Attachment A-5

City of Oakland
File No. ERO4-0014
Reference No. PUD04-400 and PUDF05-339

INITIAL STUDY AND ENVIRONMENTAL REVIEW CHECKLIST

California Environmental Quality Act (CEQA)

1. Project Title: Head-Royce School Master Plan

2. Lead Agency Name and Address:

   City of Oakland
   Community and Economic Development Agency, Planning Division
   250 Frank H. Ogawa Plaza, Suite 3315
   Oakland, CA 94612
   Heather Klein
   510-238-3659

3. Contact Person and Phone Number:

   John Malick
   John Malick & Associates
   1195 Park Avenue
   Emeryville, CA 94608
   510-595-8042

4. Project Location:

   4233, 4309, 4315 Lincoln Avenue, Oakland, CA 94602
   APNs 029A136700601, 029A136700502, 029A136700404

5. Project Sponsor's Name and Address:

   Head-Royce School
   4315 Lincoln Avenue
   Oakland, CA 94602
   Attn: Dennis Malone, Director of Finance and Operations – Head-Royce School

6. General Plan Designation: Hillside Residential and Detached Unit Residential

7. Zoning: R-30 One Family Residential

Attachment E

8. Description of Project:

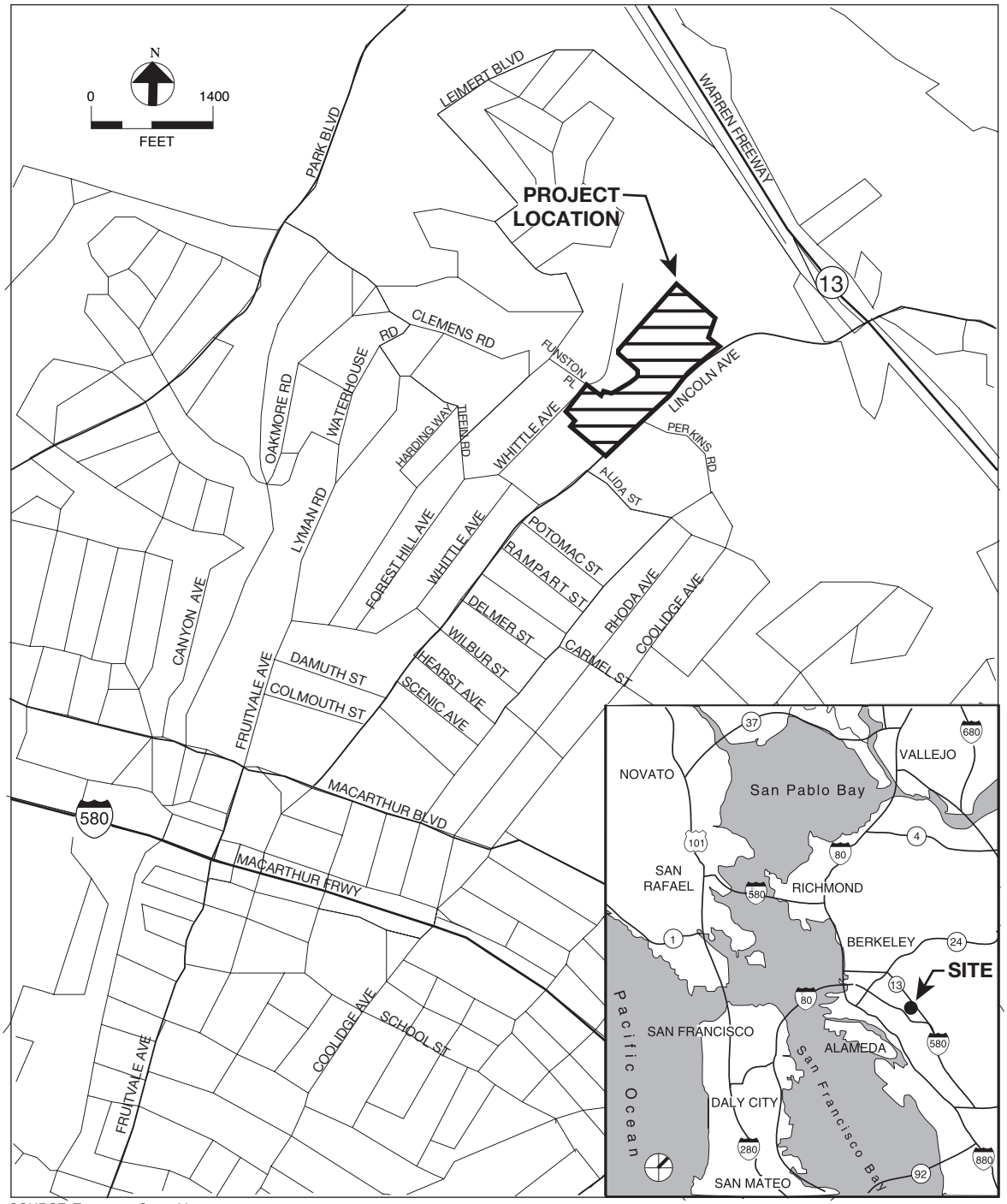
The proposed project is the implementation of the Head-Royce School Master Plan on the existing 14.2-acre school campus at 4315 Lincoln Avenue (see Figure 1, Project Location). The Master Plan calls for 159,226 sq. ft. of renovation and new construction (51,624 sq. ft. net increase after removal of several existing structures) in at least two phases. New construction would consist of one-, two-, and three-story buildings with heights of 21 to 50 feet. Table 1, on pp. 4-5, shows the changes in gross square feet that would be implemented. About 27 new parking spaces would be added in Phase 1; an additional 20 parking spaces could be added in later phases bringing the campus total to 157. Upon completion of the Master Plan improvements, the school would accommodate 880 students, an increase of 180 students, and a staff of 151, an increase of 18 faculty, staff, and administrative employees, for a total school population of 1,031. Table 2 summarizes the proposed project.

Table 2: Summary of Head-Royce Master Plan

	Existing	Proposed	Change
Building area (sq. ft.)	113,440	165,064	+51,624
Students	700	880	+180
Employees	110	128	+18
Parking spaces	110	157	+47

Phase 1 consists of the components listed below. (See Figure 2, Existing Site Plan, and Figure 3, Phase 1 Improvements. In the following text, letters and numbers in parentheses refer to buildings identified in Table 1 and shown on Figures 2 and 3. Existing buildings are identified by capital letters, and new buildings are identified by number.)

- **Construction of a new Upper School Quadrangle.** The Quad would be a landscaped academic quadrangle whose edges would be defined by the existing Mary E. Wilson Auditorium on the west (F), a new two-story Library on the north (1), a new three-story classroom/administration building on the east (2a), and a new two-story classroom building on the south (3). In order to construct the quadrangle and the new buildings surrounding it, the existing Foreign Language classroom (H) and the upper level of the existing Science Classrooms/Administration building (G) would be removed. The lower level of the Science Classrooms/Administration building would be renovated and a portion of the new Quad would be located on a terrace above this building. Behind the Quad to the east an existing Middle School building (I) would be remodeled to provide Upper School classrooms (2b). A portion of the Whittle Creek culvert would be relocated before the new library building is constructed.
- **Renovation of the existing Upper School building.** The Upper School classrooms (D) would be converted to Middle School use. This would consist of interior modifications, addition or replacement of the mechanical and electrical systems, and renovation of an existing plaza and the enclosed spaces beneath the plaza at the western end of the Auditorium.



SOURCE: Turnstone Consulting

FIGURE 1: PROJECT LOCATION

Table 1 – Master Plan Area Summary (Sq. Ft.) **(Table footnotes shown on the following page)**

Existing Facilities		Action		Total		
Plan Key	**Use**	**Use**	**Existing Area**	**Delete**	**Renov.**	**Add**
A	Lower School Classrooms	No Change	16,000			
J	Gymnasium/Locker Rms.	No Change	14,000			
PHASE 1:		**Demolition**				
G	Science Classrooms/Admin.	Upper Level Removed	3,388	3,388		
H	Foreign Lang. Classrooms	Removed	3,190	3,190		
K	Summer Program	Removed	800	800		
L	4309 Lincoln Ave.	Removed	2,452	2,452		
S	Swimming Pool	Removed				
		Total Phase 1 Demolition		**9,830**		
		Conversions and Renovations				
C	Upper School Library	Middle School Use	6,590		6,590	
D	Upper School Classrooms	Middle School Classrooms	17,590	768[1]	16,822	
G	Science Classrooms/Admin.	Basement Level Rehearsal Room	3,388		3,388	54[2]
I	Middle School Classrooms	Upper School Classrooms	15,000		15,000	
E/F	MEW/Arts/Admin.[3]	No Change	17,572	130[4]	17,442	
M	4233 Lincoln Avenue	Administration/Residence	1,350		1,350	
N	Driveway	Campus Walk				
		Total Phase 1 Renovations		**898**	**60,592**	**54**
		New Construction				
1		Upper School Library				6,187[5]
2		Upper School Classrooms				23,011[6]
3		Upper School Classrooms				5,082[7]
4		Gatehouse/Garage				5,325[8]
5		Natatorium				
		Total Phase 1 Construction				**39,659**
LATER PHASE(S):		**Demolition**				
B	Lower School Classrooms	Removed	7,200	7,200		
C	Former Upper Sch. Library	Removed	6,590	6,590		
E	Arts Center – Admin.	Removed	10,392	10,392		
F	Auditorium	Removed	12,100	12,100		
		Total Later Phase(s) Demolition		**36,282**		
		New Construction				
6		Lower School Classrooms				10,000
7		Middle School Classrooms				7,500
8		Arts Center – Admin.				12,600
9		Auditorium				25,000
M		Residence/Administration				3,500
10		Gymnasium Entry				321
		Total Later Phase(s) Construction				**58,921**
	a.	**Master Plan Demolition Area**		**47,010**		
	b.	**Master Plan Renovation Area**			**60,592**	
	c.	**Master Plan New Construction Area**				**98,634**
Total Existing Area	**113,440**	**Total New Area (c-a)**				**51,624**

Table 1 (cont'd)

Notes:

[1] Includes 246 sq. ft. area adjacent to New Library and 522 sq. ft. area adjacent to Middle School Patio

[2] Area added at north entrance.

[3] Not included in August 12, 2004 tally. Figure includes MEW Auditorium, Choir Room, Bechtel Arts Center, and Head's Office/Administration.

