to reduce wildfire hazard in the Oakland Hills. The Oakland Hills present a complex wildfire environment that presents a significant risk to public and firefighter safety and the built and natural environment. This area is one of the highest risk areas in the country for devastating wildland urban interface (WUI) fires, and is the location of one of the state's most destructive historic wildfires, the 1991 Tunnel Fire. Lessons learned from this and more recent, devastating wildfires in Northern California highlight the importance of managing vegetation to reduce wildfire hazard.

This Plan includes a detailed assessment of wildfire hazard, which was used to identify and map areas with high ignition potential or where extreme wildfire behavior would be expected, given current terrain and fuel conditions. Plan development included coordination with OFD personnel and significant public and stakeholder outreach to better understand current vegetation management activities in the Plan Area. Vegetation treatment projects were then identified and prioritized based on proximity to Plan Area structures, roads, ridgelines, and park access gates, where fire behavior is anticipated to be extreme (high flame lengths and/or crown fires), and where continuation of the City's goat grazing program would effectively maintain lower fuel loads. Identified priority projects total 1,366 acres within the Plan Area's 1,924 total acres. This Plan also prioritizes vegetation management along 30 miles of primary access/egress routes in the Plan Area. This Plan also outlines measurable vegetation treatment standards, by dominant vegetation type, and identifies a range of vegetation management tools that can be utilized by OFD, or its contractors, to reach these treatment standards. As vegetation is dynamic in nature, this Plan outlines an adaptive field assessment and work plan development process to be implemented by OFD annually, which accounts for the variability in vegetation condition project site conditions over time.

[7] http://www2.oaklandnet.com/government/o/PBN/OurOrganization/PlanningZoning/s/LocalHazardMitigationPlan/OAK058455

Oakland Fire Code

Oakland Municipal Code Chapter 15.12 (Oakland Fire Code) and its amendments establish regulations regarding the hazard of fire and explosion arising from the storage, handling, or use of structures, materials or devices; conditions hazardous to life, property or public welfare in the occupancy of structures, or premises; fire hazards in the structure or on the premises from occupancy or operation; matters related to fire suppression or alarm systems; and conditions affecting the safety of firefighters and emergency responders during emergency operations.

The Oakland Fire Code also includes Chapter 49 (Wildland-Urban Interface Areas), which defines the City's VHFHSZ and outlines requirements for defensible space, hazardous vegetation management, electrical distribution line clearances, fire apparatus access, water supply, ignition source control, and combustible materials storage, among others. Specifically, Section 4906.3 of the Oakland Fire Code states that vegetation around all applicable buildings and structures within the VHFHSZ shall be maintained in accordance with California Public Resources Code Section 4291, California Code of Regulations Title 14 – Natural Resources, Division 1.5 – Department of Forestry and Fire Protection, "General Guideline to Create Defensible Space," and California Government Code Section 51182 (see above under California Fire Code).

Section 4906.3 of the Oakland Fire Code

This section of the Oakland Fire Code states that vegetation around all applicable buildings and structures within the VHFHSZ shall be maintained in accordance with California Public Resources Code Section 4291, California Code of Regulations Title 14 – Natural Resources, Division 1.5 – Department of Forestry and Fire Protection, "General Guideline to Create Defensible Space," and California Government Code Section 51182. Because the Head-Royce School is located in a Very High Fire Hazard Severity Zone, 100-feet of defensible space would be required.

Oakland Fire Department Vegetation Inspection Program

The OFD Vegetation Management Unit (VMU) serves to inspect properties in the Oakland Hills, much of which is designated as a Very High Fire Hazard Severity Zone (VHFHSZ). The VMU works under the Oakland Fire Department's Fire Prevention Bureau. The VMU is responsible for the inspections of over 20,000 homes and vacant parcels in the VHFHSZ. The purpose of these inspections is to identify and mitigate hazards that could contribute to the spread, growth, and intensity of wildfire. Inspections are done annually, and property owners are required to actively maintain their parcels in a fire-safe condition year-round. The Vegetation Management Unit does inspections to identify potential hazards in an area described as the Wildland-Urban Interface (WUI). The goal is to reduce the amount of fuel (combustible, flammable vegetation) that could contribute to the spread, growth, and intensity of wildfires.

Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to hazards and hazardous materials are listed below for reference. If the Project is approved, applicable SCAs would be adopted as conditions of that project approval to help reduce potential impacts associated with hazards and hazardous materials.

SCA Fire-1, Designated Very High Fire Severity Zone – Vegetation Management

***Applies to**: All projects involving construction of new facilities (e.g., new primary dwellings, new commercial buildings) located in the Designated Very High Fire Severity Zone*

Vegetation Management Plan Required: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:

1. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically
2. Removal of leaves and needles from roofs and rain gutters
3. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure
4. Trimming back vegetation around windows
5. Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes of 5 to 20% and within 100 feet or to the property line on slopes greater than 20%
6. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk
7. Clearing out ground-level brush and debris; and All non-ornamental plants, seasonal weeds & grasses, brush, leaf litter and debris within 30 feet of the residential structure shall be cut, raked and removed from the parcel
8. Stacking woodpiles away from structures at least 20 feet from residential structures
9. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.

   When Required: Prior to approval of construction-related permit

   Initial Approval: Oakland Fire Department

   Monitoring/Inspection: Oakland Fire Department

Fire Safety Prior to Construction: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6" or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code.

When Required: Prior to approval of construction-related permit

Initial Approval: Oakland Fire Department

Monitoring/Inspection: Oakland Fire Department

Fire Safety during Construction: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Smoking Prohibition: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction, per Section 310.8 of the California Fire Code.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building and Oakland Fire Department

SCA Fire-2, Fire Safety Phasing Plan

***Applies to**: All projects to be constructed in phases and with the furthest structure over 150 feet from the nearest fire hydrant*

The project applicant shall submit a Fire Safety Phasing Plan for City review and approval, and shall implement the approved Plan. The Fire Safety Phasing Plan shall include all of the fire safety features incorporated into each phase of the project and the schedule for implementation of the features.

When Required: Prior to approval of construction-related permit

Initial Approval: Oakland Fire Department

Monitoring/Inspection: Bureau of Building

SCA Fire-3: Compliance with Other Requirements

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, Department of Transportation, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans.

Other Fire Safety and Fire Management Programs

Alameda County Community Wildfire Protection Plan [8]

The Diablo Fire Safe Council, in conjunction with the Alameda County Fire Chief's Association, the Hills Emergency Forum, the Oakland Wildfire Prevention Assessment District, and Stakeholder Committee members prepared the Community Wildfire Protection Plan (CWPP) that accounts for all parts of Alameda County. The CWPP acts as a multi-year guiding document to facilitate implementation of present and future mitigation efforts. The goal of the CWPP is to reduce fire hazard through increased information on, and education about wildfires, hazardous fuels reduction, actions to reduce structure ignitability and other recommendations to facilitate emergency preparedness and fire suppression efforts. The CWPP provides an overview of wildfire hazards and risk in the WUI areas of Alameda County, California. The CWPP follows the format established by the federal Healthy Forest Restoration Act by identifying and prioritizing opportunities for fuel reduction within the County, addressing structural ignitability, and including collaboration with stakeholders. In order to accomplish this, action plan summaries are provided that identify implementation steps, leaders and partners, timeframes, and funding needs that will occur over several years to facilitate the implementation of mitigation efforts. The CWPP complements existing local agreements and plans for wildfire protection, and is updated after major events such as wildfire, flood or even significant new home development in order to remain an effective tool.

[8] Diablo Fire Safe Council, 2015

CAL FIRE/Santa Clara Unit Strategic Fire Plan

The 2016 CAL FIRE/Santa Clara Unit Strategic Fire Plan is produced on an annual basis for the coming fire season. The Plan includes an assessment of the fire situation in the Santa Clara Unit (which includes Alameda County), stakeholder contributions and priorities, and strategic targets for pre-fire solutions developed by people who reside and work in the local fire problem area. The Plan is also designed to achieve the goals and objectives of the 2010 Strategic Fire Plan for California under the direction of the Santa Clara Unit's pre-fire engineer. After identifying and evaluating existing wildfire hazards, the plan supports collaboration between stakeholders in the implementation and development of actions to reduce potential for a wildfire and ensure adequate response in the event of a wildfire.

East Bay Regional Park District East Bay Hills Wildfire Hazard Reduction, Resource Management Plan, and Environmental Impact Report

The East Bay Regional Park District (EBRPD) East Bay Hills Wildfire Hazard Reduction and Resource Management Plan (LSA 2009) was prepared to provide long-term strategies for reducing fuel loads and managing vegetation within EBRPD's Study Area parks. The plan includes wildfire hazard reduction and resource management goals that are further supported by objectives and guidelines to minimize the risk of Diablo wind-driven catastrophic wildfire along the WUI while maintaining and enhancing ecological habitat values within the EBRPD's jurisdiction. In order to achieve these goals, the EBRPD established a vegetation management plan, which describes vegetation types and characteristics within the EBRPD's Study Area, includes fire hazard reduction and resource management goals, and sets forth potential fuel treatment methods. The plan also discusses fuel reduction methods and plan implementation and allows for a feedback process to improve plan implementation.

Fire Hazard Mitigation Program and Fuel Management Plan for the East Bay Hills (1995)

The Fire Hazard Mitigation Program and Fuel Management Plan (East Bay Hills Vegetation Management Consortium 1995) covers a study area of approximately 37,000 acres from Berkeley to Oakland and summarizes the efforts of nine public agencies to mitigate fire risk, collectively referred to as the Vegetation Management Consortium (VMC). The Plan acknowledges the fire risk in the East Bay Hills, summarizes then-current plans and programs, the study area's fire environment and fire history, identifies high fire hazard areas, and prioritizes fuel treatment areas based on fire hazard ratings. The Plan also identifies vegetation management prescriptions by dominant vegetation type.

FEMA Hazardous Fire Risk Reduction Project

The City of Oakland, along with the University of California Berkeley (UCB) and the EBRPD, submitted an application under FEMA's Pre-Disaster Mitigation (PDM) grant program for six vegetation management projects in Alameda County near the Contra Costa County border. The projects included Oakland's North Hills-Skyline-PDM and Caldecott Tunnel PDM projects; UCB's Frowning Ridge-PDM project; and EBRPD's Tilden Regional Park-PDM (Tilden-Grizzly), Sibley Volcanic Regional Preserve-PDM (Sibley Triangle and Island), and Claremont Canyon-PDM (Claremont Canyon-Stonewall) projects. These six project areas total 359 acres and were intended to reduce fire hazard in the area. In its North Hills-Skyline and Caldecott Tunnel projects, the City of Oakland sought to remove eucalyptus and other trees that are prone to torching, preserve non-pyrophytic trees, and create a fuel break on the west side of Grizzly Peak Boulevard north and east of the Caldecott Tunnel. The projects have not been implemented.

State Emergency Response Plan - Evacuation Planning

The State of California Emergency Plan (described above) addresses California's response to emergency situations associated with natural disasters or human-caused emergencies. This Plan describes the methods for conducting emergency operations, the emergency services to be provided by governmental agencies, and

how the public will be informed. Among the plans and procedures of the State's Emergency Plan, the following provisions relate specifically to emergency evacuation procedures (defined in this Plan as organized, phased and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas):

- Before an emergency, residents can assist the emergency management effort by taking first aid training, maintaining emergency supplies and being prepared to evacuate or shelter in-place for several days.
- The Joint Information System (JIS), which is the coordinated and integrated system in which Public Information Officers must communicate amongst each other to form unified messages on lifesaving measures, evacuation routes, threat and alert methods, and other protective actions to numerous audiences in an accurate, timely, accessible and consistent manner.
- Local and state governments may consider supplementing their public information programs with established 2-1-1 information and referral services to increase the public's access to vital emergency-related information, including evacuation routes, shelter locations and road closures.
- Sufficient warning can provides the opportunity for response agencies to increase readiness, which are actions designed to increase an agency's ability to effectively respond once the emergency occurs. When a disaster is foreseen as highly likely, action can be taken to save lives and protect property. During this phase, warning systems are activated, evacuation begins, and resources are mobilized.
- California Highway Patrol (CHP) assists by securing routes, regulating traffic flow, and enforcing safety standards for evacuation and re-entry into evacuated areas in coordination with local agencies.
- Evacuation plans must integrate accessible transportation providers within the planning process and movement of people with mobility impairments and those with transportation disadvantages. Transportation planning considerations should include staging, embarkation points, transportation centers, evacuee locations, and care and shelter.
- Local and state governments may consider supplementing their public information programs with established 2-1-1 information and referral services to increase the public's access to vital emergency-related information, including evacuation routes, shelter locations, road closures, to reduce inappropriate calls to 9-1-1, and make referrals to essential health and social services. The 2-1-1 program can improve access to government and nonprofit community services for people who are most at risk, including older adults, individuals with disabilities, non-English speakers, those incapacitated by the disaster, and people new to their communities.

City of Oakland Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan

This Local Hazard Mitigation Plan (LHMP) is an amendment to the City's Safety Element of the General Plan, and serves an annex to the Association of Bay Area Governments (ABAG) multi-jurisdictional Local Hazard Mitigation Plan. It cites past achievement made in comprehensive emergency management planning through the development of the federal and state compliant Local Hazard Mitigation Plan (LHMP), Emergency Operations Plan (EOP), and Regional Catastrophic Preparedness Grant Program (RCPGP) Annexes. The LHMP assists in the mitigation of future disasters by identifying risk vulnerabilities and measures to alleviate the impact of hazards. The EOP is an all-hazards emergency preparedness, response and short-term recovery plan designed to serve as a basis for effective response to any hazard threatening Oakland using capabilities for the protection of citizens from the effects of disasters; facilitate the integration of mitigation in response and recovery activities; and facilitate coordination with cooperating private or volunteer organizations and County, State and Federal government in disaster situations. It focuses on the City's response to the impact

of a catastrophic earthquake on mass care and sheltering, mass transportation and evacuation, donations management, volunteer management, mass fatalities, and debris management. These are the priorities that City of Oakland staff assigned to the ABAG Multi-Jurisdiction Local Hazard Mitigation Plan Strategies. The strategies are grouped by topic: Economy; Education; Environment; Government; Health; Housing; Infrastructure; and Land Use. Among the mitigation strategies included in the LHMP, the following pertain specifically to the topic of emergency evacuations:

- Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging private businesses' employees to have disaster plans that include drop-cover-hold earthquake drills, fire and storm evacuation procedures, and shelter-in-place emergency guidelines.
- Develop plans, in conjunction with fire jurisdictions, for evacuation or sheltering in place of school children during periods of high fire danger, thereby recognizing that overloading of streets near schools by parents attempting to pick up their children during these periods can restrict access by fire personnel and equipment

Emergency Procedures Plan, Roles and Responsibilities Handbook

Section 15, Title 8 of the California Code of Regulations requires that all employers establish and implement an Emergency Plan, with sufficient numbers of their employees oriented to the details of emergency preparedness and procedures to take positive action during an emergency. The City of Oakland offers an emergency response handbook designed to assist employers and employees before and during an emergency. As part of the employer's ongoing concern for the safety of employees and others who may visit their buildings, the guidelines and procedures contained in the Emergency Plan handbook can be put into practice and maintained. Among these guidelines is an Emergency Evacuation Checklist, which recommends that evacuation not be initiated unless conditions in the area present a threat to life safety or if instructed by fire or police personnel or public address announcement, and to not automatically evacuate or relocate after an earthquake.

Head-Royce School Security and Emergency Preparedness Manual

Head-Royce School has an extensive security and emergency preparedness program to ensure the safety and security of students and employees during an emergency. Their Security and Emergency Preparedness Manual provides necessary information for faculty/staff to handle emergency situations, including armed students, bomb threats, civil disturbances, earthquakes, fire, hazardous material spills, hostage situations, lockdown procedures, shelter in place, and shootings.[9]

The shelter-in-place procedures are an effort to isolate students and staff from a perceived or real danger, and is considered a temporary solution to a short-term problem. The shelter-in-place plan protects students and staff in the event of (among other conditions), a natural disaster or emergency requiring students to remain in their classrooms. Shelter-In-Place plan has proven to be a safer approach than evacuating students into a potentially contaminated outdoor environment. Generally, the duration of these situations would last minutes or hours, not days. Parents will be granted access to the Campus and their children once the school has been notified by safety and health personnel that it is safe to do so.

In the event of an evacuation, teachers are directed to take a few moments to review the exit routes and evacuation plan with their students. Evacuations procedures should maintain the following protocols:

- Speed is important in any evacuation; however, control and order are paramount. There should be no running, pushing, or skipping steps on the stairs.