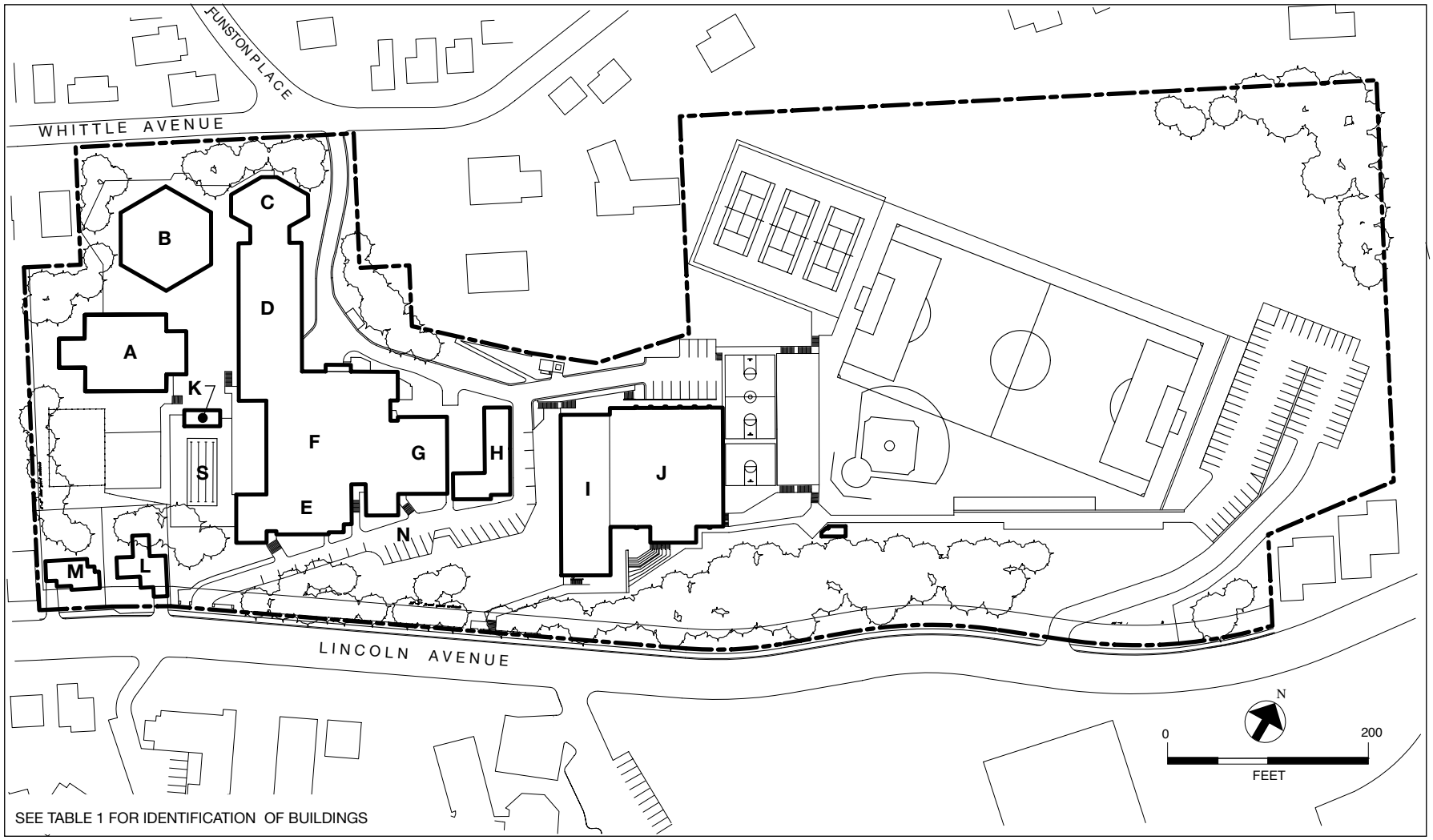
[4] Existing office addition to north to be removed.

[5] Figure includes 1,682 sq. ft. Lower Level; 2,164 sq. ft. Quad Level; and 2,341 sq. ft. Level 2.

[6] Figure includes 7,268 sq. ft. Quad Level; 7,456 sq. ft. Level 2; and 8,287 sq. ft. Level 3.

[7] Figure includes 2,561 sq. ft. Quad Level and 2,521 sq. ft. Level 2.

[8] Figure includes 1,962 sq. ft. Entry Level; 1,729 sq. ft. Lower Level 1; and 1,634 sq. ft. Lower Level 2. Figure does NOT include 463 sq. ft. Covered Drop-Off / Transit Stop on Lincoln Avenue.



SOURCE: John Malick & Associates, Turnstone Consulting

FIGURE 2: EXISTING SITE PLAN

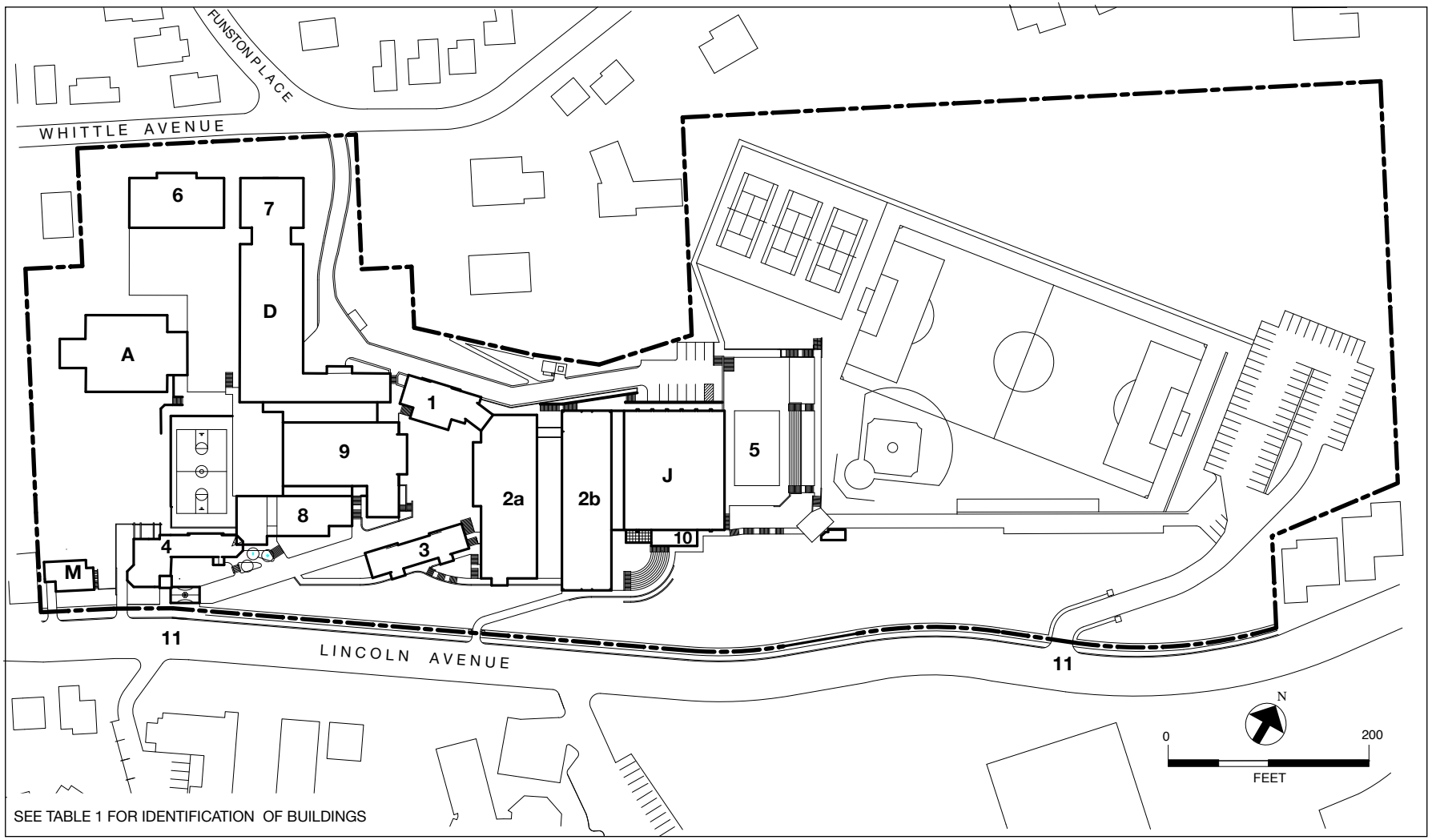


FIGURE 3: PROPOSED PROJECT SITE PLAN

- **Provision of an integrated pedestrian circulation system including new campus walks and some handicapped accessible pathways.** These walkways would link the major buildings and open spaces to each other, to the entry portals along Lincoln Avenue, and to the parking areas.
- **Closure of the existing driveway.** The existing driveway on the west end of the campus provides access to 38 of the school's 110 existing parking spaces and allows cars to drive through the campus from the entry on Lincoln Avenue to a driveway on Whittle Avenue. This passage would be closed to automobiles, 23 parking spaces would be removed, and the driveway would be redesigned as a Campus Walk leading to the Upper School Quadrangle (N).
- **Creation of Lincoln Avenue Entries.** New entrance portals and gates would be constructed at the eastern and western ends of the campus on Lincoln Avenue (11). A new decorative wrought iron fence would connect the two entries.
- **Construction of the Lincoln Avenue Gatehouse/Administration Building.** The existing residence at 4309 Lincoln Avenue (L) would be removed and up to 150 sq. ft. of the Head's Office Building would be removed. These structures would be replaced with a new Gatehouse (4) and entry portal to the campus. The new structure would contain administrative offices and a passage connecting to the remainder of the Head's Office Building, with a parking garage with 15 parking spaces below (10 spaces on lifts), accessed from Lincoln Avenue. This building would provide space for visitor reception and deliveries, and would control access to and from the campus.
- **Consolidation of parcels.** The existing residence at 4233 Lincoln Avenue (M) would be retained as a single-family residence in Phase 1. Since the two existing residential properties on Lincoln Avenue would be integrated into the school's day-to-day operations, separate legal status for the parcels would no longer be necessary and the two properties would be consolidated into the school parcel. A Tentative Parcel Map application would be required by the City of Oakland for this merger as a separate planning process.
- **Renovation (and change of use) of the existing Library building.** The Library building (C) would be renovated for use as an assembly area for the Lower and Middle Schools. In a later phase, this building would be replaced by a Middle School classroom building (7).
- **Replacement of the swimming pool.** The existing swimming pool at the western end of the campus (S) would be filled in to provide additional recreational space for the Middle School. A new competition-size swimming pool, or natatorium (5), would be constructed east of the gymnasium in the area currently occupied by the basketball courts (the basketball courts would be relocated to the location of the existing swimming pool). Bleachers may be added on the east side of the new pool.
- **Improvements in landscaping.** Due to a lack of water pressure, the school has been unable to complete its landscaping on the exposed, steeply sloping south-facing hill above the north side of the playing fields. Recent discussions with a neighbor indicate that it would be possible to install a new water pipeline from the existing water main in Whittle Avenue across private property directly to this hillside, thus providing for irrigation water. Landscaping would be installed with irrigation on this largely barren hillside.

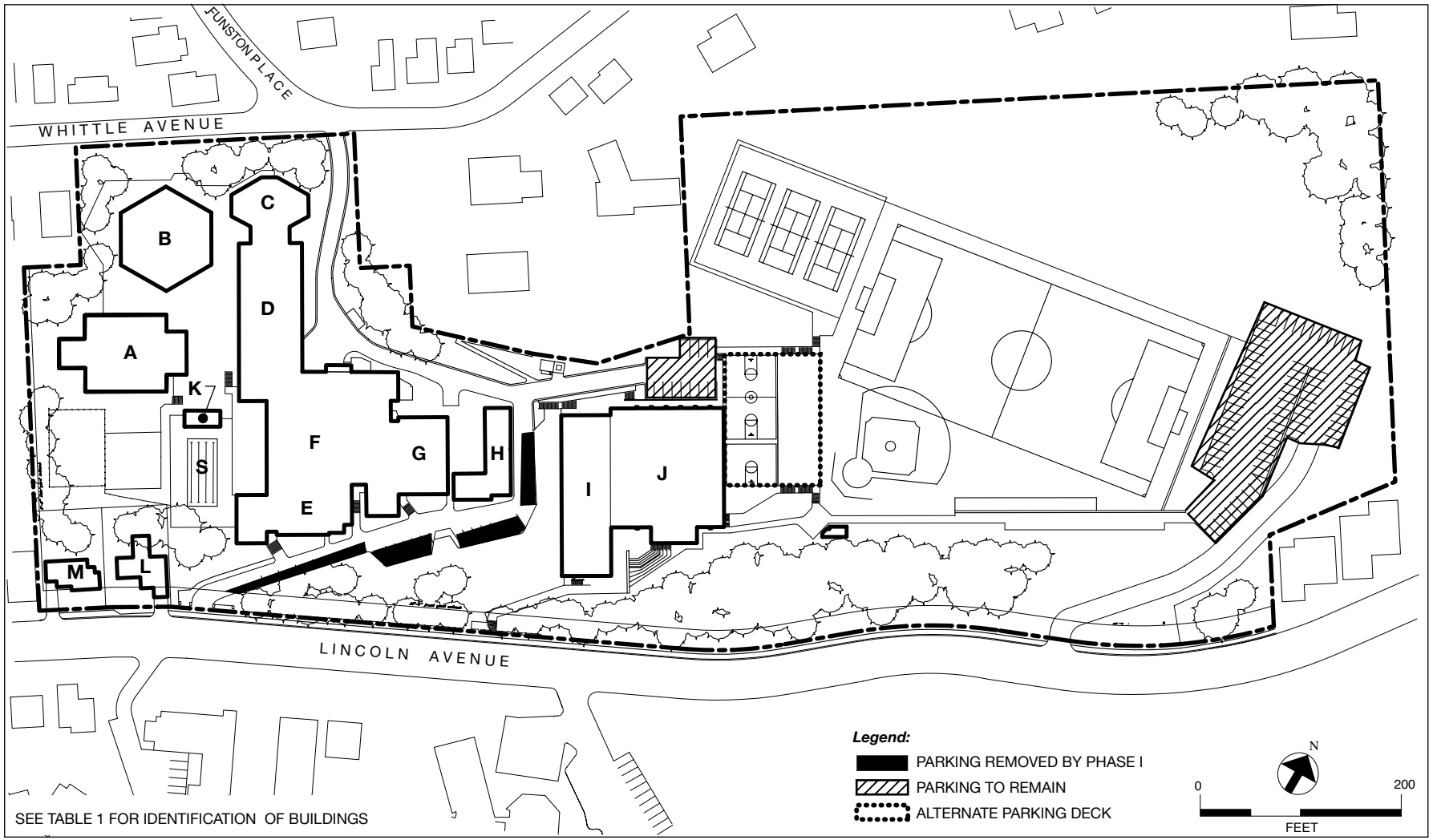
The Phase 1 improvements would be implemented in stages in order to minimize disruption to both the school's day-to-day operations and the community. Construction would take place over a two-year period.

Later Phase improvements would follow the completion of Phase 1 within three to five years of Planned Unit Development approval. Availability of funding would dictate the construction schedule. However, these improvements would be expected to be completed within five years. Later Phase improvements would include:

- **Replacement of the Auditorium.** The existing Auditorium (F) would be renovated or replaced with a new facility at the same location (9). The new facility would be a two-story structure with a performance stage.
- **Renovation or replacement of the Administration/Arts building.** Depending on funding availability, the school may implement this feature (E to 8) of the Master Plan.
- **Replacement of the Lower School building and former Library.** Two existing hexagonal buildings at the southwestern edge of the campus, the Lower School building (B) and the former Library (C) (used as an assembly area at the beginning of this phase), would be removed and replaced by two new two-story buildings: a Lower School building (6) and a Middle School building (7). These buildings would create a Lower School Quadrangle.
- **Construction of a new building at 4233 Lincoln Avenue.** This residential building (M) would be demolished and replaced with a new building that may be used either as a residence or an administrative space.
- **New entry structure for Gymnasium.** A new glass and steel structure (10) would be added to the south side of the existing Gymnasium (J). The structure would be similar to a large vestibule, and would provide a new entry to the gymnasium. It would have space for trophy cases and similar displays. It would require the reconfiguration of the amphitheater steps.

Parking improvements. The school has 110 designated parking spaces: 72 in the upper parking lot at the east end of the campus and 38 at various locations along roads and in small lots among the buildings on the west end of the campus. Some cars are found parked along the driveway leading from Lincoln Avenue to the upper parking lot and along the edges of this lot in non-designated areas.

Construction and renovation of buildings during Phase I would remove 23 of the 38 west campus parking spaces, leaving a total of 87 designated spaces (72 in the upper lot and 15 in the west campus accessible only from Whittle Avenue). Figure 4 shows the location of the current parking spaces and indicates those that would be displaced by new construction. Thirty-five new spaces would be added during Phase 1 by re-structuring the upper parking area: constructing a series of retaining walls, re-striping the upper lot, widening and striping an area along the edge of the soccer field, and widening and striping the driveway to the lot. These new spaces would replace the 23 spaces lost and increase the number of designated spaces from 72 to 107 in the upper



SOURCE: John Malick & Associates, Turnstone Consulting

FIGURE 4: PARKING

parking lot. The new Lincoln Avenue Gatehouse/Administration building would have 15 spaces in its lower level accessible only from Lincoln Avenue; 10 of the spaces would be tandem using lifts. A delivery space for the administration building would be located at the street curb; the project sponsor would request a special loading area (yellow curb) from the Public Works Agency (PWA) Transportation Services at this location to retain the space for delivery vehicles. These new spaces would increase the number of designated spaces from 15 to 30 in the west end of the campus. The total number of designated spaces on-site following Phase 1 would increase from 110 to 137 (107 in the upper lot and 30 in the west campus).

In later phases, an additional 20 parking spaces would be added either by constructing a parking deck structure over a portion of the upper parking lot, constructing a parking deck over the new swimming pool adjacent to the gym, or in some other manner, for a total of 157 designated spaces on the campus.

Implementation of the proposed project would require the following permits:

- Planned Unit Development
- Tentative Parcel Map
- Design Review Approval
- Storm Water Pollution Prevention Plan
- Tree Protection/ Removal Permit
- Waste Reduction and Recycling Plan
- Special Loading Area designation
- Building Permit
- Sewer Permit
- Grading Permit
- P-Job Permits for storm sewer, sanitary sewer, curb/gutter/sidewalk

9. Surrounding Land Uses and Setting:

The project site is at the southwestern edge of Oakland's North Hills area, located within a naturally occurring canyon between Lincoln and Whittle Avenues. The Head-Royce School campus includes three individual properties abutting Lincoln Avenue along its southeastern side: the property at 4315 Lincoln Avenue used as a K-12 educational facility and the two single-family residential properties at 4233 and 4309 Lincoln Avenue used as faculty housing.[1] The existing school campus at 4315 Lincoln Avenue is located in the canyon and the two residences

[1] The school also owns two adjacent single-family residential properties at 4200 and 4220 Whittle Avenue located near the western corner of the campus, which are used as faculty housing. These two properties are not part of the proposal.

are adjacent to the southwest corner of the school campus. The majority of the existing school structures are concentrated on the floor of the canyon at the southwest end of the school campus. The athletic fields and surface parking occupy the northeast end of the campus. Whittle Creek flows through the campus from approximately east to west in an existing underground culvert.

Land uses in the immediate area include primarily single-family homes with some civic uses. A few one- and two-story single-family homes and an eight-acre educational civic institution — the Lincoln Child Center at 4368 Lincoln Avenue—are located south of the southern boundary of the school property across Lincoln Avenue. The Lincoln Child Center is a non-profit organization located on a campus with 10 two- to three-story structures. Several single-family homes are located west of the western boundary of the school property along Tiffin Road. Rear yards of single-family homes abut the northern boundary of the school property; vehicular access to these homes is from Whittle Avenue. A few single-family homes are also located east of the eastern boundary of the school property; vehicular access to these homes is mainly from Lincoln Avenue. Further east of the school property on the south side of Lincoln Avenue are the Greek Orthodox Cathedral of the Ascension at 4700 Lincoln Avenue, and the Oakland Temple of the Church of Jesus Christ of Latter-day Saints at 4780 Lincoln Avenue.

10. Other Public Agencies Whose Approval May Be Required:

Relocation of a portion of the existing Whittle Creek culvert away from the proposed new library building may require review by the Regional Water Quality Control Board, San Francisco Bay Region, or by the California Department of Fish and Game.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☒ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION

On the basis of this initial evaluation:

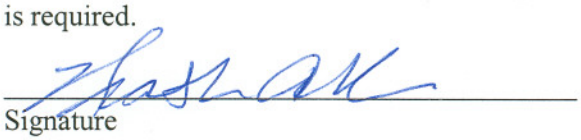
I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

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

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

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



Signature

12/8/05

Date

Heather Klein
Planner II

For Claudia Cappio
Development Director

EVALUATION OF ENVIRONMENTAL IMPACTS

CEQA requires that an explanation of all answers except "No Impact" answers be provided along with this checklist, including a discussion of ways to mitigate any significant effects identified. As defined here, a significant effect is considered a substantial adverse effect.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or locally designated scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area?	☐	☐	☒	☐
e) Introduce landscape that now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986)?	☐	☐	☐	☒
f) Cast shadows that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors?	☐	☐	☐	☒
g) Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space?	☐	☐	☐	☒
h) Cast shadow on an historic resource, as defined by CEQA Section 15064.5(a) (see Appendix A for definition), 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 Historic Resources or a historical resource survey form (DPR Form 523) with a rating of 1-5?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
i) 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?	☐	☐	☐	☒
j) Create winds exceeding 36 mph for more than 1 hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or b) the project is located in Downtown?	☐	☐	☐	☒

Comments to Questions Ia and Ic: The 14.2-acre project site is at the southwestern edge of Oakland's North Hills area. The project site is currently occupied by a K-12 private school campus with six one- to two-story structures at 4315 Lincoln Avenue; a one-story single-family residence at 4233 Lincoln Avenue; and a two-story single-family residence at 4309 Lincoln Avenue.[2] The residential properties are owned by the Head-Royce School and used as faculty housing. The school campus is located in a naturally occurring canyon between Lincoln and Whittle Avenues; the floor of this canyon is now approximately 25 feet below street level at Lincoln Avenue. Existing school buildings are screened from view from adjoining streets and nearby properties by the concave topography of the school property, in combination with the tree cover along the campus perimeter. The two residences on Lincoln Avenue are adjacent to the southwest corner of the school campus and are located at street level. The majority of the existing on-site school structures are concentrated at the southwest end of the campus, while athletic fields and surface parking occupy the northeast end of the campus.