[9] Head-Royce School, *Security and Emergency Preparedness Manual*, 2018 - 2019

- For both safety and psychological reasons, students should walk in pairs as they exit the building and be as quiet as possible.
- Teachers will escort students to their designated class/grade line-up area on the baseball field. In the event that an emergency occurs during lunch, breaks, recess or free periods, all students and personnel will be instructed to immediately go to the baseball field, and report to their class/grade level line up areas and check in with faculty assigned to that area.
- No students may leave the campus for any reason without going to the Evacuation Area and following the protocol to be released to a parent or guardian.
- The highest-level administrator will take charge at the Command Post. This administrator will organize First Aid and Search and Rescue teams if necessary.
- If it is determined that it is not safe to return to the main campus, and that an evacuation from the campus is necessary, the protocol is to shelter in place at the safe location until Incident Command authorizes the commencement of an evacuation procedure. In general, it is assumed that the Head-Royce athletic field will be the safest location in the neighborhood due to its layout as a defensible space against fire and its distance from the nearest trees and buildings. In the unusual event that an immediate evacuation from the athletic field is necessary (i.e., sheltering in place on the athletic field is not an option), the Incident Command team will direct students and adults to the nearest safe space (for example, evacuating to the proposed South Campus or to the Ability Now parking lot).
- When initiating a shelter in place procedure in anticipation of a subsequent evacuation from campus, the Communications Team will immediately advise parents through the established electronic means that we are in “shelter in place” mode, and that further instructions will be provided when it is safe for students to be picked up by parents.
- Parents must be instructed to NOT attempt to pick up their student prior to the time frame specified. When it is safe to release students the evacuation process will proceed in a sequential manner by grade - for example, with kindergarten students picked up first and 12th grade students last.
- All student releases will take place on the north side of Lincoln Avenue, utilizing the established student release procedures. The Communications Team will transmit regular electronic messages to parents throughout the process to ensure that the community is well informed and that there is an orderly process which minimizes the amount of vehicle traffic on Lincoln Avenue.

Impacts, Standard Conditions of Approval and Mitigation Measures

Thresholds of Significance

The Project would have a significant impact on the environment if it were to:

1. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. More specifically, the Project would have a significant impact:
    a. If, due to slope, prevailing winds and other factors, the Project would exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire, or the uncontrolled spread of a wildfire, or
    b. If the Project would expose people or structures to significant risks, including downslope or downstream flooding or landslides as a result of post-fire stormwater runoff, slope instability or drainage changes

2. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water service, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
3. Substantially impair an adopted emergency response plan or emergency evacuation plan
4. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions

Wildland Fires

Fire-1: The Project would exacerbate current exposure of people and structures to a significant risk of loss, injury or death involving wildland fires by adding School buildings and increasing school enrollment at a school located within the City of Oakland's VHFHSZ. This risk will be substantially mitigated through implementation of a Project-specific Vegetation Management Plan designed to minimize the potential for ignitions, crown fires and extreme fire behavior by reducing and maintaining fuel loads and altering the structure, composition and spacing of on-site vegetation. (**Less than Significant with SCAs/Vegetation Management Plan**)

The Project is located in the Oakland Hills, an area that exhibits a complex wildfire environment that presents a significant risk to public and firefighter safety and the built and natural environment. This region has been subject to numerous damaging wildland fires, is influenced by local extreme wind and weather conditions (including Diablo wind events), has steep and varied terrain, and enjoys a complex mosaic of different vegetation types. It is one of the highest risk areas in the country for devastating wildland urban interface (WUI) fires. The Project is located within a portion of the Oakland Hills within the City of Oakland-designated Very High Wildfire Hazard Severity Zone (VHFHSZ).

Of the variables that comprise the wildland fire environment (weather, terrain, and fuels/vegetation), vegetation is one of the few variable that can be managed. Vegetation management can enhances firebreaks, provide defensible space around structures and assets, and enhances ingress and egress routes.

Head-Royce School Vegetation Management Plan and Fire Safety Phasing Plan

In response to the fire risks identified above, in response to comments received as part of the EIR Notice of Preparation and EIR scoping process, and pursuant to **SCA Fire-1: Designated Very High Fire Severity Zone – Vegetation Management**, a Vegetation Management Plan has been developed to provide an enhanced level of wildfire safety at the Head-Royce School by meeting defensible space requirements

- Wildland Res. Mgt., *Vegetation Management Plan and Fire Safety Phasing Plan for the Defensible Space of the Head-Royce School*, November 13, 2020 (**Appendix 16A**)

This Vegetation Management Plan includes the following elements:

1. A map depicting the fuel management area on an aerial-photo base-map which details the locations of the fuel management zones in a manner that illustrates the locations of different vegetation treatments required in the plan. Protected creek banks are also depicted on this map.
2. A list of treatment performance standards within each fuel management zone.
3. A list of recommendations for implementing treatments, including sufficient information to provide clear instructions to contractors performing the fuel management work. Details regarding spacing, pruning heights and volumes of litter/chips are provided.

4. Diagrams that document fuel types present on the lot and current vegetation condition, as well as images needed to support specific treatment recommendations (for example, depicting sensitive habitat to be retained).
5. In addition, it includes a recommendation to perform vegetative treatments on other properties owned by Head-Royce School when it lies within the Defensible Space Zone.

The Vegetation Management Plan addresses both landscaping and management of wildlands. The biggest perceived threat to the School is the wildlands, but the vegetation nearest the structures may be the biggest risk. A summary of the Vegetation Management Plan recommendations is presented below. The full Plan is provided in Appendix 16 of this EIR.

Fire Resistant Landscaping

The Project can incorporate fire-safe plants as a way to reduce fire risk to structures. Although there have been relatively few research results on the fire resistance of landscape plants, several important generalities are obvious.

- The spacing and design of the garden is more critical than the species planted. Leaving horizontal spaces between planting masses, specimen trees, and structures helps create a fire-safe landscape. Similarly, leaving vertical and horizontal spaces between tree branches, shrubs, ground cover is important in fire-resistant landscapes.
- Good maintenance requires removing dead material and maintaining the vertical and horizontal spaces that create a fire-safe design. The significance of proper plant and landscape maintenance cannot be overemphasized. Design landscapes to discourage the creation of "fuel ladders"—a continuous fuel path by which a fire can climb from the ground to a shrub, to a tree, and ultimately to the structure. Removal of any potential fuel ladders needs to be part of routine landscape maintenance. Poorly maintained landscapes can easily become fire hazards, even if many of the plants are favorably recommended for fire performance.
- Fire resistant landscaping involves using appropriate types of plants. Desirable landscaping plant species have a low fuel volume and high foliar moisture, and do not have a tendency to produce and "hold" dead wood. They also have a proper growth form. A searchable database of plants can be found at http://www.diablofiresafe.org/04_vegetati.htm .

All of the above-mentioned plant characteristics are related to maintenance issues. Plants with a higher moisture content generally have a lower fire risk. For example, the moisture content of a plant is absolutely influenced by regular and proper irrigation, and large amounts of dead material lower the plant's overall moisture content. To increase the plant's overall moisture content, it is important to remove and properly dispose of dead material. In addition, regular fire-prevention maintenance should include thinning or pruning to reduce fuel volume and improve plant geometry. An appropriately landscaped and maintained defensible space will reduce the fire hazard and the fire risk to structures. A landscape environment that is inconsistently or improperly maintained does not function as defensible space, and it contributes to the fire hazard.

Fuel Management Standards for Defensible Space Zones

Vegetation treatments within differing Fuel Management Zones are required to create sufficient defensible space. Seven Fuel Management Zones are identified on the Project site based on proximity to roads and structures, and depending on the vegetation type (see **Figure 16-3**). The types of plant communities present influences the management actions required. Fuel treatments for areas in proximity to all structures include the Non-Combustible Zone, a Landscaping Zone and a Roadway Zone. Four other general vegetative zones are addressed in the Vegetation Management Plan based on the presence different fuels, including: Grasses, Shrubs/bushes, Woodlands with shrubs underneath, and Riparian woodland.

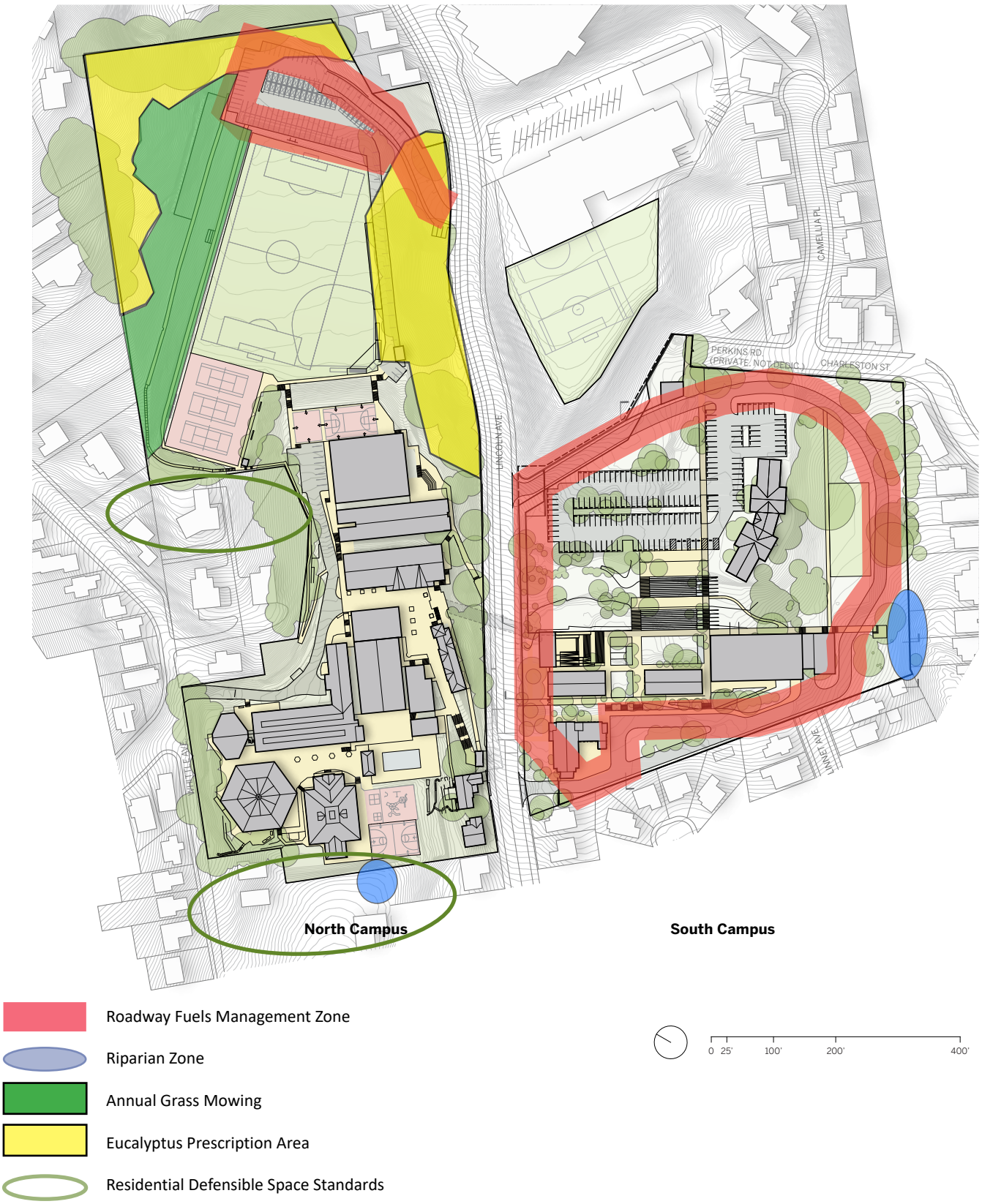


Figure 16-3
Vegetation Management Plan - Fuels Management Zones

Source: Wildland Res. Mgt., Vegetation Management Plan and Fire Safety Phasing Plan, November 2020

- Non-Combustible Zone: A non-combustible zone should be maintained within in a 5-foot buffer around structures. Hardscape surfaces (such as patios, gravel, and bare soil), and landscape materials (such as lawn and succulent herbaceous plants) are examples of non-combustible surfaces. Wood mulch is not considered non-combustible. Landscape architects are encouraged to make liberal use of hardscaping within 5 feet of structures. Care should be taken in the design phase to ensure there is adequate room for such treatments. Keep plants away from windows and vents. Minimize plant volume under roof eaves. Vines or climbing plats should be removed from structures.
- Landscaping Zone: Approved landscaping must be designed and maintained to minimize flammability. Ornamental landscaping often results in large amounts of shrubby flammable vegetation being planted near structures. Many commonly used landscape plants, such as conifers, flammable woody shrubs, and tall ornamental grasses, should be avoided because they may create a fire threat to a building that would otherwise be fire safe. All plant material that is removed from the landscaping must be composted or removed and disposed of properly.
- Roadway Zone: This zone extends 15 feet from edge of roadway pavement. Safe ingress and egress must be maintained along the roadway. The Roadway Zone is important to allow for safe passage and to provide a location where firefighter resources can travel and engage in fire response. Grasses, and the shrubby understory vegetation should be mowed within 15 feet from the pavement edges. All tree branches extending over roadway surfaces should be pruned to ensure 15 feet of vertical clearance. Whenever possible, healthy overhanging branches higher than 15 feet should be left in place to shade roadway areas and thereby reduce weed and understory growth. Every structure has a dedicated fire hydrant and a hammerhead or other safe turnaround for fire equipment access. Vegetation around these facilities must be maintained as needed to ensure visibility and access. Vegetation must be cleared three feet around each fire hydrant.
- Grassy Fuels: Grasses must be mowed at least once annually in late spring or early summer. Because non-irrigated grasses dry and become flammable at the start of every summer, grasses need annual attention, typically by mowing prior to the beginning of each summer. By mowing in late spring, native grasses and wildflowers are retained and may contribute in a lower-hazard condition. Invasive, non-native species such as Acacia, French broom, poison hemlock, and thistles must be completely removed annually.
- Trees with a Shrubby Understory: Grass must be mowed, understory plants must be kept short, and small lower tree branches must be removed. The understory of trees, such as oaks or landscaping trees, includes shade tolerant shrubs and grasslands. The goal of this standard is to maintain an existing oak woodland with a short-statured understory of herbaceous plants and shrubs, and a tree canopy at least 8 feet above the ground. An initial treatment will be required to prune smaller branches of trees up to 8 feet above the ground and to reduce density and stature of understory shrubs. After the initial treatment, annual maintenance will be needed to cut back shrub sprouts in order to maintain a maximum height of 2.5 feet. Eucalyptus trees pose a particular hazard, and a special set of prescriptions are required.
- Shrubs without Tree Canopy: All shrubs need to be kept free of dead material, and separated into groups. Shrubs can burn with great intensity and pose a high fire hazard to adjacent structures. Many shrubs (especially native species) will stump-sprout vigorously when mowed or burned, bushes will need to be retreated on a regular basis. Many landscaping shrubs are fire-resistant in nature (see section on fire-resistant landscaping); these types of plants should be preferred throughout. Defensible space is created by maintaining well-spaced shrubs with succulent young vegetation, and no dead branches. Reducing shrub height and creating groupings lessen the fuel volume and continuity, and reduces fire intensity, and slows the spread of fire.

- Riparian Zone: The Riparian Zone is the area twenty feet either side of the top of bank and within the banks of the creek bed. Riparian woodland is designated as a sensitive habitat by the California Department of Fish and Wildlife (CDFW). In these areas special care should be taken not to trample riparian vegetation or alter the creek alignment or banks. No fuel management should be performed inside the bank of the creek. Hand labor must be used to treat fuels within 20 feet of the top of bank of the creek. Treatments for fire safety in the Riparian Zone are limited by concerns for wildlife habitat. Fortunately, foliage of vegetation in this area generally has higher moisture and can act to dampen fire intensity and spread. Fire management treatments that concentrate on dead material can enhance fire safety without compromising wildlife habitat.

Fire Safe Phasing

The sequence and schedule of vegetation management practices is summarized below:

- Initial vegetation management actions will be completed before construction begins if construction takes place between June 15 and November 1.
- All required grass cutting, and other vegetation management will be completed before June 1 of each year. Mowing must begin as soon as 30% of the grass has cured. Should rains occur late in the season and produce more grass growth, the grass may need to be treated again. Pruning of tree branches should occur prior to February to avoid nesting season and minimize spread of fungus and insect pests. Shortening or cutting shrubs to ground can be done at any time of year, but as long as it is complete prior to June 1, and best done before February to avoid impact to nests.
- Grass cuttings and clippings will be removed the day they are cut. No clippings are permitted to remain in piles or scattered.
- All brush piles and tree clippings are to be removed within one week of cutting. No brush or clippings are permitted to remain in piles.
- Annual vegetation management measures include removal of all combustible vegetation along roadways, driveways, access roads, and trails according to stated standards; maintenance of the emergency-access easement; and maintenance of the defensible space around structures according to stated standards for the various Zones.

Frequency of Vegetation Management

- Grass will need to be mowed annually
- Shrubs and removal of seedlings below the tree canopy is to be done annually as well. Shrubs need to be pruned of dead wood, shortened, shrub groupings minimized in size, or new shrubs/ tree seedlings removed under tree canopies.
- Removal of a litter layer deeper than the standards is expected to be necessary annually.
- Initial pruning of lower small branches will be a substantial effort. Because trees typically grow from the top and ends of branches, subsequent pruning needs to occur only every five years to ten years, depending on the rate of growth, and significant events which may cause dead wood to develop or breakage to occur.