The proposed project would implement the Head-Royce School Master Plan on the project site. The project would be phased over a five-year period. The Master Plan Phase 1 improvements, involving several components that would occur in stages, would be implemented within the first two years of the five-year period.

The Master Plan Phase 1 development would include the following specific improvements on the project site: (1) demolition of the two-story residential building at 4309 Lincoln Avenue,[3] as well as two small

[2] The school also owns two adjacent single-family residential properties at 4200 and 4220 Whittle Avenue located near the western corner of the campus that are used as faculty housing. These two properties are not part of the proposal.

[3] Up to 150 sq. ft. of the Head's Office Building would also be removed along with the residence at 4309 Lincoln Avenue.

one-story buildings on the school campus at 4315 Lincoln Avenue; (2) addition of four two- to three-story buildings with heights of up to 50 feet on the site, or a net increase of one building after accounting for the removal of three existing buildings; (3) removal of the existing swimming pool and construction of basketball courts at this location; (4) construction of a natatorium in the area currently occupied by the existing basketball courts, including a competition-size swimming pool; (5) construction of a new Upper School Quadrangle above the lower level of the existing Science Classrooms/Administration building; (6) renovation of two two-story buildings on the campus; and (7) construction of landscaping improvements on the exposed, steeply sloping south-facing hill above the north side of the athletic fields. The new structures included in Phase 1 would generally be the same height as the existing structures on the project site; however, the overall building envelope would cover a slightly larger portion of the site.

Depending upon availability of funding, later phase improvements would include replacement or renovation of the Auditorium; renovation or replacement of the Administration/Arts building; replacement of the Lower School and former Library buildings to create a Lower School Quadrangle; replacement of the existing residential building at 4233 Lincoln Avenue; construction of additional parking on a new deck over the existing parking lot, on the roof of the new swimming pool, or provided in some other location; and construction of new entry structure for the existing Gymnasium. Design review approval is required as part of the Final Development Plan for each phase of the proposed project.

Several low-rise buildings are in the project vicinity, including several single-family residences, some of which overlook the school campus. The construction of new buildings on the school campus would introduce change to the immediate area. The physical changes to the Head-Royce campus would be visually compatible with the existing buildings on the campus. As with the existing school buildings, most of the new construction and renovation on the campus would be below street-level on the canyon floor and would be effectively screened from street and neighborhood view by the existing tree cover along the campus perimeter.

The existing residential building at 4233 Lincoln Avenue would continue to be visible from the street and neighboring properties on Lincoln Avenue. The replacement of the existing two-story residential building at 4309 Lincoln Avenue with a two-story Gatehouse and entry portal to the campus would also be visible from the street and neighboring properties on Lincoln Avenue. The new structure at 4309 Lincoln Avenue would not be substantially different in height and bulk from the existing neighboring buildings, and would not constitute an adverse visual change for the neighborhood. If the existing residential building at 4233 Lincoln Avenue were to be replaced as part of the later phase improvements, the replacement building would be at the same scale as existing neighboring residential buildings, and would not constitute an adverse visual change for the neighborhood.

Development of the project would, therefore, not degrade the existing visual character or quality of the site or its surroundings. Overall, views from surrounding properties would generally remain the same

with the proposed improvements, and, therefore, this would continue to be a less-than-significant visual impact.

Comment to Question Ib: Interstate 580 (I-580) is a state-designated scenic highway between State Route 24 and San Leandro. The school site, but not the school buildings, is briefly visible between trees, other landscape, and sound walls from portions of I-580 between Park Boulevard and approximately 35th Avenue. The dominant structure in this view is the Oakland Temple of the Church of Jesus Christ of Latter-day Saints, which is visible from many locations throughout the East Bay and San Francisco. The proposed project would not substantially alter views from a scenic highway. Lincoln Avenue is not a designated scenic highway.

Plant material on the project site is mostly non-native landscaping around existing school structures. Trees on the project site are located primarily along the perimeter of the school campus. Construction of the proposed project would remove 20 "protected" trees, as defined by the City's Protected Tree Ordinance, currently on the project site (see Section IV and Table 3: Trees to be Removed for Construction). The size of the trees to be removed ranges from 4 to 20 inches dbh.[4] None of the trees are located along the perimeter. Removal of 20 trees from a site that has several dozen trees would be considered a less-than-significant impact and, given the project location is in a canyon, the scale of the proposed construction, and the overall context, the project would have a less-than-significant impact on existing scenic resources.

As discussed in Section V. Cultural Resources, the proposed project would not involve physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings, nor would it in any other way alter views of a cultural heritage or historical resource.

Comment to Question Id: The proposed project would include some new fixed exterior lighting, particularly at building entrances, in addition to the existing exterior campus lighting and street lights provided by the City adjacent to the project site. The new outdoor lighting would be similar to existing outdoor lighting on the school campus as well as at other nearby civic buildings. Lighting fixtures would be directed downward to reduce glare and would not substantially increase the overall nighttime lighting in the project area. Consistent with City practices, the applicant would be required as a Condition of Approval to submit a detailed lighting plan to the City prior to issuance of each building permit.

In the late afternoon, sunlight occasionally reflects off west-facing building windows located in the Oakland/Berkeley hills. Relatively few of the proposed new structures would include west-facing windows, and most of the new structures would be located in the lower portions of the site where late afternoon sun would be blocked by topography and off-site trees. Some of the new windows would replace those in existing buildings and would not result in new reflections, and some of the new windows would be blocked from the late afternoon sun either by other buildings or by adjacent landscaping. If

[4] dbh is diameter breast height, i.e., the diameter of the tree at approximately four feet above ground.

there were any increase in reflected sunlight, it would be small in relation to that which already occurs throughout the nearby hills and would occur for a short time during the late afternoon. Reflection would not occur every day, as sun angles change throughout the year. Thus, the project would result in less-than-significant new light or glare impacts.

Comment to Question Ie-i: The project includes landscaping improvements and new two- to three-story buildings. The proposed improvements are not expected to cast substantial shadows on any existing solar collectors and, therefore, would not conflict with California Public Resources Code Section 25980-25986. No buildings using passive solar heat collection or photovoltaic solar collectors are known to exist near the project site; most project buildings would be located below the edge of the canyon and would not add new shadow to surrounding buildings off-site. Therefore, the project would not cast shadows that would affect solar collectors. There are no historic buildings on or immediately adjacent to the project site (see Section V, Cultural Resources). Therefore, no new shadow would materially impair an historic resource's historic significance by 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 resources survey form (DPR Form 523) with a rating of 1-5. There is no public open space immediately adjacent to the project site and the proposed project would not cast shadow that would substantially impair the use of any public or quasi-public park, lawn, garden, or open space. Additionally, the project would not require an exception to the policies and regulations in the *General Plan*, Planning Code, or Uniform Building Code related to the provision of adequate light for appropriate uses, nor would it cause a fundamental conflict with such policies and regulations. Thus, no significant shadow and light impacts would arise due to the proposed project.

Comment to Question Ij: A project that would cause wind speeds to reach or exceed 36 miles per hour for more than one hour during the year would be considered to have a significant wind impact. The proposed project does not propose any structure on site that would be 100 feet tall or higher, nor is it located adjacent to a substantial water body or in Downtown. Therefore, the project does not require detailed wind analysis, and would not be expected to have a significant impact related to wind.

Sources: Project Application for Environmental Review and Architectural Drawings
Site Visits

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL RESOURCES -- Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

Comments to Questions IIa-IIc: The project would not have any impacts on agricultural resources because the site proposed for development is located in an urban area and does not include any agricultural uses.

Sources: Oakland General Plan, Land Use and Transportation Element, March 24, 1998
Oakland General Plan, Open Space, Conservation and Recreation Element, October 1995
Project Application for Environmental Review and Architectural Drawings
Site Visits

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Frequently create substantial objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
f) Contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour Pursuant to BAAQMD, localized carbon monoxide concentrations should be estimated for projects in which (1) vehicle emissions of CO would exceed 550 lb/day; (2) intersections or roadway links would decline to LOS E or F; (3) intersections operating at LOS E or F will have reduced LOS; or (4) traffic volume increase on nearby roadways by 10% or more unless the increase in traffic volume is less than 100 vehicles per hour?	☐	☐	☒	☐
g) Result in total emissions of ROG, NOx, or PM10 of 15 tons per year or greater, or 80 pounds (36 kilograms) per day or greater. The Port of Oakland maintains PM 10 and PM 2.5 monitoring stations in West Oakland and data from these stations should be obtained and used?	☐	☐	☒	☐
h) Result in potential to expose persons to substantial levels of Toxic Air Contaminants (TAC), such that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million?	☐	☐	☒	☐
i) Result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than 1 for the MEI?	☐	☐	☒	☐
j) Result in a substantial increase in diesel emissions?	☐	☐	☒	☐

Comments to Questions IIIa-IIIc and IIIf-IIIg: The proposed project would be consistent with Oakland *General Plan* Policies (see Section IX, Land Use, below) and would not conflict with the Bay Area Air Quality Management District (BAAQMD) Clean Air Plan.

Implementation of the project could involve localized impacts from dust generated by grading and construction activities, as well as vehicle emissions. During project construction, heavy machinery such as excavation equipment would generate fine particulates (PM_{10} and $PM_{2.5}$) (i.e., fugitive dust, diesel emissions). Although these emissions would be temporary in duration, the BAAQMD urges that all feasible control measures be implemented.[5] The following standard Conditions of Approval (COAs) will

[5] Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, Revised December 1999, p. 15.

be applied to the project and are therefore analyzed as part of the project:

- Water all active construction areas at least twice per day.
- Water all inactive construction areas, e.g., parking areas and storage piles, three times daily.
- Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites.
- Sweep streets daily with water sweepers if visible soil material is carried onto public streets.
- Cover all trucks hauling construction materials and debris, or require all trucks to maintain at least two feet of freeboard.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily or apply (nontoxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Traffic generated by the project would result in about 447 additional vehicle trips per day.[6] The BAAQMD has established screening methods to determine whether development projects could exceed significance thresholds for air quality impacts of project operations and therefore require a detailed air quality analysis.[7] The BAAQMD generally does not recommend a detailed air quality analysis for projects generating fewer than 2,000 vehicle trips per day. The number of trips the project would generate is well below this number. Therefore, the increase in vehicle emissions has been determined to result in less-than-significant impacts on air quality and would not exceed state or federal standards for carbon monoxide, ozone precursors, or fine particulates.

Comments to Question IIId and IIIh-j: During construction, emissions of fine particulate matter could impact sensitive receptors on the school campus, in nearby residences, and in the childcare center across Lincoln Avenue. The City's standard Conditions of Approval would reduce this impact to a less-than-significant level. Traffic emissions are discussed above. The project would not generate large numbers of trucks or other diesel-powered vehicles and therefore would not contribute substantially to emissions of toxic air contaminants.

Comments to Question IIIe: During the construction stage, equipment could generate petroleum-based fuel odors that could temporarily affect the nearest sensitive receptor (students on the school campus). This impact would be less than significant because of the temporary nature of the construction activities. Over the long term, the project would not contain uses emitting objectionable odors and, therefore, would not result in significant odor impacts.