The Head-Royce School Vegetation Management Plan has been prepare in compliance with ***SCA Fire-1, Designated Very High Fire Severity Zone – Vegetation Management***, as required for all projects involving construction of new facilities located in the Designated Very High Fire Severity Zone. Furthermore, and pursuant to SCA Fire-1, subsequent project plans for new construction and building rehabilitation within the Project Area shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6” or less from the construction, access and staging areas to reduce the threat of fire ignition. During construction, the

project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation, shall ensure that the contractor has at minimum three (3) type 2A10BC fire extinguishers present on the job site, and that a no-smoking policy is implemented on the site and surrounding area.

Furthermore, pursuant to ***SCA Fire-3, Compliance with Other Requirements***, all new buildings and building remodeling will be required to comply with all other applicable federal, state and local laws and code requirements, including but not limited to those imposed by the City's Bureau of Building and the Fire Marshal. These Code requirements include all State and City Fire Code requirements for fire protection and life safety systems, fire service features and materials and construction methods for fire-safe structures.

With implementation of the Vegetation Management Plan and required construction-period requirements, the Project will comply with all Defensible Space requirements of the California and Oakland Fire Codes, and fire risks associated with the Project will be reduced to levels considered acceptable pursuant to these Code requirement (i.e., less than significant).

Mitigation Measures

None required

Emergency Evacuation Plans

Fire-2: The Project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. (**Less than Significant**)

There are no specified public emergency evacuation routes to be followed, or that the Project may conflict or interfere with. However, the Head-Royce School's Emergency Preparedness Manual does provide a specific procedure and evacuation plan for the School in the event of an emergency.

As indicated in the City's Local Hazard Mitigation Plan, the City encourages development of plans, in conjunction with fire jurisdictions, specifically for evacuation or sheltering in place of schoolchildren during periods of high fire danger. The Local Hazard Mitigation Plan recognizes that overloading of streets near schools by parents attempting to pick-up their children during these periods can restrict access by fire personnel and equipment. As indicated in the Head-Royce School Emergency Preparedness Manual, parents are to be instructed to not attempt to pick up their students during an emergency situation, until receiving instructions about when it is safe for students to be picked-up. This policy is intended to prevent the situation identified in the Local Hazard Mitigation Plan, where overloading of streets near schools by parents attempting to pick-up their children during these periods may restrict access by fire personnel and equipment.

Additional Evacuation Planning Recommendations for Head-Royce School

Recent research on California wildfires has found that in most cases, wildfires spread quicker than expected, overwhelming officials, communication systems, and evacuation processes.[10] The Camp Fire, which at one point consumed a football field per second, started in Pulga, CA and reached Paradise, CA in just an hour and half, almost six miles away.[11] With a high Diablo wind event and favorable fire conditions (including long-range fire spotting), a wildfire that begins in the Oakland Hills could reach Head-Royce within 15-30 minutes.

[10] Wong, S. D., Broader, J. C., & Shaheen, S. A. (2020). Review of California Wildfire Evacuations from 2017 to 2019. https://escholarship.org/uc/item/5w85z07g

[11] Almukhtar, S., Griggs, T., Johnson, K., Patel, J. K., Singhvi, A., & Watkins, D. (2018, November 18). 'Hell on Earth': The First 12 Hours of California's Deadliest Wildfire. The New York Times. https://www.nytimes.com/interactive/2018/11/18/us/california-camp-fire-paradise.html

In response to concerns and in response to comments received as part of the EIR Notice of Preparation and EIR scoping process, a list of evacuation planning recommendations has been prepared for the Head-Royce School:

- Stephen Wong, Memo: Evacuation Planning Recommendations for Head-Royce School, November 2, 2020, (**Appendix 16B**).

These recommendation recognize that Head-Royce School has invested substantial thought in developing an evacuation plan to safeguard its students, but that several additional items should be further addressed, including the infeasibility of shelter-in-place in most wildfire situations, the route and destination of an evacuation from Campus, the loss of power and communication with officials and parents, and identification of egress points. These recommendations of this report include the following:

Evacuation vs. Shelter-in-Place

The Head-Royce plan notes that people on campus would be expected to stay in the designated shelter-in-place location, and the reunification would only begin as directed by authorities. People on Campus are expected to shelter-in-place at the assembly area until the immediate danger has subsided. The Plan does not provide a specific decision-making process for initiating an evacuation. While Head-Royce would follow the directions form local authorities before initiating an evacuation, it is uncertain how local authorities would contact school officials or the Schools Incident Commander. Moreover, recent wildfires have spread so rapidly that local authorities did not have time issue mandatory or voluntary evacuation orders. Without planning guidance, the Incident Commander may choose to continue sheltering-in-place, which may not be the safest option in a wildfire. It is unclear if the gym would be able to survive an extreme wildfire event. Moreover, other risk factors from wildfires (e.g., heat, smoke) could be harmful to students. The gym is also located uphill on Campus, which is not an advisable direction given a wildfire encroaching from the east.

- Head-Royce is recommended to create a decision-making protocol within the Evacuation Plan that favors an evacuation action over a shelter-in-place action. The gymnasium should be a shelter-of-last-resort in the event of a catastrophic wildfire with little to no time to evacuate. It should be noted that long-range spotting can occur in high wind events, sparking new blazes beyond the fire front. Given these unpredictable circumstances, it is recommended that Head-Royce proceed with an evacuation of campus as soon as possible if a wildfire is detected.
- Head-Royce is recommended to conduct a pedestrian evacuation in the event of a major wildfire, if they have enough time to move people away from campus (e.g., at least 10 minutes). A pedestrian evacuation is likely to be more efficient, safer, and less impactful on the neighborhood than a vehicular evacuation.
- A vehicular evacuation from Campus would only be advised if there is substantial time to evacuate and if congestion is low on the surrounding roadways. Students with vehicles and faculty/staff with vehicles would likely be sufficient space for all students, staff, faculty and visitors.

Evacuation Route and Mode

The current evacuation plan does not explicit call out specific pedestrian routes to reach possible evacuation destinations. While fire behavior and direction are highly variable, it is generally advised that people evacuate downhill, especially since fire generally moves slower downhill compared to uphill. Moreover, the uphill area east of Campus is a more likely ignition point for a wildfire. A lack of preference of an identified evacuation route and destinations based on possible fire directions may lead to confusion during the evacuation. Moreover, concerned parents may not know where to reunify with their children, causing additional panic and probable congestion.

- The evacuation plan is recommended to include a primary destination for an evacuation of Campus. It is recommended that Head-Royce strongly consider the parking lot near Farmer Joe's and CVS

Pharmacy. This destination is recommended because it is located near multiple access points (i.e., Interstate 580, MacArthur Blvd., and Fruitvale Blvd.) that will reduce congestion for parents during the reunification process. Moreover, the major thoroughfares can provide access to AC Transit in the event that a second evacuation is necessary. It is unlikely (but not improbable) that a wildfire would reach this destination. Ultimately, the evacuation location is deemed the safest location within a mile radius of campus from a wildfire and an easy location to travel to and from. Moreover, the locations is downhill from the school and Lincoln Avenue has sidewalks on both sides of the street for a safe pedestrian evacuation.

- Head-Royce is recommended to provide secondary options and routes for an evacuation in the event that the Farmer Joe's destination is inaccessible or blocked by a wildfire. Destination options include, but are not limited to Sequoia Elementary School on Lincoln Avenue, Bret Harte Middle School on Coolidge Avenue, and Corpus Christi School on Park Boulevard. Another option that should be considered is going uphill to the Oakland Temple and Ascension Cathedral, which will likely serve as staging points for firefighting operations. However, this should only be conducted with direct orders from local authorities (in particular fire or police), as this decision would likely move students closer to a wildfire event.
- Routing and destination information is recommended to be added directly to the plan, and communicated with parents beforehand. As noted in the current evacuation plan, reunification on Lincoln Avenue would cause considerable congestion for both evacuees and emergency vehicles. The school needs an advance mechanism to notify parents in the events of lost power and cell signal. Head-Royce is recommended to tell all parents to go directly to the Farmer Joe's parking lot first. Parents will then receive updates (if possible) to come up to Campus only if and when it is deemed safe to do so. Otherwise, students will be evacuating downhill and will reunify with their parents at the Farmer Joe's parking lot.

Communications and Power Loss

The current Head-Royce evacuation plan notes that reunification would begin after guidance from local authorities. The plan does not provide for other communication with key authorities. In an extreme wildfire event, it is possible that local officials may not be able to provide specific guidance to the School or its Incident Commander. The plan must address this uncertainty, and set possible perimeters for when to evacuate. Furthermore, the current evacuation plan does not have clear procedures or preparedness plans if power is unavailable. A lack of power can affect multiple evacuation procedures including the use of mobile phones and the ability to communicate. Without cell service or data, any form of communication to or officials other than face-to-face encounter would be unfeasible.

- Head-Royce is recommended to develop a mechanism to communicate directly with local officials including a way to talk with Incident Commanders without access to power. One option Head-Royce could explore is the purchasing of a satellite radio that is compatible with Oakland emergency radios. In this way, Head-Royce could also be used for information gathering for the Oakland Emergency Management Services Division, the Oakland Police Department, and the Oakland Fire Department.

Emergency Egress Points

The Head-Royce School campus is located in a small canyon and nearly all existing Campus buildings are located below surrounding roadways. Primary pedestrian egress points on the existing Campus include: a) the Main Gate located off Lincoln Avenue with a series of wide steps that ascend from Campus to the roadway; b) the Middle Gate located off Lincoln Avenue, with a series of narrow steps ascending from Campus to the roadway; c) the Upper Gate located off Lincoln Avenue, with a narrow roadway that ascends from the parking lot to the roadway; d) the Solar Panel stairs located on the northwesterly part of the existing Campus; e) the Tennis Court Exit located on the northern part of the existing Campus with a series of stairs that allows egress to a spur of Whittle Avenue; f) the Funston Place exit roadway that ascends to

Whittle Avenue; the Side Funston Place exit located close to the Funston Place exit, a dirt path around the lower school leads past the community hall to Funston Place; g) the Basketball Court Exit located at the lower end of campus, which is a path that leads to Whittle Avenue; and h) the Main Gate Side Stairs located near the main gate and that ascends from near the basketball court to Lincoln Avenue.

Specific improvements recommended for these emergency egress points include the following:

- Head-Royce needs a plan to evacuate people with disabilities. In some cases, changes to egress points may be necessary. Faculty/staff may need to assist students and visitors with a physical disability during the evacuation. It is also recommended that the plan provide vehicular evacuation of people disabilities, as nearby streets are too steep for mobility devices.
- A new system is needed for the upper gate. This system must be functional without electricity and be operational for people on foot and inside campus. Similarly, the Funston Place gate requires battery backup in the case of power failure.
- The side exit for Funston Place requires a push-bar exit that swings outward, but still inhibits people to enter campus from the outside for security reasons.
- All possible egress points must be communicated to staff/faculty in the event of an evacuation. Since the fire direction is unknown, all egress points should be considered and made viable for a walking and/or vehicular evacuation.

As indicated above, the School's School Emergency Preparedness Manual does not conflict with, but rather helps to implement current emergency evacuation procedures. It clearly instructs parents to not attempt to pick up their students during an emergency situation until receiving instructions about when it is safe for students to be picked-up. This policy is intended to prevent the situation identified in the Local Hazard Mitigation Plan, where overloading of streets near schools by parents attempting to pick-up their children during these periods may restrict access by fire personnel and equipment, and potential impacts related to emergency plans would be less than significant.

The Emergency Preparedness Plan and its Evacuation Plan define protective actions that the School would take in the event of an evacuation situation, and is an important example for other schools in high fire risk zones along the Wildland-Urban Interface. The changes to this Plan as recommended above will serve to further increase student safety in the event of an extreme wildfire event.

Mitigation Measures

None required. The Project will not limit emergency access, impede emergency response or create hazardous conditions for the public related to emergency access or evacuation, and the impact would be less than significant.

Cumulative Impacts

The Project in combination with other existing and potential future development projects within the Oakland/Berkeley Hills would all contribute to a cumulative increase in the risk of wildland fires. However, the Project's Vegetation Management Plan and implementation of all current Fire Code requirements will serve to reduce current fire-prone conditions and lower the cumulative risk of wildfire spread to other areas. The Schools' Emergency Preparedness Plan is specific to the School, but also serves to address cumulative emergency evacuation conditions throughout the Oakland Hills by reducing potentially conflicting evacuation conditions. Nearby regional parks (i.e., Joaquin Miller Park, Roberts Regional Recreation Area, and Reinhard Redwood Regional Park) pose a significant cumulative wildfire threat for Head-Royce and the surrounding residential areas, commercial areas and other nearby institutions. However, with implementation of the Project's Vegetation Management Plan, implementation of all current Fire Code requirements and

compliance with the Schools' Emergency Preparedness Plan (including additional recommendations) the Project will not make a significant contribution to this cumulative effect.

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Other Less than Significant Effects

Section 15128 of the CEQA Guidelines requires that the EIR "briefly indicate the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." This chapter of the EIR identifies those possible significant effects of the Project that have been determined to be not significant, and the explanation for that determination. The Notice of Preparation for this EIR did not include an Initial Study Checklist and therefore did not identify any environmental topics as being screened out for potential adverse environmental effects. Therefore, this chapter of the Draft EIR provides a discussion and analysis of those environmental topics not anticipated to rise to a level of significance and not evaluated elsewhere in the EIR.

The City's Uniformly Applied Development Standards and Conditions of Approval (SCAs) are incorporated into projects as conditions of approval regardless of the determination of a project's environmental impacts. As applicable, SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will avoid or substantially reduce a project's environmental effects. Depending on the specific characteristics of the project type and/or project site, the City determines which SCAs apply to a specific project. Because these SCAs are mandatory City requirements, the following impact analysis assumes that applicable SCAs will be imposed and implemented by the Project. If an SCA would reduce a potentially significant impact to less than significant, the impact is determined to be less than significant, and no mitigation is imposed.

Agriculture and Forest Resources

Thresholds of Significance

According to the City's Thresholds of Significance, the Project would have a significant impact on agricultural and forest resources if the Project:

1. Converted 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
2. Conflicted with existing zoning for agricultural use, or a Williamson Act contract
3. Conflicted with existing zoning for, or caused 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)
4. Resulted in the loss of forest land or conversion of forest land to non-forest use
5. Involved 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

Farmland Conversion

Agriculture 1: The Project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance Farmland, as shown on 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 in an urbanized area of the City of Oakland and is not used for agriculture. The Project site is not shown on the Farmland Mapping and Monitoring Program of the California Resources Agency as containing any prime, unique or important farmland, but rather as "Urban and Built-Up Land". [1]

Mitigation Measures

None needed

Agricultural Zoning or Williamson Act Conflicts

Agriculture 2: The Project would not conflict with existing zoning for agricultural use, or with a Williamson Act contract. (**No Impact**)

The Project site is not zoned for agricultural use. As indicated in the Land Use chapter of this EIR, the Project site has a General Plan land use designation of Institutional, and the City of Oakland zoning designates the Project site and much of the surrounding neighborhood on the south side of Lincoln Avenue as Residential Detached-1 (RD-1). There are no lands in the vicinity that are zoned for agriculture, and neither the Project site nor any lands in the surroundings are under Williamson Act contracts.

Mitigation Measures

None needed

Forest Resources

Agriculture 3: The Project would not conflict with existing zoning for, or cause rezoning of forest land, and would not result in the loss of forest land or conversion of forest land to non-forest use. (**No Impact**)

As indicated in the Biology chapter of this EIR, reconnaissance-level surveys identified only one habitat type/land use on the Project site: developed/landscaped. The entirety of the Project site consists of developed and landscaped habitat in the form of hardscape, landscaping and unpaved game fields. The site does have a high diversity of landscaped trees and shrubs. The dominant tree species on the site include coast live oak, holly oak, blackwood acacia (Acacia melanoxylon), and coast redwood. Planted and naturalized non-native tree species are also scattered throughout the Project site. These trees, even in areas of denser woodland cover, do not constitute a forest or forest land. Surrounding areas are developed or otherwise urbanized and do not contain Farmland or Forest Land.

Mitigation Measures

None needed

[1] California Department of Conservation, California Important Farmland Finder, accessed July 22, 2020 at: https://maps.conservation.ca.gov/dlrp/ciff/

Other Changes Affecting Farmland or Forest Resources

Agriculture 4: The Project would not involve any changes in the existing environment which could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use. (**No Impact**)

The Project site is located in an urbanized area of the City of Oakland. There are no farmlands in the vicinity that could be converted to non-agricultural use as a result of any Project changes. The Project site and adjacent surrounding properties are developed or otherwise urbanized and do not contain farmland or forest land. Undeveloped open space areas within the Oakland Hills would not be affected by the Project in any manner that would result in conversion of forestland to non-forest use.

Mitigation Measures

None needed

Mineral Resources

Thresholds of Significance

According to the City's Thresholds of Significance, the Project would have a significant impact on mineral resources if the Project:

1. Resulted in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or
2. Resulted 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

Loss of Mineral Resources

Minerals 1: The Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (**No Impact**)

Areas designated as an Aggregate Resource sector are judged to be of prime importance in meeting future mineral needs in the region, and land use decisions must consider the importance of these resources to the region as a whole. According to the California Department of Conservation Division of Mines and Geology, the Project site is not currently considered an Aggregate Resource sector.[2] The Leona Quarry was the last mine in Oakland to be identified as a regionally significant source of aggregate resources. The Leona Quarry has been closed for many years, and there is no other land in Oakland with such a designation.