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[6] Dowling Associates, *Transportation Analysis for Head-Royce School Master Plan*, December 7, 2005.
[7] BAAQMD *CEQA Guidelines*, 1999, p. 24.

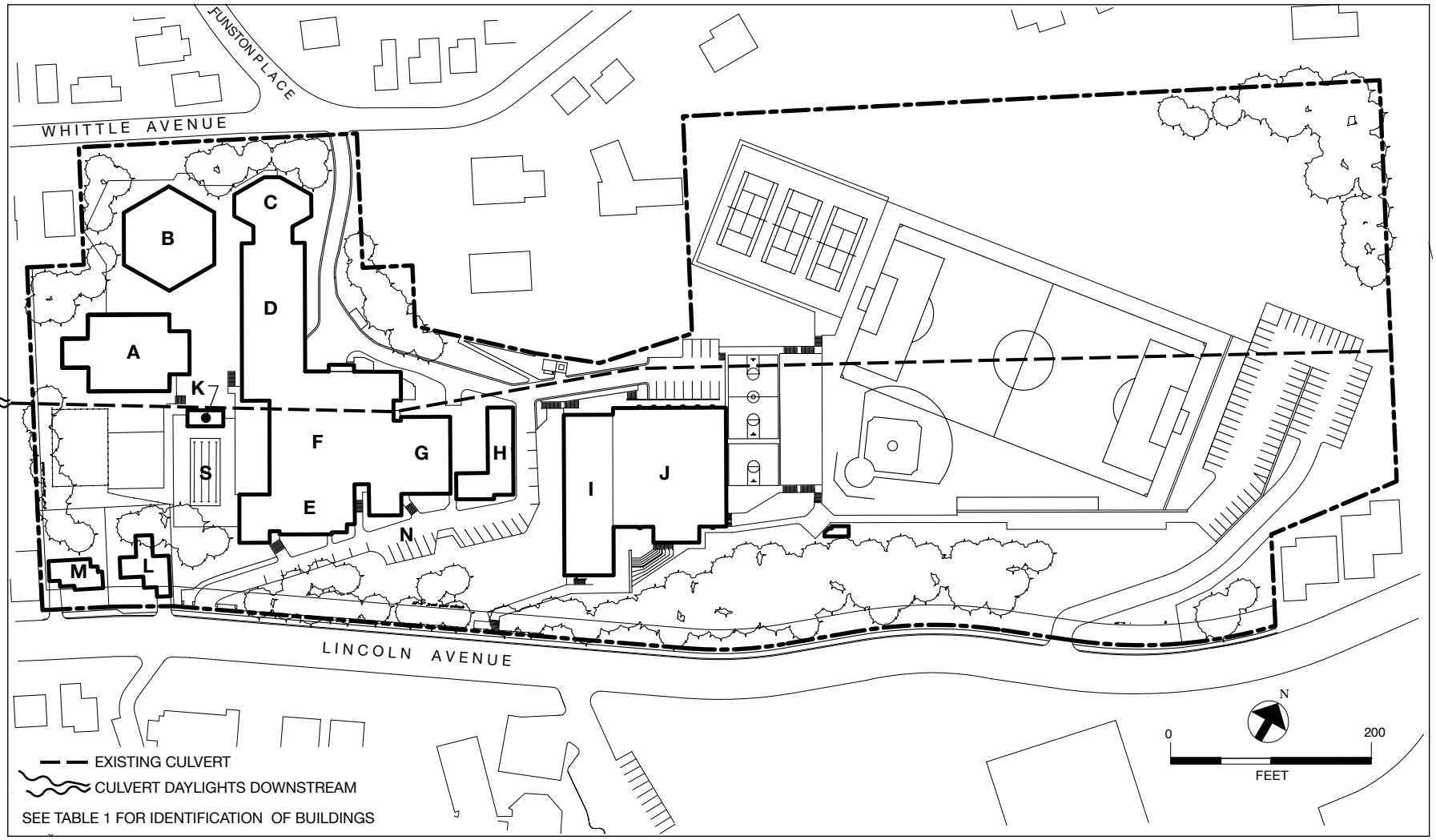
Sources: *BAAQMD CEQA Guidelines*
Transportation Analysis for: Head-Royce School Master Plan
Site Visits

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
f) Fundamentally conflict with the City of Oakland Tree Preservation and Removal Ordinance (Oakland Municipal Code (OMC) Chapter 12.36) by removal of protected trees under certain circumstances. Factors to be considered in determining significance include: The number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) the protected trees to remain, with special consideration given to native trees. Protected trees include the following: Quercus agrifolia (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and Pinus radiata (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be Protected trees.	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and aquatic habitat through: (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.	☐	☐	☐	☒

Comments to Questions IVa-IVd and IVg: All of the area that would be affected by the proposed Master Plan is currently developed and occupied by the existing school campus. Whittle Creek formerly flowed as a surface stream through the canyon now occupied by the school. Over 40 years ago, this canyon was partially filled and the creek was made to flow through an underground culvert. The culvert ends and the creek daylights at the western edge of the campus approximately 200 feet from any proposed construction (see Figure 5: Location of Culvert). The Environmental Services division of the City of Oakland Public Works Agency has determined[8] that the Head-Royce School Campus at 4315 Lincoln Avenue is not a creekside property and therefore does not require a creek protection permit.

[8] City of Oakland, Public Works Agency, letter to James D. Kent, John Malick & Associates, September 12, 2005.



SOURCE: John Malick & Associates, Turnstone Consulting

FIGURE 5: LOCATION OF CULVERT

One segment of the culvert is under the proposed new library building site and would be relocated before construction of foundations for that building. The new culvert segment would be constructed with connections to the existing culvert at each end of the new segment. After the new segment is completed, flows would be diverted into the new culvert and the old segment would be sealed off and removed. Because the water flows in a culvert, relocation would require a P-Job permit. Review by the Regional Water Quality Control Board may be required. Moving the culvert would not, itself, affect important biological resources, as it is not expected that any special status species are found in the culvert. Relocation could, however, result in sediment and construction-related materials being deposited in the culvert, affecting down-stream water quality. This impact would be reduced to a less-than-significant level by Best Management Practices (BMP) included in a Storm Water Pollution Prevention Plan (SWPPP), discussed in more detail in Section VIII, Hydrology and Water Quality. Therefore, the project would not have a significant impact on riparian habitat or fish species. There is no surface water on the project site now, nor is there any riparian habitat on the campus.

There is no other natural habitat on the site. Wildlife on the site consists of species which are adapted to survive in a semi-urban environment, i.e., landscaped vegetation and the presence of humans and pets. There are no special-status plant or animal species or natural habitat areas on the site.[9] Therefore, there would be no impact on protected biological resources.

Comments to Question IVe: No habitat protection or conservation plans are applicable to the project site. No natural habitats would be disturbed. Therefore, there would be no impact on protected habitats.

Comments to Question IVf: The City of Oakland requires that a Tree Protection/Removal Permit be approved prior to removal of a protected tree. According to the definitions of the Protected Trees Ordinance,[10] 20 protected trees, listed in Table 3, would be removed due to project construction. None of the trees to be removed are located along the perimeter of the site (see Figure 6: Locations of Trees to be Removed). The trees to be removed do not exceed the criteria of the City of Oakland Planning Code Section 17.158.280 (E). The City's standard Conditions of Approval may include replacement of some of the trees that would be removed. Replacement of nonnative species would not be required; 11 of the 20 protected trees to be removed are nonnative species. Replacement of the remaining nine protected trees would depend on the available planting area. In the event that the site conditions are unsuitable, an in-lieu fee may be substituted. Therefore, with approval of the Tree Removal Permit[11], this impact would be less than significant.

Sources: Project Application for Environmental Review and Architectural Drawings
Protected Trees Ordinance
Arborist's Report
Site Visits

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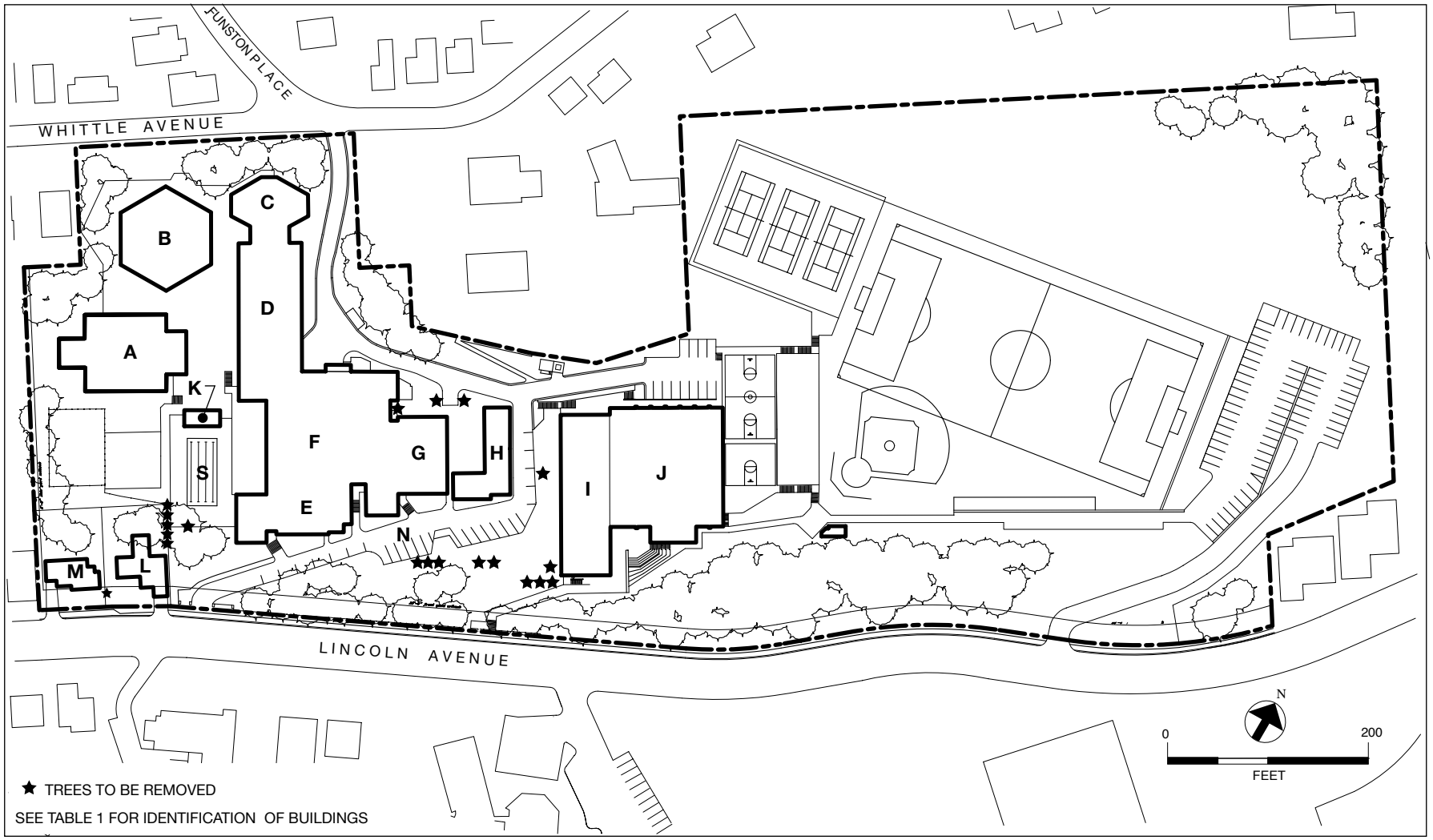
[9] California Department of Fish and Game, Wildlife & Habitat Data Analysis Branch, *California Natural Diversity Database*, 2004.
[10] City of Oakland, *Protected Trees Ordinance, Oakland Municipal Code Chapter 12.36*.
[11] City of Oakland Planning Code Section 17.158.280(E).

Table 3. Protected[12] Trees To Be Removed for Construction

Common name	Botanical Name	Diameter (inches)
Atlas cedar	*Cedrus atlantica*	10
Blue spruce	*Picea pungens*	9
Blue spruce	*Picea pungens*	12
Blue spruce	*Picea pungens*	9
Blue spruce	*Picea pungens*	9
California black oak	*Quercus kelloggii*	14
Camphor	*Cinnamomum camphora*	12
Cherry plum	*Prunus cerasifera*	14
Coast live oak	*Quercus agrifolia*	18/20
Coast live oak	*Quercus agrifolia*	24
Coast live oak	*Quercus agrifolia*	5
Coast live oak	*Quercus agrifolia*	5/3
Coast live oak	*Quercus agrifolia*	18
Coast live oak	*Quercus agrifolia*	11
Coast live oak	*Quercus agrifolia*	4/3/3/2
Coast redwood	*Sequoia sempervirens*	9
Cork oak	*Quercus suber*	20
Hollywood juniper	*Juniperus chinensis*	9
Pittosporum	*Pittosporum eugenoides*	9/6
Southern magnolia	*Magnolia grandiflora*	12

Source: The Professional Tree Care Company, *Arborist Report, Site: Head-Royce School*, April 8, 2005, and revised November 10, 2005.

[12] City of Oakland, *Protected Trees Ordinance - Municipal Code, Chapter 12.36.*



SOURCE: John Malick & Associates, Turnstone Consulting

FIGURE 6: TREES TO BE REMOVED

V. CULTURAL RESOURCES -- Would the project?	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical 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 the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5)?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Comment to Question Va: The project site is not located within any historic district. According to the Oakland Cultural Heritage Survey Map (1985, revised 2000), no historic sites are designated in proximity to the project site. The Lincoln Child Center at 4368 Lincoln Avenue is located south of the project site on the south side of Lincoln Avenue. Some of the structures housing the childcare center date back to 1929, but none are designated historic buildings and none are listed on the Oakland Cultural Heritage Survey. East of the project site on Lincoln Avenue, the Church of Jesus Christ of Latter-day Saints, or Oakland Mormon Temple, at 4780 Lincoln Avenue, and the Greek Orthodox Cathedral of the Ascension, at 4700 Lincoln Avenue, were constructed in the early 1960's. Neither of these churches are listed on the Oakland Cultural Heritage Survey or the City's Preservation Study List, but they are considered notable examples of church design.[13] The proposed project would not involve physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings, nor would it in any other

[13] City of Oakland Parks and Recreation website, http://www.oaklandnet.com/parks/news/020904e.asp, accessed September 27, 2004.

way "materially impair"[14] the significance of a cultural heritage or historical resource. Therefore, the project would not cause a substantial adverse change in the significance of an historical resource.

Comments to Question Vb-Vd: The project is proposed on a site where the ground surface has been previously disturbed and the entire site includes fill up to approximately 25 feet below the surrounding grade. Some cutting and filling of the project site would be required in order to construct the proposed new structures. Specific amounts of excavation and fill would be established in a final geotechnical investigation for the proposed project; however, it is expected that a grading permit would be required. Given the low-rise scale of the proposed additions, it is likely that they would be supported by either mat foundations or shallow spread footings founded on compacted fill. Since excavation on the site would be limited to the depth where fill is present, the possibility of unearthing subsurface archaeological resources is limited. The following standard Conditions of Approval would be applied to the project:

- If archaeological or paleontological resources are encountered, the contractor shall immediately halt work in the immediate vicinity of the resource and consult a qualified archaeologist to evaluate the potential resource, and
- If human remains are encountered, the contractor shall immediately halt work and contact the Alameda County coroner to evaluate the remains. If required, the State Native American Heritage Commission shall also be contacted, and all State requirements shall be met concerning the preservation and disposition of Native American remains.

Accordingly, the project sponsor would have a qualified archaeologist on-call during the excavation period of the project. The proposed project would not cause a substantial adverse change in the significance of a known archaeological resource pursuant to CEQA Guidelines §15064.5. It would not directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature, nor would it disturb any human remains, including those interred outside of formal cemeteries. Overall, the proposed project would result in no impacts on cultural resources.

Sources: Oakland Cultural Heritage Surveys
Oakland General Plan, Historic Preservation Element, March 8, 1994 (amended July 21, 1998)
City of Oakland, Preservation Study List, January 5, 2000
Project Application for Environmental Review and Architectural Drawings
Site Visits

[14] According to CEQA Guidelines Section 15064.5, the significance of a historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on a historical list, including the National Register of Historic Places, California Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to substantial risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards 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 Publications 42 and 117 and PRC §2690 et. seq.)?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil, creating substantial risks to life, property, or creek/waterways?	☐	☐	☒	☐
c) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as it may be revised), creating substantial risks to life or property?	☐	☐	☒	☐
d) Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property?	☐	☐	☒	☐
e) Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

Comment to Question VIa: The project site lies in the seismically active greater San Francisco Bay Area. Regional faults with the potential for generating earthquakes and significant ground shaking at the site include the San Andreas, Hayward, and Calaveras faults, all located within a few miles of the project site. The principal active fault in the vicinity of the site is the Hayward Fault. The site is not located

within the Alquist-Priolo Special Studies Zone of this fault.[15] The most recent notable seismic event associated with any known fault in the area occurred on September 4, 2003, and measured 3.9 on the Richter scale.[16] None of the buildings on the project site was damaged as a result of this event. It was centered in Oakland and attributed to the Hayward Fault. All of Oakland is subject to strong seismic ground shaking. Compliance with the requirements of the California Building Code would reduce impacts related to strong seismic ground shaking to less-than-significant levels.

A Geotechnical Investigation report prepared for the site of the existing gymnasium in 1994[17] concluded that the primary geotechnical issue was the support of new foundations on fill. Appropriate foundation design and engineering of the fill would allow the site to be developed safely. The site has very low potential for liquefaction.[18] The eastern end of the site is located within a potential landslide area.[19] This portion of the site is, and would continue to be, used solely for athletic fields and parking, thus minimizing the risk to students and staff. Furthermore, while the canyon in which the project site is located was partially filled many years ago, the site is not located above a well, pit, swamp, mound, tank vault, unmarked sewer line, or sanitary landfill. Therefore, the risks to life or property would be less than significant.

Comments to Question VIb-VIe: Soil movement for foundation excavation could create the potential for wind- and water-borne soil erosion. The portion of the site to be disturbed is nearly flat; therefore substantial erosion and loss of soil would not be expected to occur during site preparation and construction. (See Section VIII, Hydrology and Water Quality, for a discussion of water quality effects of erosion and sedimentation during construction.) Landslide potential is discussed above in Question VIa. A geotechnical engineering investigation report would be required to be submitted to the City as part of the building permit process. The project site soils have low expansion potential.[20] The project site is not located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, nor is it located above a landfill for which there is no approved closure and post-closure plan or unknown fill soils. Implementation of the site preparation and construction recommendations provided in the geotechnical engineering investigation report, as would be routinely required as part of the building permit process, would reduce the risks to life or property to less-than-significant levels.

Comment to Question VIf: The new and renovated buildings would connect to existing wastewater conveyance, treatment, and disposal facilities. Because the project would not use septic tanks or other on-

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[15] California Department of Conservation, Division of Mines and Geology, *Special Publication 42, Fault-Rupture Hazard Zones in California*, revised 1997, Oakland East.
[16] University of California, Berkeley website http://seismo.berkeley.edu/eqw/ accessed September 20, 2005.
[17] Treadwell & Rollo, Inc. *Geotechnical Investigation, Gymnasium Complex, The Head-Royce School, Oakland, California*, 1994.
[18] City of Oakland, Community and Economic Development Agency, Planning and Zoning Division, *Oakland General Plan, Safety Element*, 2004, Figure 3.1, Geologic Hazards.
[19] *Oakland General Plan, Safety Element*, 2004.
[20] *Geotechnical Investigation*, Gymnasium Complex, 1994.

site land disposal systems, determination of the capacity of the soil to handle land disposal is not necessary and the project would have no impact on soils from wastewater disposal.

Sources: Alquist-Priolo Special Studies Zone Map
Geotechnical Investigation
Oakland General Plan
Project Application for Environmental Review and Architectural Drawings

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Comments to Question VIIa-VIIc: Since the project involves the expansion of an academic institution, it would not be expected to generate significant amounts of hazardous materials requiring the need for routine transport, use, or disposal, thus reducing the potential risk to the public and/or environment in the event of an upset or accident to a less-than-significant level. Although operation of the proposed project would not be expected to involve substantial storage or use of large quantities of hazardous materials, project construction would require use of hazardous materials such as oils and combustible fuels. There would not be on-site storage or disposal of substantial quantities of these materials. Normal operating practices and procedures would involve preventive and protective measures to reduce the risk of spills or accidents to a less-than- significant level. The applicant would be required to comply with all applicable Occupational Safety and Health Agency (OSHA) guidelines and regulations regarding worker safety, and to be consistent with City of Oakland *General Plan* policies regarding the handling of hazardous materials.

Future academic and residential use of the site would involve the use of small amounts of common household hazardous materials such as cleaning products, and the use of small amounts of chemicals in some science laboratories. These cleaning products and classroom chemicals are currently in use on the campus and the amount would not change substantially. Thus, the proposed project would pose a less-than-significant hazard to the public or the environment.

Comment to Question VIId: The site is not included on any lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[21] There are no known contaminants present in soil or groundwater on the site and no known previous uses that routinely involved the use or transport of hazardous materials. Therefore, no impact would occur.

Comments to Questions VIIe-VIIf: The site is not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private airstrip. Therefore, the project would not result in any airport-related hazards for people residing or working in the project area.

Comments to Question VIIg and VIIh: The proposed project would not change the existing traffic circulation network in the vicinity, and therefore would not affect any emergency response plan or evacuation plan.

[21] *Oakland General Plan, Safety Element*, 2004, Figure 5.1.

The project site is located within the Fire Prevention and Assessment District as identified in the Safety Element of the Oakland *General Plan*.[22] Within this area, three factors increase the fire hazard: wooden residential structures, sloping terrain, and dense vegetation. The District pays for several services of the Oakland Fire Department, including the vegetation management program. The vegetation management program requires property owners to remove overgrown grass, brush, and weeds; remove low-hanging tree branches and dead and dying vegetation; and maintain firebreaks around buildings, structures, right-of-ways, and property lines. The proposed new buildings would have either concrete or Class A composition shingles on their roofs. These materials are fire resistant. The Head-Royce School complies with the vegetation management program on its campus. The school has an Evacuation Plan that would be modified as necessary to address changes in the campus as buildings are constructed or renovated. Because the school complies with the vegetation management program and has an evacuation plan, the proposed Master Plan expansion of the school's facilities would not increase the exposure of people or structures to significant risk of loss, injury, or death.