Mitigation Measures

None needed

Loss of a Mineral Resource Recovery Site

Minerals 2: The Project would not result in the loss of a locally-important mineral resource recovery site delineated on a general plan, specific plan, or other land use plan. (**No Impact**)

The Project site is not designated as a locally important mineral resource recovery site under the City of Oakland General Plan's Land Use and Transportation Element or Open Space, Conservation and Recreation

[2] California Department of Mines and Geology, accesses at: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_96-03/ , Plate 12

Element. Furthermore, Policy CO-3.2 of the Conservation Element prohibits new quarrying activity in Oakland except upon clear and compelling evidence that the benefits will outweigh the resulting environmental, health, safety, aesthetics and quality of life costs.

Mitigation Measures

None needed

Population and Housing

Thresholds of Significance

According to the City's Thresholds of Significance, the Project would have a significant impact on population and housing if the Project:

1. Induced substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed
2. Displaced substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element, or
3. Displaced substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element

Growth Inducement

Population 1: The Project will not induce substantial population growth in a manner not contemplated in the General Plan, either directly or indirectly. (**No Impact**)

As an option under the Project, the School may seek to convert the interior of existing Building 9 into up to five apartment units. If so, these apartment units would provide temporary house for newly hired faculty or staff while they seek permanent residences in the area. Anticipated stays in such units would range from one to two years. Such temporary housing is considered an accessory use pursuant to Oakland Planning Code. Short-term housing for faculty and/or staff would be accessory to the School's institutional purpose because the limited and short-term residential occupancy would support the School's institutional mission to recruit employees. Use of Building 9 as temporary, accessory housing with up to five apartments would not induce substantial population growth in a manner not contemplated in the General Plan.

The Project anticipates an increase of up to 344 new students, and 17 new faculty/staff members. New students would be drawn from the existing surrounding region, and the availability of new student space at the School would not induce population growth. The minor increase in employment at the Project site (17 new jobs) would not be so large as to induce population growth or housing demand. These new employees can likely be found from within the existing available labor force. The Project does not require the extension of any public roads or other infrastructure that would lead to growth inducing impacts that were not previously considered or analyzed in the General Plan (LUTE) and its associated EIR.

Mitigation Measures

None needed

Housing and/or Population Displacement

Population 2: The Project would not displace existing housing or people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element. (**No Impact**)

No housing currently exists within the Project site, and no housing or people would be removed as part of the Project.

Mitigation Measures

None needed

Public Services

Thresholds of Significance

According to the City's Thresholds of Significance, the Project would have a significant impact on public services if the Project:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
    - Fire protection
    - Police protection
    - Schools

Fire Protection

Public Services 1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities in order to maintain acceptable service ratios, response times or other fire protection service performance objectives. (**Less than Significant**)

The Oakland Fire Department (OFD) provides protection from natural or man-made hazards which may cause both injury and loss of property of all citizens within the City of Oakland. The OFD fire stations nearest to the Project site include Station 25 located at 2795 Butters Drive, just uphill and across Highway 13 (approximately 1 mile or a two-minute drive), Station 16 located at 3600 13th Avenue (approximately 2.3 miles or an eight minute drive), and Station 17 located at 3344 High Street (approximately 2.3 miles, or a seven minute drive). These fire stations can provide prompt fire protection service to the Project site.

The Project is not expected to result in a substantial increase in calls for fire and emergency service. OFD would be able to provide adequate fire suppression and emergency medical response services to the Project site with existing staff. The Project would not require development of new or physically altered facilities.

The Project site is located within a high wildland fire zone. This issue is addressed in the Hazards chapter of this EIR.

Regulatory Requirements

The City's approved 2016 PUD permit amendment for the Head-Royce School includes certain conditions of approval that are applicable to the current school, and that will extend similarly to the Project (unless further amended). Condition of Approval #26 to the 2016 PUD permit provides for the following:

Emergency Management Plan.

Prior to the start of the next semester after Planning Approvals and Ongoing: The project applicant shall develop an Emergency Management Plan ("EMP"), and submit to Planning and Zoning Division, Transportation Services Division, OPD-Traffic Safety, and the Fire Marshall, for review and consultation. The Applicant shall implement the final EMP. The EMP shall include at least the following components:

1. Fire Protection Bureau Occupancy Review (Ongoing): The School shall cooperate and coordinate with the Fire Services Department to conduct yearly occupancy and fire safety inspections of the school, fire drills and unannounced future site visits. The resulting Fire Department report(s), and any follow-ups, shall be sent to the Planning and Zoning Division for review.
2. Emergency Preparedness Plan (With 6 months and Ongoing). The School shall submit an Emergency Preparedness Plan, within 6 months after this approval. The completed plan shall be submitted to the Planning and Zoning Division and the Fire Protection Bureau for review and consultation. The plan shall discuss emergency evacuation procedures that will facilitate emergency vehicle access to the neighborhood during School pick-up and drop-off operations. The plan shall be implemented.
3. Fire Department Site Visits. The project applicant shall coordinate with the Oakland Fire Marshal's Office to make periodic unannounced visits to the school (the frequency, timing, and types of visits should be at the Fire Marshal's discretion based on need for visits and compliance by the school) to verify that adequate emergency vehicle access is being maintained during peak pick-up and drop-off periods. The Fire Marshal should consult with the School to identify modifications to the circulation rules, if emergency access problems are identified.

With updates to the Emergency Management Plan as needed, and ongoing implementation of Condition of Approval #26 to the 2016 PUD, the Projects effects related to fire protection services will remain less than significant.

Mitigation Measures

None needed

Police Protection

Public Services-2: The Project would not result in an increase in calls for police protection services or result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities or the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other Police Department performance objectives. (**Less than Significant**)

The Project would not result in additional housing or residents, and only a marginal increase in jobs or employees. There is no expectation that the Project would result in an increase in calls for police protection. The Project would expand an existing school use and is not anticipated to result in any changes in crime. The Project will not result in the need for any new physical facilities to maintain acceptable service ratios, response times, or other Oakland Police Department performance objectives which could result in direct physical environmental effects.

Mitigation Measures

None needed

Public Schools

Public Service-3: The Project would not result in new students attending local public schools, and would not require new or physically altered public school facilities to maintain acceptable performance objectives. (No Impact)

The Project is an expansion of an existing private school, is specifically intended to accommodate an increase in student enrollment and requires new and physically altered school facilities. The impacts associated with these new and physically altered facilities and the increase in student enrollment is the subject of this EIR and fully analyzed herein.

The Project would not generate new student enrollment in the Oakland Unified School District (OUSD), and would not require new or physically altered public school facilities to maintain acceptable performance objectives of OUSD.

Mitigation Measures

None needed

Recreation

Public Services-4: The Project would not increase the use of an existing neighborhood or regional public park or other public recreational facility such that substantial physical deterioration of such facilities would occur or be accelerated. (**No Impact**)

The Project would have no effect on public parks or recreation facilities. The Project would not result in an increase in the resident population in Oakland or surrounding communities and is not expected to cause any increase in the use of surrounding public parks. New students at the School would use existing recreational facilities within the Head-Royce School's existing Campus, as well as new recreational facilities within the proposed South Campus. Head-Royce School would continue to maintain these existing and proposed new recreational facilities such that substantial physical deterioration of such facilities would not occur.

The Project does include improvements and anticipated increased use of the existing play field at the base of the proposed South Campus. This playfield would be re-graded and repositioned, and would continue to be used for recreational purposes including athletic practices, recess and informal play. All potential adverse physical effects on the environment attributed to the improvement and increased use of this play field are fully addressed in this EIR as part of the Project.

Mitigation Measures

None needed

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Alternatives

Introduction and Overview

CEQA Guidelines require an analysis of a reasonable range of alternatives for any project subject to an EIR. The purpose of the alternatives analysis is to provide decision-makers and the public with a discussion of alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. Evaluation of alternatives should present the proposed action and all the alternatives in comparative form, to define the issues and provide a clear basis for choice among the alternatives.

CEQA provides the following guidelines for discussing project alternatives:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation (§15126.6(a))
- An EIR is not required to consider alternatives that are infeasible (§15126.6(a))
- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project (§15126.6(b))
- The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects (§15126.6(c))
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project (§15126.6(d))

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Where a lead agency has determined that, even after adoption of all feasible mitigation measures, a project as proposed would still result in significant environmental effects that cannot be substantially lessened or avoided, the agency must first determine whether any alternatives are both environmentally superior, and feasible. In this case, the lead agency (City of Oakland) had determined that the Project as proposed would not result in significant environmental effects that cannot be substantially lessened or avoided, provided that the Project implements all required SCAs and mitigation measures identified in this Draft EIR. Therefore, this EIR identifies alternatives that may be capable of avoiding impacts altogether (i.e., not requiring mitigation measures), or that may further reduce the magnitude of certain already less than significant effects.

The City's Uniformly Applied Development Standards and Conditions of Approval (SCAs) are incorporated into projects as conditions of approval regardless of the determination of a project's environmental impacts. As applicable, SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will avoid or substantially reduce a project's environmental effects. Because these SCAs are mandatory City requirements, the analysis in this EIR assumes that applicable SCAs will be imposed and implemented by the Project, and/or by any of the alternatives.

Accomplishing Basic Project Objectives

The Project Description proposes several amendments to the currently effective PUD to implement the Project Objectives, which are listed below:

1) Expand the School's educational facilities to the proposed South Campus by rehabilitating three existing buildings (Buildings 0, 1 and 2) that are identified under current City records as historic resources; utilizing one additional existing building (Building 9) for school-related or potentially short-term employee housing; building new facilities that address current and future educational needs; and improving vehicular and pedestrian circulation, parking and grounds.
2) Use of existing outdoor space for outdoor classrooms.
3) Construct a new Performance Arts Center for student curriculum relating to theater, music, dance and culture.
4) Gradually increase permitted enrollment by 344 students over currently allowed enrollment to a maximum student population of 1,250 students, at an anticipated enrollment increase rate of approximately 1 percent to 2 percent per year for a 20-year period, with a corresponding increase of 17 additional faculty and staff, to a total of 189 employees.
5) Remove on-street drop of and pick up from Lincoln Avenue and remove parent use of Alida Loop by developing an internal, one-way circulation loop driveway on the proposed South Campus. The driveway will provide off-street drop-off and pick-up space, eliminate pick up and drop off activities (other than for buses) from Lincoln Avenue, and create a new vehicle circulation pattern that reduces turn-around traffic in adjacent neighborhoods.
6) Integrate the existing Campus and proposed South Campus for pedestrians with an underground pedestrian tunnel below Lincoln Avenue, to reduce at-grade crossings.
7) Reconfigure and increase the number of off-street parking spaces on the proposed South Campus to provide 344 total on-site parking spaces on the Head-Royce Campus at Master Plan build-out, to minimize neighborhood parking and disruption.
8) Use new buildings placed on the proposed South Campus to create a central commons for student interactions and to provide for noise attenuation.
9) Achieve LEED Gold standards on the renovation of existing buildings and on the new construction of the Performing Arts Center and Link Pavilion.
10) Improve drainage through better stormwater management.
11) Allow neighbor access to outdoor facilities including a network of trails and pathways on new proposed South Campus through key card access.

The range of alternatives addressed in this EIR include those alternatives to the Project that could feasibly accomplish, or partially accomplish most of these basic objectives of the Project, but that could avoid or substantially lessen one or more significant effects.

Alternatives Considered but Rejected

Alternative Site Location

In considering the range of alternatives to be analyzed in an EIR, the CEQA Guidelines state that an alternative site location should be considered when, "feasible alternative locations are available and significant effects of the project would be avoided or substantially lessened by putting the project in another location."

The existing Head-Royce School is located directly across Lincoln Avenue from the proposed South Campus site. There is no other available and reasonably feasible alternative site that is in immediate proximity to the existing Head-Royce School, and where the School could construct additional facilities that would increase their ability to address current and future educational needs, improving vehicular and pedestrian circulation, and provide for increased parking and school grounds. An alternative site would not enable the school to achieve many of its fundamental objectives:

- No other alternative site would be capable of being fully integrated with the existing Head-Royce School Campus.
- An alternative site for construction of a new Performance Arts Center would not be able to be integrated into the existing School's curriculum relating to theater, music, dance and culture.
- No other alternative site would provide the potential to remove on-street drop-of and pick-up from Lincoln Avenue, or create a new vehicle circulation pattern that reduces turn-around traffic in adjacent neighborhoods.
- No other alternative site could provide a central commons area for the entire student body to interaction

There is no information to suggest that development of additional school facilities, including a new Performing Art Center, at any of other off-site location would avoid or substantially lessen any effects of the Project, but instead would likely transfer those effects from one place to another. For these reasons, an alternative site location was eliminated from further consideration in this EIR.

Alternatives Analyzed

The three alternatives analyzed in this EIR are listed below. These alternatives are intended to meet the CEQA requirements for the EIR to describe a No Project alternative, as well as a range of reasonable alternatives to the Project that would feasibly attain most of the basic objectives of the Project, but would avoid or substantially lessen significant effects.

The Project applicant has stated their intention for the Project to be constructed in three phases. Generally, these construction phases lend themselves to consideration of reduced project alternatives. For example, Phase I of the Project represents a relatively minor development program for the site, with little change to the existing conditions. Rather than being the first phase of a larger development plan for the site, Alternative 2 represents ending development of the site at completion of Phase I. Similarly, Phase II could be viewed as a reduced project that would end at the end of the Project's Phase II improvements, and would not include the subsequent Phase III or Phase IV improvements. These alternatives would not achieve all of the Project objectives, but may avoid certain effect and reduce the magnitude of other environmental effect as compared to full buildout of the Project.

<u>Alternative #1: No Project</u>

CEQA Guidelines Section 15126.6(e) (3) (B) states that, "*if the project is . . . a development project on identified property, the no project alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state, against environmental effects that would occur if the project is approved.*" This section of the CEQA Guidelines further provides that, "*If disapproval of a project under consideration would result in predictable actions of others, such as the proposal of some other project, this no project consequence should be discussed.*" Further, "*where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical results of the project's non-approval, and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.*"

Whereas the Project site has an existing General Plan land use designation of Institutional and is currently zoned Residential Detached (RD-1), and whereas disapproval of the project would not involve any efforts toward permanent preservation of the Project site as open space, the practical results on non-approval would likely lead to a proposal for some other institutional use of the site, or the development of detached single unit residences with the potential for a limited range of commercial uses as well.

Alternative 2: Minor Development Alternative

Under Alternative 2: Minor Development, there would be no increase in student enrollment at the School. Enrollment would remain capped at a maximum of 906 students. Physical changes at the proposed South Campus site pursuant to Alternative 2 would include:

- Demolition of Buildings 3, 4, 5, 6, 7, 8, 10 and 11
- Restoration and rehabilitation of Buildings 0, 1, 2 (those buildings identified as historic resources) and these three existing buildings would be reused for additional classroom and/or School administrative purposes. Similarly, Building 9 would be reused in its current condition for classroom and/or School administrative purposes.
- Improvements would be added for outdoor gathering spaces, including improvement of the planned Commons area, plus improvement of walking paths and outdoor classrooms
- The existing playfield at the proposed South Campus would be improved and reused for outdoor recreational activity.
- Tree removal would be conducted as necessary to implement those physical improvements listed above, with new landscape improvements to be added.

Alternative 2 would not include any other physical improvements on the proposed South Campus, and no change to the existing Campus. There would be no change to the current operations for School drop-offs and pick-ups that occur along Lincoln Avenue, and the underground pedestrian tunnel and the Performing Art building would not be constructed.

A PUD amendment would be required to allow expansion of the Head Royce School onto the former Lincoln site to establish a new proposed South Campus under this Alternative.

Alternative 3: Reduced Alternative

Alternative 3 would provide for a reduced incremental increase in student enrollment as compared to the Project, increasing from the current cap at a maximum of 906 students, with an increase of 144 students to a total student enrollment of 1,050 students. Physical improvements at the proposed South Campus pursuant to Alternative 3 would include all of the improvements identified for Alternative 2, plus the following:

- The new Loop Road would be constructed, including new off-street drop-off and pick-up locations within the proposed South Campus, as well as new/relocated traffic signals along Lincoln Avenue.
- Pedestrian crossing of Lincoln Avenue between the existing Campus and the proposed South Campus would occur at an at-grade crossing of Lincoln, at the relocated traffic signal.
- Building 9 would be renovated to better accommodate classroom and/or School administrative purposes.
- The number of parking spaces on the proposed South Campus would be incrementally increased to accommodate the expected increased demand. Tree removal would be conducted as necessary to implement those Phase II physical improvements listed above Tree removal would be conducted as necessary to implement those physical improvements listed above, with new landscape improvements to be added.

Under Alternative 3, the underground pedestrian tunnel and the Performing Art building would not be constructed.

A PUD amendment would be required to allow expansion of the Head Royce School onto the former Lincoln site to establish a new proposed South Campus under this Alternative.