Sources: Oakland General Plan, Safety Element
Head-Royce School Building/Campus Evacuation Plan

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters?	☐	☐	☒	☐
d) Result in substantial flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems?	☐	☐	☒	☐

[22] *Oakland General Plan, Safety Element*, 2004.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Create or contribute substantial runoff which would be an additional source of polluted runoff?	☐	☐	☒	☐
g) Otherwise substantially degrade water quality?	☐	☐	☐	☒
h) 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?	☐	☐	☐	☒
i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
j) Expose people or structures to a substantial risk of loss, injury or death involving flooding?	☐	☐	☐	☒
k) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
l) 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?	☐	☐	☐	☒
m) Fundamentally conflict with elements of the City of Oakland Creek Protection (OMC Chapter 13.16) ordinance intended to protect hydrologic resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety?	☐	☐	☐	☒

Comment to Question VIIIa: Domestic wastewater from the school is currently, and would continue to be, discharged to the East Bay Municipal Utility District (EBMUD) wastewater treatment system. Discharge of typical institutional wastewater to this system would not violate any water quality standards or waste discharge requirements. Therefore, no impact would occur.

Comment to Question VIIIb: The proposed project would not use or deplete groundwater supplies. Relocation of the existing culvert would not change groundwater levels, because the water in the culvert does not contribute substantially to groundwater levels and this condition would not change substantially.

Groundwater may be encountered during drilling for foundation piers.[23] In this event, the pier holes could be dewatered. This would be a temporary activity that would not deplete groundwater supplies. The project site is not located in a designated groundwater recharge zone. The impact of the project on groundwater supplies would be less than significant.

Comments to Questions VIIIc-VIIIf: The project site is on fill placed on the floor of a canyon. Whittle Creek flows in a culvert beneath the school site. There are no surface water channels on the project site. Relocation of the culvert could result in erosion and siltation into the culvert during construction. The culvert would remain underground, and other construction activities would not affect water quality in the creek. The project would not be subject to Provision C-3 of the National Pollution Discharge Elimination System permit issued in 2003 to the Alameda County Clean Water Program, of which Oakland is a member. Provision C-3 requires on-site stormwater treatment for new projects with impervious surfaces above an identified threshold of over one acre. Because the project would not involve new impervious surfaces above the threshold, this provision is not applicable. The San Francisco Bay Regional Water Quality Control Board (RWQCB) has identified Best Management Practices (BMPs) for the control of sediment carried off construction sites. Among the possible types of BMPs are the use of sediment catchment basins, drainage swales, and silt fences. As a standard Condition of Approval of the City of Oakland permit process, the project sponsor would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) that will specify BMPs to be used to prevent discharge of sediment from the site into the storm drains during construction. Compliance with these requirements would result in no significant construction-related water quality impacts caused by erosion or siltation.

The Environmental Services division of the City of Oakland Public Works Agency has determined that the Head-Royce School Campus at 4315 Lincoln Avenue is not a creekside property and therefore does not require a creek protection permit.[24] The creek would remain in a culvert; relocation of the culvert would not conflict with the Oakland Creek Protection Ordinance, and would require a P-Job permit. Moving the culvert may require review by the Regional Water Quality Control Board.

The proposed project would increase the extent of impervious surface on the 14.2-acre site by approximately 27,000 sq. ft. or approximately 12 percent. Thus, the proposed project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site or exceed the capacity of existing or planned stormwater drainage systems. The RWQCB has identified BMPs for the control of pollutants carried off paved surfaces in urban areas in stormwater runoff. The project sponsor would be required to prepare a Stormwater Management Plan (SWMP) that

[23] *Geotechnical Investigation, Gymnasium Complex,* 1994.
[24] City of Oakland, Public Works Agency, letter to James D. Kent, John Malick & Associates, September 12, 2005.

would specify the BMPs to be included to remove oil and grease and suspended pollutants from stormwater runoff, and thus protect water quality. Compliance with these requirements would result in no water quality impact from discharge of polluted runoff.

Comment to Question VIIIg: The project would have no other impact on water quality.

Comments to Question VIIIh-VIIIj: The project site is not located within a 100-year floodplain as designated by the Federal Emergency Management Agency.[25] Furthermore, the proposed project does not include the placement of structures which would impede or redirect flood flows. Therefore, no impact would occur.

Comment to Question VIIIk: The project site is not located within an area that is subject to inundation by seiche, tsunami, or mudflow.[26] Therefore, no impact would occur.

Comments to Question VIIIl and VIIIm: Relocation of the culvert beneath the campus would not substantially alter the existing drainage pattern of the site, or increase the rate or amount of flow in a manner that would result in substantial erosion, siltation, or flooding. The Environmental Services division of the City of Oakland Public Works Agency has determined that the Head-Royce School Campus at 4315 Lincoln Avenue is not a creekside property. Therefore, the proposed project would not conflict with the City's Creek Protection Ordinance. Furthermore, the proposed project would not substantially degrade water quality.

Sources: Project Application for Environmental Review
Oakland General Plan
Geotechnical Investigation
Creek Determination by Public Works Agency, dated September 12, 2005

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Result in a fundamental conflict between adjacent or nearby land uses?	☐	☐	☐	☒

[25] *Oakland General Plan, Safety Element,* 2004, Figure 6.1.
[26] *Oakland General Plan, Safety Element,* 2004, Figure 6.1.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Fundamentally conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?	☐	☐	☐	☒
d) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Comments to Questions IXa-IXd: The project site is at the southwestern edge of Oakland's North Hills area and includes three individual properties abutting Lincoln Avenue along its southeastern side: the property at 4315 Lincoln Avenue used as a K-12 educational facility and two single-family residential properties at 4233 and 4309 Lincoln Avenue used as faculty housing.[27] The existing school campus at 4315 Lincoln Avenue is located in a naturally occurring canyon between Lincoln and Whittle Avenues, and the two residences are adjacent at the southwest corner of the school campus. The majority of the existing school structures are concentrated at the southwest end of the school campus, and athletic fields and surface parking occupy the northeast end of the campus. With the exception of the Lincoln Child Center, an eight-acre institutional-use campus at 4368 Lincoln Avenue, across the street from the school campus, the project site is surrounded by mainly single-family housing.

The project sponsor proposes implementation of the Head-Royce School Master Plan on the existing school campus, phased over a five-year period. The Master Plan Phase 1 improvements, involving several components of the project, would be implemented in stages within the first two years of the five-year period. The Master Plan Phase 1 improvements would require demolition of two existing academic buildings on the school campus at 4315 Lincoln Avenue and a single-family residence at 4309 Lincoln Avenue. Three new buildings for educational facilities would be constructed in the central portion of the campus. The residential building at 4309 Lincoln Avenue and up to 150 sq. ft. of the Head's Office Building would be replaced with a new Gatehouse and entry portal to the campus; the new structure would contain administrative offices and a parking garage. The Phase 1 improvements would also involve replacement and relocation of athletic facilities, including basketball courts and the swimming pool; construction of a new quadrangle or enclosed courtyard; renovation of two existing academic buildings; and addition of 27 parking spaces. Later Phase improvements include renovation or replacement of the Auditorium; renovation or replacement of the Administration/Arts building; replacement of the Lower School and former Library buildings to create a Lower School Quadrangle;

[27] The school also owns two adjacent single-family residential properties, at 4200 and 4220 Whittle Avenue located near the western corner of the campus, which are used as faculty housing. These two properties are not part of the proposal.

replacement of the residential building at 4233 Lincoln Avenue with either a new residential or administrative building; construction of new entry structure for the existing Gymnasium; and, if feasible, the addition of about 20 parking spaces on a parking deck over a portion of the upper parking lot, over the new swimming pool, or in some other location. Implementation of these Later Phase improvements would depend on availability of funding.

In 1998, the City adopted a revised and updated Land Use and Transportation Element for its *General Plan*. According to the Land Use Diagram in the City's *General Plan* Land Use and Transportation Element, most of the project site is designated as "Hillside Residential" while a small portion to the south is designated as "Detached Unit Residential." Both the Detached Unit Residential and Hillside Residential designations permit community education activities and school facilities. The entire project site is zoned R-30 (One-Family Residential Zone), which permits residential and certain civic uses. The expansion of existing on-site community education uses may be allowed in an R-30 residential zone upon the granting of a Planned Unit Development. The project site would be developed as a Planned Unit Development (PUD). A PUD is a large, integrated development adhering to a comprehensive plan and located on a single tract of land, or on two or more tracts of land which may be separated only by a street or other right-of-way.[28] The project is not requesting any variances from the Zoning Ordinance as part of this application.

The proposed project would intensify existing land uses on the project site, as it would expand and improve existing on-site community education facilities; however, it would not introduce new uses on the project site. The existing buildings at 4233 and 4309 Lincoln Avenue would be replaced with new structures that would be compatible in terms of scale and character with their predominantly residential context. Since both the 4233 and 4309 Lincoln Avenue residential parcels would be integrated into the school's day-to-day operations, separate legal status for these parcels would no longer be necessary and they would be consolidated into the school campus parcel. Overall, the proposed project, as an expansion of an existing use, would not disrupt or divide an established community; nor would it result in a fundamental conflict with adjacent or nearby land uses.

The proposed project would be consistent with *Oakland General Plan* policies. For example, the project would:

(i) Build on Oakland's educational resources, thereby conforming with Land Use and Transportation Element Policy D12.1, which is related to promoting Oakland's strength in the area of educational opportunities and is considered a vital component of a livable city.

(ii) Develop educational facilities located within an Oakland neighborhood, appropriately designed and sited to serve the community, thereby conforming with Land Use and Transportation Element Objective N2, which is related to planning civic and institutional uses in Oakland residential neighborhoods.

[28] Oakland Municipal Code, Chapter 17.09.040.

(iii) Be designed and operated in a manner that is sensitive to surrounding residential and other uses, as well as be physically compatible with the character of its surrounding context, thereby conforming with Land Use and Transportation Element Policies N2.1 and N2.7.

(iv) Incorporate adequate amount of parking into the new development, designed in a manner that its visual prominence is minimized, thereby conforming with Land Use and Transportation Element Policy D3.10.

(v) Expand and retain Oakland's job base, particularly jobs in the services sector, thereby conforming with Land Use and Transportation Element Objective I/C1 and Table 8: North/South Hills Jobs and Housing Summary.

According to Land Use and Transportation Element, Policy N2.5, while reviewing the land use permit application for expansion of an institutional use, the decision-making body should take into account the institution's overall benefit to the entire City, as well as its effect upon the immediate surroundings. In addition, the discussion of "Desired Character and Uses" for the Detached Unit Residential land use designation in the Land Use and Transportation Element states that future development within this land use classification should remain residential in character with appropriate allowances for schools and other small-scale civic activities.