Summary of Alternatives

Table 18-1 compares the amount of development and other applicable comparable improvements at the proposed South Campus as proposed by the Project, and compared to the three other alternatives.

Table 18-1: Project and Alternatives Development Summary

	Project	No Project/No Change Scenario	Alternative 2	Alternative 3
Enrollment (student cap)	1,250	906	906	1,050
Demo of Buildings 3,4,5,6,7,8,10,11	✓		✓	✓
Reuse of Building 9	✓		✓	✓
Restoration of Buildings 0, 1 and 2	✓		✓	✓
Commons and outdoor classrooms	✓		✓	✓
Use of South Campus Playfields	✓		✓	✓
At-grade pedestrian crossing	option		✓	✓
Loop Road and relocated traffic signals	✓			✓
Pedestrian tunnel below Lincoln	✓			
New Performing Arts Center Building	✓			

Overview of Alternatives Analysis

Each of the alternatives is more fully described below, and their potential environmental effects are disclosed. The environmental effects of each alternative are also compared to those of the Project. As permitted by CEQA (CEQA Guidelines Section 15126.6[d]), the effects of the alternatives are discussed in less detail than the impact discussions of the Project. However, the alternatives analysis is conducted at a sufficient level of detail to provide the public, other public agencies, and City decision-makers adequate information to evaluate the alternatives as compared to the Project. For each of the alternatives, the significance of each impact is compared to applicable thresholds. These significance conclusions assume implementation of those same regulatory requirements and SCAs as applied to the Project (as applicable). The impacts of each alternative are also compared to the impacts of the Project to indicate whether the alternative would:

- avoid potentially significant impacts of the Project
- result in impacts that are greater than those of the Project
- result in impacts less significant (or of a lesser magnitude) than those impacts of the Project, or
- generally have the same impact as the Project

Alternative 1: No Project

CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated, along with its impacts. The "no project" alternative must be the practical result of non-approval of the project.

No Change Scenario

A No Change scenario would be consistent with those CEQA Guidelines provisions of Section 15126.6 which indicate that the no project alternative is the circumstance under which the project does not proceed, and the environmental effects would be the result of the property remaining in its existing state. Under this No Change scenario, the former Lincoln site and the existing Head Royce Campus would remain as they are under current conditions. Use of the former Lincoln site by Head-Royce School would continue to be limited to surplus parking. Under this No Change scenario, there would be no increase over the currently permitted maximum enrollment of 906 students, and no additional faculty or staff positions would be needed for this alternative.

The 12 existing buildings on the former Lincoln site, including the three historic buildings (Buildings 0, 1 and 2) would remain as they are today. There would be no rehabilitation of the three existing historic buildings, and these buildings would not be used for any School-related functional purposes such classrooms or administrative functions. No interior upgrades or renovations to these buildings would occur. Building 9 would not be re-purposed for classroom or administrative use, and would not provide short-term housing for faculty and/or staff.

Vehicular access to the former Lincoln site would continue to be limited to the two existing driveways off of Lincoln Avenue, which connect directly to existing surface parking lots. No additional vehicular access to or through the former Lincoln site would be provided. The existing 129 paved parking spaces on the former Lincoln site would remain available for the School's use as surplus and overflow parking.

All student drop-off and pick-up activity would continue to occur along Lincoln Avenue, as would public and private bus loading and unloading. The loading zones for AC Transit and private buses would be maintained on Lincoln Avenue. No new traffic signals would be installed, and existing traffic signals would remain. The current Transportation Policy Guide and TDM program for the School's identified "Loop" through public streets in the adjacent, downhill neighborhood would remain as-is, as would use of the Mormon Temple parking lot near Highway 13 as a staging area for afternoon pick-up.

No grading or earthwork would occur at the site, and no new electrical, gas, communication, sewer, water, fire, or irrigation utility systems would be installed.

Other Potential Predictable Actions

CEQA Guidelines Section 15126.6(e) (3) (B) also provides that if the Project is not approved, and that non-approval would result in predictable actions of others (such as the proposal of some other project), this no project consequence should be discussed. These CEQA Guidelines further provide that the practical results of a project's non-approval should not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment. In this case, there are no mechanisms such as an open space acquisition plan, a publicly defined park plan or a re-zoning effort that would be necessary to permanently preserve the former Lincoln site under existing condition, and non-approval of the Project could potentially lead to other predictable actions.

Different Institutional Use

One potential outcome under a No Project Alternative is that Head-Royce School might sell or lease the former Lincoln site to a different institutional use (e.g., a different school, healthcare provider, church, etc.). The former Lincoln site has a General Plan land use designation of Institutional, which is intended to create,

maintain and enhance areas appropriate for educational facilities, cultural and institutional uses, health services and medical uses, as well as other uses of similar character. Under such a potential scenario, a separate institutional use may simply utilize the existing buildings on site, or may propose an entirely different development plan for the site. Under the General Plan's Institutional land use designation, the maximum FAR could be as high as 8.0, but (without a re-zoning) the current RD-1 zoning would limit development to a lot coverage of only 15% and a height limit of only three stories (30 feet), effectively accommodating only approximately 157,000 square feet of new institutional development across the 8-acre site.

Environmental Implications

The environmental effects associated with such a new institutional use of the site are too speculative to estimate, but would be at least as great as those of the Project. Such a Different Institutional Use scenario would be unlikely to avoid or reduce any environmental effects as compared to the Project.

Residential Scenario

Another potential outcome under a No Project Alternative is that Head-Royce School might sell the former Lincoln site to a residential developer. The former Lincoln site's Institutional General Plan land use designation would preclude a stand-alone residential development, and a General Plan amendment would be required.

The former Lincoln site is zoned Residential Detached-1 (RD-1). Under the City's Planning Code, the RD-1 zoning district is intended to accommodate detached, single unit structures and a limited range of commercial uses permitted with a CUP (e.g., general food or retail sales, full service restaurants and limited service restaurants and cafes). Based on OMC Table 17.15.03: Property Development Standards, residential densities under the RD-1 zoning are based on a minimum residential lot size of 5,000 square feet. Assuming that 25% of the former Lincoln site (or approximately 2 acres) would be needed to accommodate roadways and infrastructure, and conservatively assuming that a 1- to 2-acre portion of the site would be used to retain the existing three historic buildings on the site, the remaining 4 to 5 acres of net developable land on the proposed South Campus could accommodate between 35 and 43 new single-family residential lots.

Environmental Implications

The environmental effects associated with such a residential subdivision are again too speculative to estimate, but would be at least as great as those of the Project. Such a Residential Scenario would be unlikely to avoid or reduce any environmental effects as compared to the Project.

Alternative 2: Minor Development

Description of Alternative 2

Under Alternative 2, there would be no increase over the currently permitted maximum enrollment of 906 students, and no additional faculty or staff positions would necessarily be needed for this alternative. Alternative 2 would enable only limited development and activity at the former Lincoln site. A visual representation of the limited new construction and retention of existing structures and facilities associated with Alternative 2 is shown in Figure **18-1**.

A an amendment to the currently effective PUD for the Head-Royce School would be required for any expanded use of the former Lincoln site by Head Royce School, including that pursuant to Alternative 2.

Physical Changes on the Proposed South Campus

Alternative 2 would remove eight of the twelve existing buildings on the proposed South Campus, including four non-historic buildings constructed in the 1950s and 1960s (Building 4, Building 5, and Buildings 6 and 7), two buildings constructed in the 1990s, and two accessory structures. Demolition of these buildings would occur to increase open space and to limit maintenance of underutilized buildings.

The three existing historic buildings on the proposed South Campus would be rehabilitated consistent with Secretary of Interior Standards for historic buildings, and reused for on-going School purposes pursuant to Alternative 2. These three buildings include Building 0 (the Junior Alliance Hall), Building 1 (the Mary A. Crocker Cottage), and Building 2 (the Grace L. Trevor Cottage). These buildings would be used for collaborative meeting space for small groups, assembly space, classrooms and administrative functions. The rehabilitation efforts under Alternative 2 (like the Project) would mainly involve interior upgrades and renovations, as well as installing certain new exterior features to meet modern life/safety requirements and/or the School's programmatic needs and design preferences. It is presumed that the School would continue to pursue LEED Gold certification for the renovation of existing Buildings 0, 1 and 2.

Alternative 2 would use Building 9, re-purposed for administrative use with no significant changes to the exterior. As an option, the School may convert the interior of Building 9 into up to 5 apartment units as short-term housing for faculty and/or staff.

Like the Project, Alternative 2 would include an outdoor central Commons, outdoor wood deck classrooms, outdoor farming in raised planters, and ADA-accessible paths. The Commons would be used daily for students to congregate and eat lunch, and may also be used intermittently for larger events such as graduation. Irrigated lawn area will be consolidated to only the Commons and areas immediately surrounding Buildings 0, 1 and 2 (see Figure 18.1). The majority of existing vegetation throughout the former Lincoln site would remain. The existing play field would be re-graded and continue to be used for recreational purposes including athletic practices, recess and informal play.

Site grading activities would be very limited pursuant to Alternative 2. Buildings 0, 1, 2, and 9, which are the three buildings that would be retained under this alternative, would have minimal grading around their perimeters. Re-grading and limited revegetation would occur at each of the locations where the eight other buildings would be removed.

No new enrollment—enrollment capped at 906

Demolition of Buildings 3, 4, 5, 6, 7, 8, 10 and 11

Restoration and rehabilitation of Buildings 0, 1, 2

Reuse of Building 9 “as is”

No change to existing drop off or pick up, no additional parking spaces, maintain existing parking supply

- (A) New outdoor gathering space/Commons
- (B) New walking paths/outdoor classrooms
- (C) Reuse of playfield for informal recreation
- (D) New surface improvements for Teaching Garden

Tree removal and landscaping as necessary

- Site Work
- No Work
- Building Improvement / Construction / Use
- Building Demolition

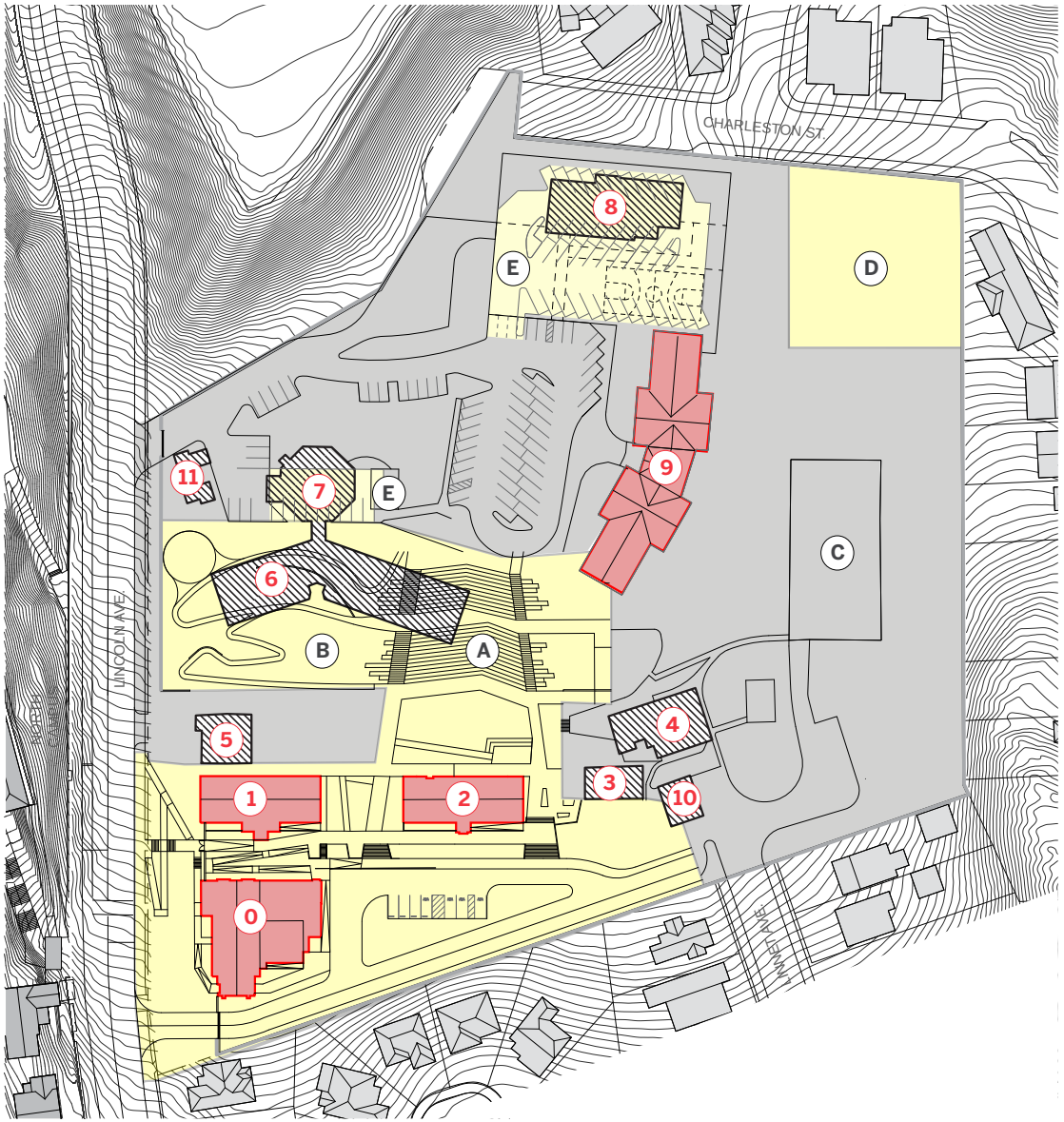


Figure 18-1
Alternative 2 - Minor Development

Source: Skidmore. Owing & Merrill, 2020

Vehicular/Pedestrian Access and Circulation

Vehicular access to the proposed South Campus would be limited to the two existing driveways off of Lincoln Avenue, which connect directly to existing surface parking lots. No additional vehicular access to, or through the proposed South Campus would be provided.

All student drop-off and pick-up activity would continue to occur along Lincoln Avenue, as would public and private bus loading and unloading. The loading zones for the AC Transit and private buses would be maintained on Lincoln Avenue. No new traffic signals would be installed, and existing traffic signals would remain. The current Transportation Policy Guide and TDM program for the School's identifies a "Loop" through public streets in the adjacent, downhill neighborhood for changing direction on Lincoln Avenue would remain as-is, as would use of the Mormon Temple parking lot near Highway 13 as a staging area for afternoon pick-up.

Alternative 2 would retain the existing 129 paved parking spaces that are currently on the proposed South Campus. In addition to 154 existing parking spaces at the existing Campus, 283 total off-street parking spaces would remain available for the School's use.

To access the proposed South Campus, students would cross Lincoln Avenue at the existing pedestrian crossing near the Guardhouse. This pedestrian crosswalk has a traffic signal with pedestrian crossing activation. Pedestrian pathways would be constructed throughout the proposed South Campus, connecting existing buildings, outdoor classrooms and the Commons area.

Utilities

Alternative 2 could likely continue to rely on existing electrical, gas, communication, sewer, water, fire, and irrigation utility systems. With the removal of existing buildings and no new construction, Alternative 2 would result in a decrease in impervious surface, resulting in a decrease in stormwater runoff from the Project site. Alternative 2 would not create or replace new impervious surfaces, and a Stormwater Management Plan would unlikely be required for management of water quality or stormwater flows.

There is an existing, partially culverted drainage channel on the neighboring properties to the south of the proposed South Campus. No improvements pursuant to Alternative 2 would occur within 100 feet of this drainage channel, and no Creek Permit would likely be required.

Existing Campus Building Reprogramming

No new construction would occur at the existing Campus.

Comparative Environmental Effects of Alternative 2

Aesthetics

With the exception of those specific items discussed below, the aesthetics impacts of Alternative 2 (views and vistas; scenic resources and visual character; light and glare; and shadows) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Aesthetics-1: Landscape Plan
- SCA Aesthetics-2: Lighting
- SCA Aesthetics-3: Trash and Blight Removal
- SCA Aesthetics-4: Graffiti Control
- SCA Biology-6 : Tree Permit

Views and Vistas

Alternative 2 would not include the Project's most prominent new building, the Performing Arts Center building. The Performing Art Center building would not be prominently visible from the adjacent neighborhood under Alternative 2, and will have no effects on public scenic views or vistas.

Light and Glare

Alternative 2 would not include the Loop Road or the Performing Arts building, and no new nighttime lighting fixtures associated with those features would be installed. The total number of new light sources would be substantially reduced under Alternative 2.

Air Quality

With the exception of those specific items discussed below, the impacts of Alternative 2 on air quality (construction emissions of criteria pollutants; operational emissions of criteria pollutants; community health risks from toxic air contaminants; cumulative community health risks from all TAC sources) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Air-1, Dust Controls – Construction Related
- SCA Air-2, Criteria Air Pollutant Controls - Construction Related
- SCA Air-3, Diesel Particulate Matter Controls-Construction Related
- SCA Air-6, Asbestos in Structures

Operational Criteria Pollutants

Whereas Alternative 2 would not provide for an increase is student enrollment, Alternative 2 would not generate any new operational criteria pollutants associated with increased vehicle trips, increased energy use at new buildings, new generators, or increased solid waste generation, water or wastewater use.

Operational TAC Emissions

Alternative 2 would not result any additional sources of TAC emission as attributable to emergency diesel generators (otherwise needed at the elevator/lifts at the Performing Art building and the Link Pavilion), increased traffic, or traffic on the Loop Road, and SCA Air-5, Stationary Sources of Air Pollution (Toxic Air Contaminants) would not be required.

Biological Resources

With the exception of those specific items discussed below, the impacts of Alternative 2 on biological resources (special status plant or animal species; sensitive natural communities; wetlands; wildlife movement and nursery sites; conflict with the City of Oakland's tree protection ordinance; compliance with the City of Oakland creek protection ordinance; and conflicts with an adopted habitat conservation plan) would be similarly less than significant as concluded for the Project, with implementation of SCAs required of the Project. Those SCAs include:

- SCA Hydrology-1: State Construction General Permit
- SCA Hydrology-2: NPDES C.3 Stormwater Requirements for Regulated Projects
- SCA Biology-1: Tree Removal during Bird Breeding Season

Tree Removal

Implementation of Alternative 2 would substantially reduce the number of trees needed to be removed to accommodate changes at the proposed South Campus. Alternative 2 would result in site work at approximately one-half of the proposed South Campus, focusing on the areas where existing buildings would be removed; areas in the vicinity of where rehabilitation work would be conducted near Buildings 0, 1 and 2; and the creation of the outdoor Commons area in the center of the site. Alternative 2 would not include the Loop Road, the Performing Arts Center building or the pedestrian tunnel, and it is anticipated that existing trees otherwise needed to be removed for these Project element, would remain. A Tree Permit would still be required for the removal or pruning of any protected trees pursuant to Alternative 2.

Creek Protection Ordinance

Pursuant to Alternative 2, no construction work would occur between 20 feet from the top of bank and 100 feet from the centerline of the off-site creek, and no earthwork involving more than three cubic yards of material would occur more than 20 feet from the top of bank. Unlike the Project, Alternative 2 would be unlikely to require implementation of SCA Hydro-3: Creek Protection Plan or to obtain a Creek Permit.

Water Quality Effect on Habitat

Alternative 2 would not involve any substantial grading activities or excavations, and would have less construction activities that might expose soil to substantial erosion. Rehabilitation of Buildings 0, 1 and 2 would not involve use of motorized heavy equipment that require fuels that could enter into stormwater runoff, and the potential for pollution of downstream water bodies would be reduced.

Cultural and Historic Resources

With the exception of those specific items discussed below, the impacts of Alternative 2 on cultural and historic resource (historic resources; vibratory damage to historic resources; cultural resources; tribal cultural resources; and discovery of human remains) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction
- SCA Cultural-3: Human Remains

Rehabilitation of Buildings 0, 1 and 2 pursuant to Alternative 2 would the same as proposed pursuant to the Project and, as concluded for the Project, these rehabilitation efforts would fully comply with nine of the ten Secretary of the Interior's Standards for Rehabilitation, and partially comply with one of the Standards (Standard 6). Compliance with these Standards as proposed would not negatively affect the ability of Buildings 0, 1 and/or 2 to be listed on the California Register. Alternative 2 would not cause a substantial, adverse change in the significance of these resources as defined by CEQA and no further mitigation would be required.

Vibration Effects

Whereas no tunnel excavation would occur under this Alternative, no heavy groundborne vibration associated with the pedestrian tunnel excavation would occur, and SCA Cultural-4 would not be applicable.

Cultural Resources

With substantially less grading and no excavation, Alternative 2 would have less likelihood of discovery of any historic or prehistoric subsurface cultural resources during ground disturbing activities.

Geology and Soils

With the exception of those specific items discussed below, the impacts of Alternative 2 related to geology and soils (fault rupture, liquefaction and seismically induced landslides and/or settlement; seismic ground

shaking; slope instability; surface settlement and ground movement – tunneling; expansive soils; substantial soil erosion or loss of topsoil; and septic tanks) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Geo-1: Construction-Related Permits
- SCA Geo-2: Soils Report
- SCA Geo-5: Erosion and Sedimentation Control Plan for Construction

Slope Instability

The 2020 Rockridge Geotechnical Report identifies an on-site fill slope on the southern side of Building 9 that has displayed indications of minor instability since its construction. It is possible that future shallow sliding will gradually reduce the relatively level area between the Building 9 and the top of the slope, and that slope instability may impact future improvements constructed on and at the base of the slope pursuant to the Project. However, Alternative 2 does not include any improvements at the base of this slope (i.e., no Loop Road). The slope reconstruction and retaining walls, and the Recommendations Geo-1: Stability of Slope below Building 9, would not be required.

Surface Settlement and Ground Movement – Tunneling

Whereas Alternative 2 does not include construction of the pedestrian tunnel below Lincoln Avenue, the potential for surface settlement and ground loss during tunnel excavation and construction operations would not result in settlement of the overlying road and/or utilities. No regulatory requirements, SCAs or Recommendations Geo-1: Conceptual Tunnel Design and Constructability would be needed to reduce the risk to life or property due to surface settlement or ground loss.

Expansive Soil

Alternative 2 does not include the construction of any new buildings, only the rehabilitation of existing Buildings 0, 1 and 2. Therefore, Recommendations Geo-3: Grading Practices for Expansive Soils, would not be required of Alternative 2.

Greenhouse Gas Emissions

The impacts of Alternative 2 pertaining to GHG emissions and ECAP consistency would be similarly less than significant as concluded for the Project, with SCAs or mitigation as required of the Project. However, pursuant to Alternative 2, there would be no new buildings, no increase in student enrollment, and no needed changes to the current TDM program for the School. As such, there would be very few ECAP Consistency Checklist criteria that would apply.

- The School's current TDM Plan includes providing a subsidy to students and faculty for transit passes
- The rehabilitation of Buildings 0, 1 and 2 would be private efforts and not a retrofit of City-owned or City-controlled buildings.
- The design and construction of renovations to existing Buildings 0, 1 and 2 would need to comply with the City of Oakland Green Building Ordinance, unless waivers for these requirements as may apply to historic buildings are sought.
- Alternative 2 would comply with the Construction Demolition Ordinance by requiring the Project contractor reduces demolition waste and facilitates material reuse as required.

Hazards and Hazardous Materials

The impacts of Alternative 2 related to hazards and hazardous materials (routine transport, use, disposal or storage of hazardous materials; reasonably foreseeable upset and accident conditions; Cortese List sites;

construction-related hazardous materials; emissions of hazardous materials near a school; and safety hazards related to a public or private airport or airstrip) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Hazards-1: Hazardous Materials Related to Construction
- SCA Hazards-2: Hazardous Building Materials and Site Contamination
- SCA Air-6: Asbestos in Structures

Hydrology

With the exception of those specific items discussed below, the impacts of Alternative 2 related to hydrology and water quality (water quality during construction; water quality during operations; stormwater runoff; groundwater; flood hazards; and conflict with the City of Oakland Creek Protection Ordinance) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs applicable to Alternative 2 include:

- SCA Hydro-1: Erosion and Sedimentation Control Plan for Construction
- SCA Hydro-2: State Construction General Permit
- SCA Hydro-6: Vegetation Management on Creekside Properties

Dewatering

Alternative 2 would not include the proposed pedestrian tunnel, and the need for dewatering of the tunnel excavation during construction would not occur. Alternative 2 would not likely be required to include dewatering provisions in its Construction General Permit issued by the SWRCB, or to obtain a permit from the City for discharge or groundwater.

Erosion and Sedimentation

Alternative 2 would not involve any substantial grading activities or excavations, and would have limited construction activities that might expose soil to substantial water erosion. Rehabilitation of Buildings 0, 1 and 2 would not involve use of motorized heavy equipment such as trucks or grading equipment that require fuel, lubricating grease and other fluids. Alternative 2 would still disturb more than one acre of surface area, and would be required.

Operational Water

Alternative 2 would include limited new impervious surfaces and minimal potential to contribute to an increased amount of non-point sources of pollutants in the runoff from the site. Alternative 2 would likely still qualify as a Regulated Project under NPDES C.3 Stormwater Requirements, and it requirements would still apply to minimize non-point source pollution.

Creek Permit

Unlike the Project, Alternative 2 would not include construction activities within 100 feet of the Laguna Branch of Peralta Creek (no Loop Road, retaining walls, fill or stormwater treatment measures), and this Alternative would likely not require a Creek Permit. Alternative 2 may be determined to be a Creekside property, requiring implementation of SCA Hydro-6, requiring BMPs for managing creekside vegetation prior to, during, and after construction.

Land Use

The impacts of Alternative 2 related to land use (division of an established community; fundamental conflict with nearby land uses; conflict with applicable plans and policies; and conflicts with an HCP or NCP) would be similarly less than significant, as concluded for the Project.

Noise

With the exception of those specific items discussed below, the impacts of Alternative 2 related to noise (construction noise; daily operational noise; noise from special events; traffic noise; and groundborne vibration) would be similarly less than significant as concluded for the Project, with implementation of SCAs, detailed recommendations pursuant to SCAs, and mitigation measures as required of the Project. Those SCAs, mitigation measures and recommendations applicable to Alternative 2 include:

- SCA Noise-1, Construction Days/Hours
- SCA Noise-2, Construction Noise
- SCA Noise-4, Project-Specific Construction Noise Reduction Measures
- SCA Noise-5, Construction Noise Complaints
- SCA Noise-7, Operational Noise
- Recommendation Noise-2, Audible Pedestrian Crosswalk Signals
- Mitigation Measure Noise-3A, Sound System Design Parameters.
- Mitigation Measure Noise-3B, Special Event Notifications and Restrictions

Construction Noise

Unlike the Project, construction activities associated with Alternative 2 would be limited to demolition of existing development and rehabilitation of Buildings 0, 1 and 2, and would not include additional site preparation, grading and paving, or construction of the pedestrian tunnel undercrossing or the Performing Art Center building. The highest noise levels from construction would be during demolition of existing structures when impact tools are used, but no extreme construction noise would be expected. With implementation of Oakland's standard noise controls (SCA Noise-1 through SCA Noise-5), and recognizing that noise generated by demolition activities would occur over a very temporary period, the temporary increase in ambient noise levels attributed to Alternative 2 would be less than significant.

Operational Noise

Outdoor noise-generating activities anticipated to occur pursuant to Alternative 2 would be limited to outdoor classes, social gatherings and classes at the Commons space, and outdoor recess activities. There would be no nighttime (10:00 pm to 7:00 am) outdoor events pursuant to this Alternative. As analyzed for the Project, typical noise levels generated by daily operations pursuant to Alternative 2 would comply with the City's noise standards at the nearest off-site residential receptors, and would be less than significant. This conclusion is not dependent on construction of a perimeter wall, which is not included under Alternative 2.

Special Event Noise

Alternative 2, would need to include an amendment to the School's current PUD permit to allow certain Special Events to the occur at the proposed South Campus, including high school graduation and lower grade level promotion ceremonies at the proposed Commons. No special events would be held at the Performing Arts Center building, as this building is not a part of Alternative 2. As analyzed for the Project, noise levels generated during large graduation ceremonies and promotion events held in the Commons would be anticipated to exceed the adjusted daytime thresholds established by the City of Oakland Noise Ordinance at

nearby residences. These special events would be limited to just three events per year and would only occur during daytime hours, but because they would exceed the noise standard, they would be considered significant noise impacts. Mitigation Measure Noise-3A: Sound System Design Parameters, and Mitigation Measure Noise-3: Special Event Notifications and Restrictions would apply to this alternative. By designing the PA sound system used at special graduation events to minimize noise "spillover" as defined by the 52 to 53 dBA Leq standard at the property line established per Mitigation Measure Noise-3A, the resulting noise levels at all identified sensitive receptors would meet applicable noise thresholds, and this mitigation measure would reduce the noise impacts associated with large Special Events to levels of less than significant. Notifying the surrounding neighborhood of upcoming graduation and promotion ceremonies (per Mitigation Measure Noise-3B would reduce the annoyance that these neighbors may feel towards these infrequent event (only three such graduation and promotion ceremonies over the course of a year).

Traffic Noise

Alternative 2 would not include any increase in student enrollment and would not result in any increase in School-related traffic noise, nor would it include any new noise source associated with the Loop Road.

Vibrations

Alternative 2 would not include construction of the pedestrian tunnel, and implementation of Mitigation Measure Noise-5 for construction-related vibration levels near on-site historic structures would not be required.

Transportation

The impacts of Alternative 2 related to transportation (vehicle miles traveled; consistency with plans and policies addressing the safety or performance of the circulation system; and induced travel) would be similarly less than significant as concluded for the Project, with SCAs as required of the Project. Those SCAs applicable to Alternative 2 include:

- SCA Transportation-1: Construction Activity in the Public Right-of-Way
- SCA Transportation-2: Bicycle Parking
- SCA Transportation-4: Transportation and Parking Demand Management
- SCA Transportation-5:Transportation Impact Fee
- SCA Transportation-6: Plug-In Electric Vehicle (PEV) Charging Infrastructure

Whereas the calculation of VMT for the Project is based on a per-population rate, the existing student enrollment number under Alternative 2 would be the same per-student VMT rate of approximately 27 VMT per student. This calculation assumes that VMT under Alternative 2 would continue to have similar mode shares, operating conditions at the School, and a similar geographic distribution of the student and faculty/staff home locations. Actual vehicle miles traveled would be the same as existing conditions.

Utilities

With the exception of those specific items discussed below, the impacts of Alternative 2 related to utilities and services systems (water supply; wastewater treatment and disposal; stormwater drainage; utility service connections; solid waste; and energy) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs applicable to Alternative 2 include:

- SCA Utilities-1, Water Efficient Landscape Ordinance
- SCA Utilities-2, Green Building Requirements (as may apply to rehabilitation of Buildings 0, 1 and 2 only)

- SCA Utilities-3, Sanitary Sewer System
- SCA Utilities-4, Underground Utilities
- SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling
- SCA Utilities-6, Recycling Collection and Storage Space
- SCA Utilities-7, Storm Drain System

Water Supplies

With no increase in student enrollment under Alternative 2, this alternative would generate substantially less water demands than the Project. Increased water demands would be limited to exterior irrigation of landscape areas surrounding Buildings 0, 1 and 2, the Commons and the playfield. SCA-1: Water Efficient Landscape Ordinance, would still apply to these limited area.

Wastewater Treatment and Disposal

With no increase in student enrollment under Alternative 2, this alternative would not generate an increased demand for wastewater treatment and disposal.

Solid Waste

With no increase in student enrollment under Alternative 2, this alternative would not generate an increased demand for solid waste, other than construction waste generated during rehab of Building 0, 1 and 2. SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling would apply to this alternative.

Energy Demands

Alternative 2 would not include construction of any new buildings (only rehab of existing buildings), and increased energy demands would be substantially less than the Project.

Wildfire and Emergency Evacuation

The impacts of Alternative 2 related to wildfires and emergency evacuation (wildland fires; and conflicts with emergency evacuation plans) would be similarly less than significant as concluded for the Project, with implementation of SCAs and additional project-specific recommendations pursuant to SCAs as required of the Project. Those SCAs and further recommendations applicable to Alternative 2 include:

- SCA Fire-1, Designated Very High Fire Severity Zone – Vegetation Management
- SCA Fire-3: Compliance with Other Requirements
- Additional Evacuation Planning Recommendations for Head-Royce School

Although Alternative 2 does not include any new buildings, it is assumed that SCA Fire-1 would still apply to this alternative, as it would place students into existing buildings located within an area designated as a Very High Wildfire Severity Zone. SCA provisions pertaining to defensible space, fire-resistant landscaping and fuels management would reduce this impact to less than significant.

Alternative 3: Reduced Development

Description of Alternative 3

Alternative 3 would be similar to the Project, but would not include either the pedestrian tunnel under Lincoln Avenue or the proposed Performing Arts Center. The increase in permitted enrollment under Alternative 3 would be up to a maximum of 1,050 students, representing an increase of 144 additional students over the currently allowed enrollment of 906. Enrollment increases would occur at no more than 20 additional students each year, over an approximate 7 to 8-year period. To support increased enrollment, perhaps as many as 7 or 8 additional faculty and staff would be added, for a total of approximately 180 employees. A visual representation of the new construction and retention of existing structures and facilities associated with Alternative 3 is shown in **Figure 18-2**.

An amendment to the School's current PUD permit would be required to allow expansion of Head-Royce School's civic education activities to the former Lincoln site as a new, proposed South Campus.

Physical Changes on the Proposed South Campus

Alternative 3 would remove eight of the twelve existing buildings on the former Lincoln site, including four non-historic buildings constructed in the 1950s and 1960s (Building 4, Building 5, and Buildings 6 and 7), two buildings constructed in the 1990s, and two accessory structures. Demolition of these buildings would occur to clear new open space, to accommodate construction of the new Loop Road, and to clear space for needed parking.

Alternative 3 would provide for the three existing historic buildings on the proposed South Campus to be rehabilitated consistent with Secretary of Interior Standards for historic buildings, and reused for School purposes. These three buildings include Building 0 (the Junior Alliance Hall), Building 1 (the Mary A. Crocker Cottage), and Building 2 (the Grace L. Trevor Cottage). These buildings would be used for collaborative meeting space for small groups, assembly space, classrooms and administrative functions. The rehabilitation efforts under Alternative 3 (like the Project) would mainly involve interior upgrades and renovations, as well as installing certain new exterior features to meet modern life/safety requirements and/or the School's programmatic needs and design preferences. It is assumed that the School would continue to pursue LEED Gold certification for the renovation of existing Buildings 0, 1 and 2.

Alternative 3 would include renovation of Building 9 to better accommodate classroom and/or School administrative purposes, and as an option, the School may seek to convert the interior of Building 9 into up to 5 apartment units as short-term housing for faculty and/or staff. The only new building pursuant to Alternative 3 would be a new, approximately 1,500 square-foot, 14-foot tall building to be used for storage. The storage building would be located on the easterly (uphill) side of Building 9. The Performing Art Center would not be constructed pursuant to Alternative 3.

Alternative 3 would include new perimeter fencing around the proposed South Campus to promote security and privacy. On the southern and western property boundaries, Alternative 3 would include a solid fence or wall six feet in height.

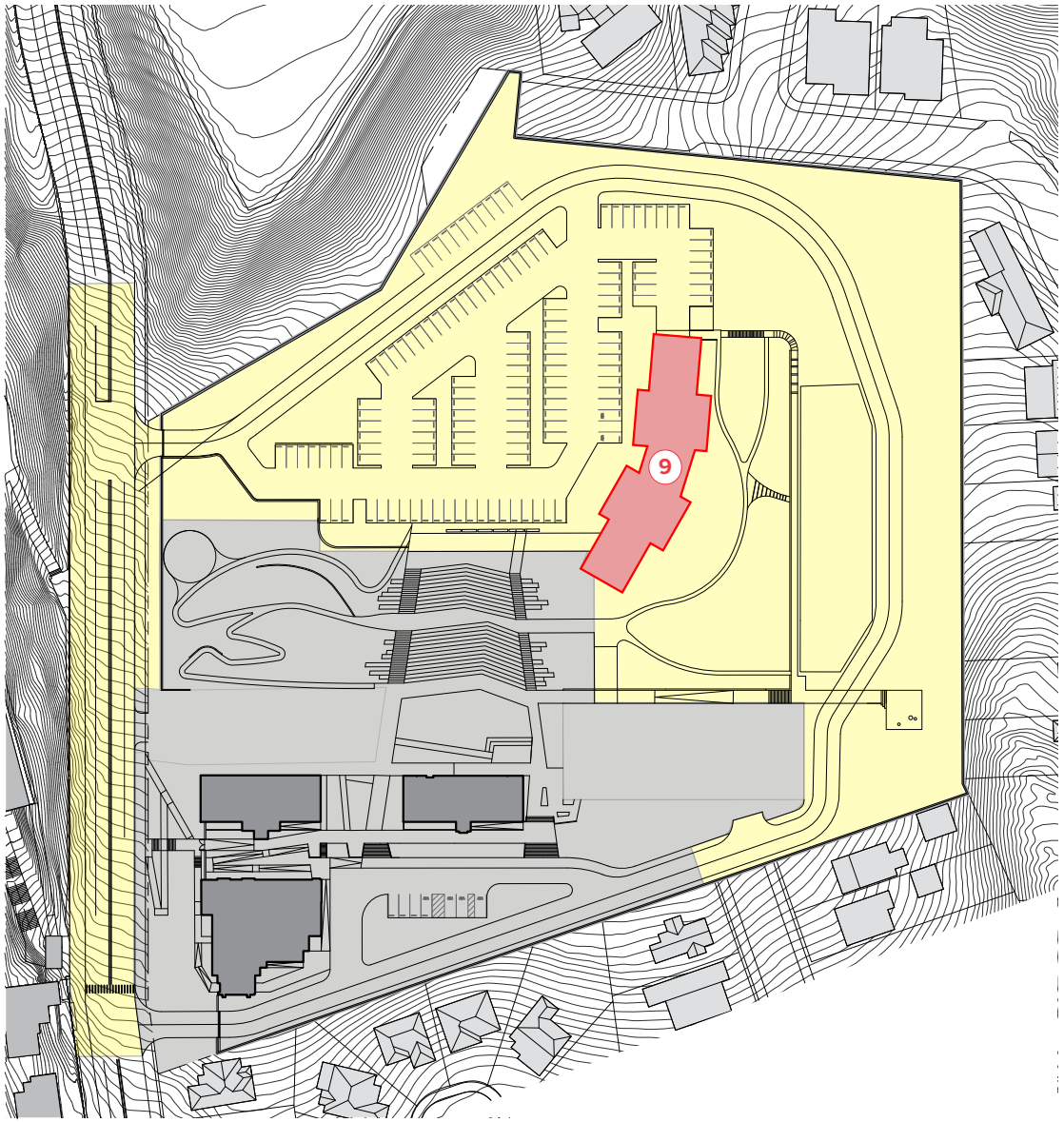
Enrollment increase to 1,050

New drop off/pick up using internal Loop Road with new traffic signals

Renovation of Building 9

Increase in parking

Tree removal and landscaping as necessary



Site Work
Previous Phase I Work
Building Improvement / Construction / Use

Figure 18-2
Alternative 3 - Reduced Development

Source: Skidmore. Owing & Merrill, 2020

Like the Project, Alternative 3 would include a landscape design that would include a central Commons, multiple outdoor wood deck classrooms, a "walking labyrinth", outdoor farming in raised planters, and a series of ADA-accessible paths. The Commons would be the central gathering place within the proposed South Campus, composed of terraces integrated with perennial planting and a stepped water feature connecting to rain gardens, and would be used daily for students to congregate and eat lunch. It may also be used intermittently for larger events such as graduation. Irrigated lawn area will be consolidated to only the Commons and areas immediately surrounding buildings. School gatherings could also take place on the deck of Building 0. Existing shrubs will be removed, and any groundcover or bare ground will be replaced with drought-tolerant perennials and grasses. Native plantings will be used wherever feasible. The existing play field at the base of the proposed South Campus would be re-graded and repositioned to continue to be used for recreational purposes including athletic practices, recess and informal play.

Similar to the Project, Alternative 3 would include site grading to accommodate the loop road, access driveways, parking lots, plazas and walkways. The extent of grading is driven by construction of the Loop Road and the need to meet Fire Department requirements for grade and alignment, the protection of existing trees and the intent to minimize retaining walls. Grading and earthwork would be performed in conformance with the Project's geotechnical report and specifications. No earthwork would be conducted for construction of the pedestrian tunnel under Alternative 3.

Vehicular Access and Circulation

Under Alternative 3, the new internal, one-way Loop Road would ring the internal perimeter of the proposed South Campus. The entrance to this Loop Road would be at or near the existing curb cut and driveway off Lincoln Avenue at the easterly (upper) end of the proposed South Campus, and the exit would be at a similar existing curb cut and driveway off Lincoln at the westerly (lower) end. The new Loop Road would be approximately 1,450 linear feet in length, providing on-Campus, off-street queuing space for vehicles. Two distinct drop-off and pick-up points (one for the Upper School, and one for the Lower and Middle Schools) would provide a required alternative to the current drop-off and pick-up location along Lincoln Avenue (see Figure 18-2). Other than for public and private bus loading and unloading, which would continue at Lincoln Avenue, all vehicle picking-up and dropping-off activity at the School would occur along this Loop Road, rather than as currently occurs along Lincoln Avenue. The loading zones for AC Transit and private buses would be maintained on Lincoln Avenue.

Access to the new Loop Road in the proposed South Campus would be controlled at signalized intersections. Alternative 3 would result in reconfiguration of the existing Lincoln Avenue right-of-way to accommodate a downhill left-turn pocket and an uphill right-turn pocket into the one-way, signalized entrance to the Loop Road at the uphill access point. Parallel parking spaces along the south side of Lincoln Avenue (in front of the proposed South Campus) would be removed to accommodate this modification. A new signalized intersection would be added to Lincoln Avenue at the egress point of the Loop Road, which would include a crosswalk sequence for pedestrians crossing Lincoln Avenue, replacing the current traffic signal that controls the existing pedestrian crosswalk at the Head-Royce Gatehouse. The furthest uphill existing traffic signal that is located at the entrance to the Head-Royce athletic field parking lot and the Ability Now Bay Area parcel will be retained and upgraded to coordinate with the two downhill traffic signals.

The new internal Loop Road would replace and eliminate the circuitous turn-around routes identified in the School's Transportation Policy Guide and TDM program known as "the Loop", which relies on public streets in the adjacent, downhill neighborhood to change direction on Lincoln Avenue, and uses the Mormon Temple parking lot near Highway 13 as a staging area for afternoon pick-up.

Alternative 3 would modify existing surface parking lots at the proposed South Campus to better accommodate the Loop Road, and would re-design and re-construct these parking spaces to accommodate increased parking demand.

Pedestrian pathways would be constructed throughout the proposed South Campus, connecting existing and proposed new buildings and associated open spaces. Alternative 3 would rely on at-grade crossings of Lincoln Avenue for all pedestrian connections between the existing and proposed South Campuses. The tunnel would not be constructed under this alternative.

Utilities

Alternative 3 would likely require new electrical, gas, communication, sewer, water, fire and irrigation utility systems. Like the Project, Alternative 3 would require preparation of a Stormwater Management Plan designed to provide for appropriate water quality treatment for new and/or replaced impervious surfaces.

Construction of portions of the Loop Road, retaining walls, graded fill and drainage improvements would be conducted within 100 feet of an off-site drainage channel, and construction of these features near the drainage channel would be required to avoid erosion and sedimentation of the channel, including implementation of a Creek Protection Plan.

Existing Campus Building Reprogramming

No new construction would occur in the existing Campus pursuant to Alternative 3.

Comparative Environmental Effects of Alternative 3

Aesthetics

With the exception of those specific items discussed below, the aesthetics impacts of Alternative 3 (views and vistas; scenic resources and visual character; light and glare; and shadows) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Aesthetics-1: Landscape Plan
- SCA Aesthetics-2: Lighting
- SCA Aesthetics-3: Trash and Blight Removal
- SCA Aesthetics-4: Graffiti Control
- SCA Biology-6 : Tree Permit

Views and Vistas

Alternative 3 would not include the Project's most prominent new building, the Performing Arts Center building. The Performing Art Center building would not be prominently visible from the adjacent neighborhood under Alternative 3, and will have no effects on public scenic views or vistas.

Air Quality

With the exception of those specific items discussed below, the impacts of Alternative 3 on air quality (construction emissions of criteria pollutants; operational emissions of criteria pollutants; community health risks from toxic air contaminants; cumulative community health risks from all TAC sources) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Air-1, Dust Controls – Construction Related
- SCA Air-2, Criteria Air Pollutant Controls - Construction Related
- SCA Air-3, Diesel Particulate Matter Controls-Construction Related

- SCA Air-6, Asbestos in Structures

Operational Criteria Pollutants

Whereas Alternative 3 would have a reduced student enrollment as compared to the Project and would not include any new buildings, Alternative 3 would generate less operational criteria pollutants associated with increased vehicle trips, and no increased operational criteria pollutants associated with energy use at new buildings or new generators.

Operational TAC Emissions

Alternative 3 would not result any additional sources of TAC emission as attributable to emergency diesel generators (otherwise needed at the elevator/lifts at the Performing Art building and the Link Pavilion), and SCA Air-5, Stationary Sources of Air Pollution (Toxic Air Contaminants) would not be required

Biological Resources

With the exception of those specific items discussed below, the impacts of Alternative 3 on biological resources (special status plant or animal species; sensitive natural communities; wetlands; wildlife movement and nursery sites; conflict with the City of Oakland's tree protection ordinance; compliance with the City of Oakland creek protection ordinance; and conflicts with an adopted habitat conservation plan) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Hydrology-1: State Construction General Permit
- SCA Hydrology-2: NPDES C.3 Stormwater Requirements for Regulated Projects
- SCA Biology-1: Tree Removal during Bird Breeding Season
- SCA Bio-2: Tree Permit
- SCA Hydro-3: Creek Protection Plan

Tree Removal

Alternative would result in removal of a similar number of trees as would the Project. Most trees to be removed are as a result of construction of the Loop Road, which is a part of Alternative 3. It is estimated that Alternative 3 would remove slightly fewer trees than would the Project, as some trees located at the site of the Project's Performing Art Building and at the pedestrian tunnel (which would not be constructed under this Alternative) could be retained. Pursuant to SCA Bio-2: Tree Permit and pursuant to OMC Chapter 12.36 (the Protected Tree Ordinance), the Project applicant would be required to obtain a Tree Permit for the removal or pruning of any protected tree, and to abide by all conditions of that permit.

Cultural and Historic Resources

With the exception of those specific items discussed below, the impacts of Alternative 3 on cultural and historic resource (historic resources; vibratory damage to historic resources; cultural resources; tribal cultural resources; and discovery of human remains) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction
- SCA Cultural-3: Human Remains

Rehabilitation of Buildings 0, 1 and 2 pursuant to Alternative 3 would the same as proposed pursuant to the Project and, as concluded for the Project, these rehabilitation efforts would fully comply with nine of the ten Secretary of the Interior's Standards for Rehabilitation, and partially comply with one of the Standards

(Standard 6). Compliance with these Standards as proposed would not negatively affect the ability of Buildings 0, 1 and/or 2 to be listed on the California Register. Alternative 3 would not cause a substantial, adverse change in the significance of these resources as defined by CEQA and no further mitigation would be required.

Vibration Effects

Whereas no tunnel excavation would occur under this Alternative, no heavy groundborne vibration associated with the pedestrian tunnel excavation would occur, and SCA Cultural-4 would not be applicable.

Greenhouse Gas Emissions

The impacts of Alternative 3 pertaining to GHG emissions and ECAP consistency would be similarly less than significant as concluded for the Project, with SCAs or mitigation as required of the Project. Pursuant to Alternative 3, there would be no new buildings (only the construction of the Loop Road), but there would be an increase in student enrollment. As such, only a few ECAP Consistency Checklist criteria would apply:

- The School's current TDM Plan includes providing a subsidy to students and faculty for transit passes, and that subsidy would be extended to new students and faculty
- The new parking spaces provided under this alternative would need to comply with PEV Charging Infrastructure requirements of the Oakland Municipal Code
- Sidewalk and curb space would be prioritized by minimizing curb cuts along the Lincoln Avenue frontage. The new Loop Road would not increase the number of curb cuts, and would not prevent implementation of any improvements associated with the City's Bike and Pedestrian Plans
- The design and construction of renovations to existing Buildings 0, 1 and 2 would need to comply with the City of Oakland Green Building Ordinance, unless waivers for these requirements as may apply to historic buildings are sought
- This alternative would need to comply with the School's existing Vegetation Management Plan, which includes requirements for pruning, clearing and removal of vegetation, and other measures to mitigate the risk of wildfire hazards

Geology and Soils

With the exception of those specific items discussed below, the impacts of Alternative 3 related to geology and soils (fault rupture, liquefaction and seismically induced landslides and/or settlement; seismic ground shaking; slope instability; surface settlement and ground movement – tunneling; expansive soils; substantial soil erosion or loss of topsoil; and septic tanks) would be similarly less than significant as concluded for the Project, with implementation of SCAs and detailed recommendations pursuant to SCAs as required of the Project. Those SCAs and detailed recommendations applicable to Alternative 3 include:

- SCA Geo-1: Construction-Related Permits
- SCA Geo-2: Soils Report
- SCA Geo-5: Erosion and Sedimentation Control Plan for Construction
- Recommendations Geo-1: Stability of Slope below Building 9
- Recommendations Geo-3: Grading Practices for Expansive Soils

Surface Settlement and Ground Movement – Tunneling

Whereas Alternative 3 does not include construction of the pedestrian tunnel below Lincoln Avenue, the potential for surface settlement and ground loss during tunnel excavation and construction operations would

not result in settlement of the overlying road and/or utilities. No regulatory requirements, SCAs or Recommendations Geo-2: Conceptual Tunnel Design and Constructability would be needed to reduce the risk to life or property due to surface settlement or ground loss.

Hazards and Hazardous Materials

The impacts of Alternative 3 related to hazards and hazardous materials (routine transport, use, disposal or storage of hazardous materials; reasonably foreseeable upset and accident conditions; Cortese List sites; construction-related hazardous materials; emissions of hazardous materials near a school; and safety hazards related to a public or private airport or airstrip) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs include:

- SCA Hazards-1: Hazardous Materials Related to Construction
- SCA Hazards-2: Hazardous Building Materials and Site Contamination
- SCA Air-6: Asbestos in Structures

Hydrology

With the exception of those specific items discussed below, the impacts of Alternative 3 related to hydrology and water quality (water quality during construction; water quality during operations; stormwater runoff; groundwater; flood hazards; and conflict with the City of Oakland Creek Protection Ordinance) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs or mitigation measures include:

- SCA Hydro-1: Erosion and Sedimentation Control Plan for Construction
- SCA Hydro-2: State Construction General Permit
- SCA Hydro-4: NPDES C.3 Stormwater Requirements for Regulated Projects
- SCA Hydro-5: Creek Protection Plan
- SCA Hydro-6: Vegetation Management on Creekside Properties

Dewatering

Alternative 3 would not include the proposed pedestrian tunnel, and the need for dewatering of the tunnel excavation during construction would not occur. Alternative 3 would not likely be required to include dewatering provisions in its Construction General Permit issued by the SWRCB, or to obtain a permit from the City for discharge or groundwater.

Land Use

The impacts of Alternative 3 related to land use (division of an established community; fundamental conflict with nearby land uses; conflict with applicable plans and policies; and conflicts with an HCP or NCP) would be similarly less than significant, as concluded for the Project.

Noise

With the exception of those specific items discussed below, the impacts of Alternative 3 related to noise (construction noise; daily operational noise; noise from special events; traffic noise; and groundborne vibration) would be similarly less than significant as concluded for the Project, with SCAs, project-specific recommendations pursuant to SCAs, or mitigation as required of the Project. Those SCAs, recommendations or mitigation measures applicable to Alternative 3 include:

- SCA Noise-1, Construction Days/Hours

- SCA Noise-2, Construction Noise
- SCA Noise-4, Project-Specific Construction Noise Reduction Measures
- SCA Noise-5, Construction Noise Complaints
- SCA Noise-7, Operational Noise
- Recommendation Noise-2, Audible Pedestrian Crosswalk Signals
- Mitigation Measure Noise-3A: Sound System Design Parameters
- Mitigation Measure Noise-3B, Special Event Notifications and Restrictions

Construction Noise

Unlike the Project, construction activities associated with Alternative 3 would be limited to demolition of existing development, rehabilitation of Buildings 0, 1 and 2, construction of outdoor classrooms and the Commons, and construction of the Loop Road. Alternative 3 would not include additional site preparation, grading for construction of the pedestrian tunnel undercrossing or the Performing Art Center building. The highest noise levels from construction would be during demolition of existing structures when impact tools are used, but no extreme construction noise would be expected. With implementation of Oakland's standard noise controls (SCA Noise-1 through SCA Noise-5), and recognizing that noise generated by demolition activities would occur over a very temporary period, the temporary increase in ambient noise levels attributed to Alternative 3 would be less than significant.

Special Event Noise

Like the Project and Alternative 2, Alternative 3 would need to include an amendment to the School's current PUD permit to allow certain Special Events to the occur at the proposed South Campus, including high school graduation and lower grade level promotion ceremonies at the proposed Commons. No special events would be held at the Performing Arts Center building, as this building is not a part of Alternative 3. As analyzed for the Project, noise levels generated during large graduation ceremonies and promotion events held in the Commons would be anticipated to exceed the adjusted daytime thresholds established by the City of Oakland Noise Ordinance at nearby residences. These special events would be limited to just three events per year and would only occur during daytime hours, but because they would exceed the noise standard, they would be considered significant noise impacts. Mitigation Measure Noise-3A: Sound System Design Parameters, and Mitigation Measure Noise-3: Special Event Notifications and Restrictions would apply to this alternative. By designing the PA sound system used at special graduation events to minimize noise "spillover" as defined by the 52 to 53 dBA Leq standard at the property line established per Mitigation Measure Noise-3A, the resulting noise levels at all identified sensitive receptors would meet applicable noise thresholds, and this mitigation measure would reduce the noise impacts associated with large Special Events to levels of less than significant. Notifying the surrounding neighborhood of upcoming graduation and promotion ceremonies (per Mitigation Measure Noise-3B would reduce the annoyance that these neighbors may feel towards these infrequent event (only three such graduation and promotion ceremonies over the course of a year).

Vibrations

Alternative 3 would not include construction of the pedestrian tunnel, and implementation of Mitigation Measure Noise-5 for construction-related vibration levels near on-site historic structures would not be required.

<u>Transportation</u>

The impacts of Alternative 3 related to transportation (vehicle miles traveled; consistency with plans and policies addressing the safety or performance of the circulation system; and induced travel) would be

similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs applicable to Alternative 3 include:

- SCA Transportation-1: Construction Activity in the Public Right-of-Way
- SCA Transportation-2: Bicycle Parking
- SCA Transportation-4: Transportation and Parking Demand Management
- SCA Transportation-5: Transportation Impact Fee
- SCA Transportation-6: Plug-In Electric Vehicle (PEV) Charging Infrastructure

Whereas the calculation of VMT for the Project is based on a per-population rate, the lower student enrollment under Alternative 3 would still result in a similar per-student VMT rate of approximately 27 VMT per student, as applied to fewer students. This calculation assumes that VMT under Alternative 3 would have similar mode shares, operating conditions at the School, and a similar geographic distribution of the student and faculty/staff home locations. Actual vehicle miles traveled would be proportionally lower, based on proportionally fewer students under Alternative 3.

Utilities

The impacts of Alternative 3 related to utilities and services systems (water supplies; wastewater treatment and disposal; stormwater drainage; utility service connections; solid waste; and energy) would be similarly less than significant as concluded for the Project, with implementation of SCAs as required of the Project. Those SCAs applicable to Alternative 3 include:

- SCA Utilities-1, Water Efficient Landscape Ordinance
- SCA Utilities-2, Green Building Requirements (as may apply to rehabilitation of Buildings 0, 1 and 2 only)
- SCA Utilities-3, Sanitary Sewer System
- SCA Utilities-4, Underground Utilities
- SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling
- SCA Utilities-6, Recycling Collection and Storage Space
- SCA Utilities-7, Storm Drain System

Alternative 3 would have a lower increase in student enrollment and would construct less new building space than the Project, and its demands on utilities and services would be less relative to the demands of the Project.

Water Supplies

With less increase in student enrollment under Alternative 3, this alternative would generate less water demands than the Project. Increased water demands would be limited to domestic use within Buildings 0, 1, 2 and 9, as well as exterior irrigation of landscape areas surrounding Buildings 0, 1 and 2, the Commons and the playfield. SCA-1: Water Efficient Landscape Ordinance, would still apply to these limited area.

Wastewater Treatment and Disposal

With les increase in student enrollment under Alternative 3, this alternative would generate a lower demand for wastewater treatment and disposal than would the Project.

Solid Waste

With less increase in student enrollment under Alternative 3, this alternative would generate a reduced demand for solid waste as compared to the Project, but would generate similar construction waste during rehab of Building 0, 1 and 2. SCA Utilities-5, Construction and Demolition Waste Reduction and Recycling would apply to this alternative.

Energy Demands

Alternative 3 would not include construction of any new classroom buildings (only rehab of existing buildings), and increased energy demands would be substantially less than the Project.

Wildfire and Emergency Evacuation

The impacts of Alternative 3 related to wildfires and emergency evacuation (wildland fires; and conflicts with emergency evacuation plans) would be similarly less than significant as concluded for the Project, with implementation of SCAs and project-specific recommendations pursuant to SCAs, as required of the Project. Those SCAs and recommendations applicable to Alternative 3 include:

- SCA Fire-1, Designated Very High Fire Severity Zone – Vegetation Management
- SCA Fire-3: Compliance with Other Requirements
- Additional Evacuation Planning Recommendations for Head-Royce School

Although Alternative 3 does not include any new buildings (no Performing Arts building or Link Pavilion), it is assumed that SCA Fire-1 would still apply to this alternative, as it would place students into existing buildings and it would include new roadways (the Loop Road) located within an area designated as a Very High Wildfire Severity Zone. SCA provisions pertaining to defensible space, fire-resistant landscaping and fuels management would reduce this impact to less than significant.

Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an EIR identify an environmentally superior alternative capable of reducing or avoiding, to the greatest extent, the environmental impacts associated with the proposed Project. Consideration of the environmentally superior alternative is based on the extent to which each of the CEQA alternatives reduces or avoids the significant impacts of the Project.

The Project was not found to result in any significant and unavoidable impacts. All Project-related impacts are either less than significant or can be reduced to less than significant with implementation of applicable SCAs and/or mitigation measures as identified in this EIR. Accordingly, differences between the proposed Project and the Alternatives are a matter of degree, rather than of reducing or avoiding any significant effect exceeding CEQA thresholds.

No Project – Alternative 1

Failure to approve the Project (as a no project scenario) is unlikely to result in preservation of the existing environmental conditions of the former Lincoln site, which has a General Plan land use designation of Institutional, and an underlying zoning of single-family residential (RD-1). Not approving the Project would likely not remove an alternative future use of the property. The practical results of not approving the Project would likely lead to a different proposal for some other institutional use of the site, or the development of detached single unit residences with the potential for a limited range of commercial uses as well. There are no practical assumptions or reasonable scenarios that would result in permanent preservation of the existing environmental setting of the former Lincoln site.

Minor Development – Alternative 2

The environmental effects of the Minor Development Alternative (Alternative 2) would clearly be of a lesser extent than those of the Project, or of Alternative 3. Alternative 2 would not include any increase in student enrollment (whereas Alternative 3 would increase total student enrollment to 1,050 students), would not include grading, paving or use of the Loop Road (whereas Alternative 3 does include construction of the Loop Road), would not include the pedestrian tunnel, and would not include any new buildings (i.e., the Performing Art building and the Link Pavilion would not be constructed). Alternative 2 would reduce the extent of Project-related impacts pertaining to:

- Aesthetic resources (no prominently visible Performing Arts building and no new light source)
- Air Quality (no increase in criterial pollutants or TACs from vehicle emissions or energy use)
- Biological Resources (less tree removal)
- Geology (no grading at the base of the potentially unstable slope behind Building 9, no excavations or potential ground settlement related to the pedestrian tunnel)
- Hydrology (no dewatering associated with the underground pedestrian tunnel, less overall grading and potential for erosion and sedimentation, no grading within 100 feet of a creek)
- Noise (less construction noise, no noise related to use of the Performing Arts building for special events, no increase in traffic noise along the Loop Road)
- Utilities (less overall demand for water and wastewater services

In the absence of a practical and reasonable No Project alternative wherein the Project site is preserved in its existing condition, the Minor Development – Alternative 2 is environmentally superior as compared to the Project and other alternatives.

On balance, the potential environmental effects of Alternative 2 and the Project are both able to be mitigated to less than significant levels. The environmental effects of Alternative 2 are comparatively less than those of the Project, but the differences as measured against CEQA threshold criteria are not substantial (i.e., there are few significant impacts or potentially significant that would be completely avoided under Alternative 2, as compared to the Project. There are no significant impacts of the Project that can only be reduced or avoided by consideration of Alternative 2. However, because Alternative 2 would result in impacts that are comparably less than those of the Project, it is environmentally superior to the Project and all other alternatives considered in this EIR.

Weighing Environmental Benefits against the Project's Merits

When considering the merits of the Project as compared to other alternatives (including the environmentally superior Alternative 2), the City will weigh and assess the degree to which the Project and each of the alternatives achieve the Project applicant's basic objectives.

The environmentally superior Alternative 2 could meet, perhaps to a less degree than the Project, the following key Project objectives:

- Alternative 2 could expand the School's educational facilities to the proposed South Campus by rehabilitating three existing buildings (Buildings 0, 1 and 2) identified as historic resources.
- Alternative 2 could utilize existing Building 9 for school-related or potentially short-term employee housing.
- Alternative 2 could provide for use of existing outdoor space for outdoor classrooms.

- Alternative 2 could reconfigure off-street parking spaces on the proposed South Campus to meet parking demands.
- Alternative 2 could create a central Commons area for student interactions.
- Alternative could allow neighbor access to outdoor facilities, including a network of trails and pathways on proposed South Campus, through key card access.

Alternative 2 could not meet any of the following key Project objectives:

- Alternative 2 would not provide for construction of a new Performance Arts Center for student curriculum relating to theater, music, dance and culture.
- Alternative 2 would not gradually increase permitted enrollment by 344 students over currently allowed enrollment, to a maximum student population of 1,250 students.
- Alternative 2 would not remove on-street drop-off and pick-up from Lincoln Avenue, or remove use of the "Alida Loop" by developing an internal, one-way circulation loop driveway on the proposed South Campus.
- Alternative 2 would not integrate the existing and proposed South Campus together with an underground pedestrian tunnel below Lincoln Avenue, reducing the number of student at-grade crossings.

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CEQA Assessments and Conclusions

This chapter summarizes the EIR findings for those assessment categories required by Section 21100 of the California Environmental Quality Act, including growth-inducing impacts; significant irreversible changes; unavoidable significant impacts; cumulative impacts; and effects found not to be significant.

Mandatory Findings of Significance

Appendix G of the CEQA Guidelines (Environmental Checklist) contains a list of mandatory findings of significance that may be considered significant impacts if any of the following occur.

Quality of the Environment

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 California history or prehistory?

All impacts of the Project on the quality of the environment, including potential impacts to fish or wildlife species and their population levels, plant and animal communities, rare and endangered plants and animals, and important examples of California history and prehistory have been addressed in this EIR. These impacts have been found to be less than significant or reduced to levels of less than significant with required implementation of the City of Oakland Standard Conditions of Approval. There would be no potential for the Project to degrade the quality of the environment that has not been identified and addressed in this EIR.

Cumulative Impacts

Does the Project have impacts that are individually limited, but cumulatively considerable?

The proposed new South Campus for Head-Royce School is surrounded by the existing Head-Royce School Campus to the north, other institutional uses to the west (Ability Now, the Ascension Greek Orthodox Cathedral and the Oakland California Temple of the Church of Jesus Christ of Latter-day Saints), and established residential neighborhoods to the south and east. Each of these surrounding areas are fully developed, and there are no other known current projects or probable future projects expected in the vicinity. As such, the potential for individually limited environmental effects of the Project to contribute to broader cumulatively considerable impacts in the surrounding area is unlikely and substantially limited.

The preceding chapters of this EIR demonstrate that the Project would not have impacts that are individually limited but cumulatively considerable, provided that all policies, rules and regulations pertaining to new development projects are fully adhered to by the Project, and by all other potential cumulative development in the surrounding area.

Adverse Effects on Human Beings

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

The Project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Construction-period air quality emissions, increased noise, exposure to hazardous or toxic chemical, and other potential effects on nearby sensitive receivers are fully addressed in this EIR. These impacts have been found to be less than significant, or reduced to levels of less than significant with required implementation of the City of Oakland Standard Conditions of Approval and/or mitigation measures identified in this EIR. The Project would not expose people to significant new hazards, and there would be no other adverse effects on human beings.

Significant Irreversible Modifications in the Environment

CEQA Guidelines Section 15126(f) requires that an EIR must identify any significant irreversible environmental changes that could be caused by a project. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. These CEQA Guidelines describe three distinct categories of significant irreversible changes: 1) changes in land use which would commit future generations to specific uses; 2) irreversible changes from environmental actions; and 3) consumption of non-renewable resources.

Changes in Land Use Which Would Commit Future Generations

Head-Royce School has occupied its current 14-acre North Campus on the north side of Lincoln Avenue since 1964, and is proposing to reuse an adjacent property that has been developed and used by Lincoln since the 1930s. While use of the South Campus property by Head-Royce is a new use for this site, it does not represent a new commitment of land for institutional use. The Project proposes few changes in land use that would commit future generations, other than the commitments that have already been made by past generations. It is possible that decisions made by future generations could change land uses on this property, as none of the Project's development plans are necessarily irreversible.

Irreversible Changes from Environmental Actions

Most of the existing Campus has been disturbed by prior development by the School, and most of the proposed South Campus has been disturbed by past grading activity and prior development by Lincoln. Non-native grassland, irrigated turf, paved roadways and existing buildings form the predominant surface over most of the Project site. Development of the Project will not necessarily commit the site for school use in perpetuity, but it unlikely that this site will ever revert to back to its original natural state.

Consumption of Nonrenewable Resources

The Project would not result in the loss of agricultural or forested lands or mining reserves. Development of the Project site as proposed would result in the commitment of non-renewable resources (e.g., gravel and petroleum products) and renewable resources (e.g., wood products) used in construction. Operation and maintenance of the School would require a commitment of water resources for irrigation. The Project will be required to comply with the California Green Building Standards (CALGreen) which seek to minimize consumption of non-renewable resources and water, and the Water Efficient Landscape Ordinance, which seeks to minimize water use for irrigation to the extent practicable.

Growth Inducing Impacts

The proposed South Campus is surrounded by the existing Head-Royce School Campus to the north, other institutional uses to the west (Ability Now, the Ascension Greek Orthodox Cathedral and the Oakland California Temple of the Church of Jesus Christ of Latter-day Saints), and established residential

neighborhoods to the south and east. Each of these surrounding areas are fully developed, and there is limited potential for growth or change at any of these locations. The Project does not propose a new roadway or utility connection to other currently undeveloped area, and use of the site for educational purposes as a school would not have growth-inducing effects.

Significant and Unavoidable Impacts

CEQA Guidelines section 15126.2(b) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." Unavoidable significant impacts are those that could not be reduced to less than significant levels by mitigation measures identified in the EIR, included as part of the project, or other mitigation measures that could be implemented.

This EIR has not identified any significant environmental impacts that would be unavoidable with implementation of the proposed Project. All potential impacts would be reduced to levels of less than significant with implementation of required City of Oakland Standard Conditions of Approval and additional mitigation measures (where necessary) as identified in this EIR.

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