The uses and intensity of the proposed project are consistent with the City's *General Plan* and zoning regulations and would not result in adverse physical changes. The project would not conflict with applicable land use plans, policies, or with regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment. The proposed project is located in an area that is not governed by any habitat conservation plan or natural community conservation plan, and would not conflict with any such plan affecting the area. Overall, the project would have no significant impacts related to land use and planning.

Sources: Oakland General Plan, Land Use and Transportation Element, March 1998
Guidelines for Determining Project Conformity with the General Plan and Zoning Regulations
Oakland Zoning Regulations
Project Application for Environmental Review and Architectural Drawings
Site Visits

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES -- Would the project:				
a) 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?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Comments to Questions Xa-Xb: The proposed project is located in an urban area that has been previously developed. The project would not include quarrying, mining, dredging, or extraction of locally important mineral resources on site, nor would it deplete any non-renewable natural resource. Local planning documents do not identify the project site as a mineral resource recovery site. Thus, the proposed project would have no impact.

Source: Oakland General Plan

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generate noise levels in excess of standards established in the Oakland general plan or applicable standards of other agencies (e.g., OSHA)?	☐	☐	☒	☐
b) Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise?	☐	☐	☒	☐
c) Violate the City of Oakland Noise Ordinance (Oakland Planning Section 17.120.050) regarding construction noise, except if an acoustical analysis is preformed and all feasible mitigation measures are imposed, including the standard City of Oakland noise measures adopted by the Oakland City Council on January 16, 2001. During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, will noise levels received by any land use from construction or demolition exceed the applicable nighttime operational noise level standard?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Violate the City of Oakland Noise Ordinance (Oakland Municipal Code Section 8.18.020) regarding nuisance of persistent construction-related noise?	☐	☐	☒	☐
e) Create a vibration which is perceptible without instruments by the average person at or beyond any lot line containing vibration-causing activities not associated with motor vehicles, trains, and temporary construction or demolition work, except activities located within the (a) M-40 zone or (b) M-30 zone more than 400 feet from any legally occupied residential property (Oakland Planning Code Section 17.120.060)?	☐	☐	☐	☒
f) Generate interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24):	☐	☐	☐	☒
g) Result in a 5dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
h) Conflicts with state land use compatibility guidelines for all specified land uses for determination of acceptability of noise (Source: State of California, Governor's Office of Planning and Research, General Plan Guidelines, 2003 (Appendix C, Figure 2))	☐	☐	☒	☐
i) Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
j) Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Comments to Questions XIa, XIc, XId and XIf: Implementation of the proposed project would result in a temporary increase in ambient noise levels in the project vicinity, above levels existing without the project, due to construction noise. Demolition, excavation, and construction activities would all cause temporary increases in ambient noise levels. No pile driving would be necessary for foundations of the new buildings. New and remodeled buildings would be wood-frame construction, so construction noise levels would be similar to those generated by construction of single-family houses. In general, construction equipment causes intermittent noise levels in the range of 80 to 90 dBA at a distance of about 50 feet. An analysis of potential maximum noise levels from outdoor construction activities such as earthmoving and trucking, and

from stationary construction equipment was prepared for each proposed demolition and for each proposed new or renovated building in relation to the closest residential building.[29] This analysis shows that noise from demolition activities, which would generally last about one to five days, would exceed the City's short-term daily noise standards at some but not all locations, and would exceed the short-term weekend noise standards at all demolition sites. Noise from construction activities for proposed new buildings on the campus would exceed the long-term weekday and weekend noise standards during exterior construction activities at the nearest residential location. Exterior construction activities are estimated to last for less than 3 to 15 months, depending on the building.

Interior finishing noise would be shielded by exterior walls and roofs of new and remodeled buildings; therefore, for this portion of the construction period noise levels would not be substantially increased.

The project would be required to implement the City's standard Conditions of Approval for noise. These conditions include the following:

1. The project sponsor would require construction contractors to limit standard construction activities as required by the City Building Department. Such activities are generally limited to the hours between 7:00 a.m. and 7:00 p.m. Monday through Friday. No construction activities would be allowed on weekends until after the buildings are enclosed, without prior authorization of the Building Services Division.
2. To reduce daytime noise impacts due to construction, the project sponsor would require construction contractors to implement the following measures:
    - 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.)
    - Impact tools (*e.g.*, jack hammers and pavement breakers) used for project construction shall be hydraulically or electrically powered wherever possible 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 where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.
    - Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.
3. Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor shall submit to the City Building Department a list of measures to respond to and track complaints pertaining to construction noise. These measures would include:
    - A procedure for notifying the City Building Division staff and Oakland Police Department;

[29] Orion Environmental Associates, Table showing Estimated Maximum Construction Noise Levels at Nearby Receptors, prepared for Turnstone Consulting. A copy of this document is available for public review at CEDA offices.

- A plan for posting signs on-site pertaining to permitted construction days and hours and complaint procedures and who to notify in the event of a problem;
- A listing of telephone numbers (during regular construction hours and off-hours);
- The designation of an on-site construction complaint manager for the project;
- A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

With the adoption of these standard measures, the project's impacts are considered to be less than significant.

Comment to Question XIe: Pile driving would not be necessary, as the new buildings are expected to have mat foundations or to use spread footings. Therefore the project would not result in substantial groundborne vibration or noise.

Comment to Question XIb and XIg: Following completion of the Master Plan project, there would be no change in the activities conducted on the site. No long-term noise sources would be introduced on the campus. The increased number of students using the site would not be expected to result in a substantial change in noise levels on the site. Buildings and playing fields would not be located closer to residences than they are now. The project would not conflict with state land use compatibility guidelines regarding acceptability of noise. Therefore, noise levels would not exceed ambient levels established in the City standards, or the City's Noise Ordinance. The project would not generate noise that would cause interior noise levels in multi-family dwellings, hotels, motels, dormitories or long-term care facilities to exceed the California Noise Insulation Standards.[30] Therefore, noise impact would be less than significant.

A doubling of traffic is necessary to cause a noticeable increase in traffic-generated noise of 3 dBA. The project would generate about 447 new vehicle trips daily. This would not result in a doubling of traffic. Therefore, the project would not cause a significant permanent increase in ambient noise levels.

Comments to Questions XIi-XIj: The site is not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private airstrip. Therefore, the project would not result in any exposure of students or staff at the school to excessive noise levels.

Sources: Oakland Municipal Code
Transportation Analysis for: Head-Royce School Master Plan.

[30] California Code of Regulations, Part 2, Title 24.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce 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 extension of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?	☐	☐	☒	☐

Comments to Questions XIIa-XIIc: The proposed project would expand and improve an existing school campus located in a primarily residential neighborhood. The proposed project would therefore result in additional students and school staff on the campus; this addition of students and staff would occur in phases over a 15-year period (2005-2020).

The project would not introduce a new mix of uses on the project site. Instead, it would intensify existing on-site community education uses and parking. Development of the project would result in the displacement of one of the two faculty residences on the project site. This residential displacement would be considered negligible in the context of the City's existing, under-construction, and proposed housing stock, and it would not necessitate the construction of large amounts of replacement housing elsewhere in excess of that contained in the City's Housing Element. Therefore, the project would not conflict with City policies related to retention and conservation of existing housing stock.

The project would add a total of 18 full-time employees who would be expected to work on the campus during typical school hours. The number of employees on the campus would thus increase from 133 to 151 employees, which would be a 13.5 percent increase in on-site employment over a 15-year period (2005-2020). According to the U.S. Census, the City of Oakland had 185,162 total jobs in 2000. The City of Oakland estimates that the total number of jobs will reach 215,049 by 2010 and 247,497 by 2025, which is a 16.1 percent increase from 2000 to 2010 and a 15.1 percent increase from 2010 to 2025, respectively. Extrapolating from these long-term employment projections, it can be estimated that the total number of jobs in Oakland would reach approximately 201,105 by 2005 and 236,681 by 2020, respectively. The increase in jobs between the years 2005 and 2020 would be approximately 36,576 jobs. The job-related growth on the project site over the same time period (2005-2020)—18 total jobs—would represent approximately 0.05 percent of the total job growth for this period. This potential increase in

employment would be very small in the context of total employment in Oakland. Increases in project employment are therefore not expected to result in substantial direct population growth beyond that planned for the area, increase demand for local housing, or potentially lead to displacement of low-income households.

The number of students currently studying at Head-Royce is about 700;[31] of this number, about 55 percent live in Oakland, about 20 percent live in Berkeley, and the remaining 25 percent live in other parts of the East Bay.[32] The proposed project would add a total of 180 students and the number of students would thus increase from approximately 700 to 880, which would be a 25.7 percent increase in student enrollment over a 15-year period. It is expected that the demographic profile of students attending Head-Royce in the future would generally remain the same, with the most students coming from the Oakland-Berkley area.

Overall, the increase in student enrollment and employees on the project site is not expected to induce substantial population growth in the project area in a manner not contemplated in the *General Plan*, either directly or indirectly, such that additional infrastructure would be required to support growth. It is also reasonable to assume that the project would result in no new contribution to direct and indirect displacement of households. The proposed project would therefore have a less-than-significant impact on the City's population or housing supply.

Sources: Project Application for Environmental Review and Architectural Drawings
Head-Royce School Demographic Profile, 2004-2005
Oakland General Plan, Housing Element – Adopted June 15, 2004
Citywide Employment Data from the 2000 U.S. Census; California Employment Development Department (EDD); and ABAG Projections 2000
Site Visits

[31] Head-Royce School Demographic Profile, 2004-2005.
[32] About 0.7 percent or five students at Head-Royce live in San Francisco. Other than these students, all the remaining students live in the East Bay.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES -- Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Other public facilities?	☐	☐	☐	☒

The proposed project would be located in an urban area fully served by fire, police, schools, and other public services. The Community Services Analysis prepared for the *Land Use and Transportation Element* of the *General Plan* stated that future development through the *General Plan* horizon year of 2015 would not likely impose a burden on existing public services. It is reasonable to assume that the Community Services Analysis for future development for 2015 would have taken into account the expansion of school facilities such as that proposed on the project site. The proposed project would thus not impose a burden on existing public services greater than assumed in the *General Plan* Community Services Analysis.

Comment to Question XIIIa.i: Fire protection would be provided by the Oakland Fire Department (OFD). The closest fire station, Station No. 25, is located about one-half mile from the site.[33] The estimated response time to the proposed project site is seven minutes. The addition of 198 persons to the school population and the construction of seven two- and three-story buildings to the OFD Service Area would not impact OFD's ability to maintain acceptable service ratios and response times. Prior to construction, the applicant must submit plans to the Fire Services Agency for final approval to ensure that adequate fire and life safety measures are designed into the project in compliance with all applicable State and City fire safety requirements. Therefore, the proposed project would have no impact on fire protection.

Comment to Question XIIIa.ii: Police protection would be provided by the Oakland Police Department (OPD). The project site is located within Police Service Area 4 and the nearest police station is located

[33] *Oakland General Plan, Safety Element*, 2004, Figure 4.1.

less than one mile away.[34] The addition of 198 persons to the school population would not significantly impact OPD's ability to maintain acceptable service ratios and response times. Therefore, the proposed project would have no impact on police protection.

Comment to Question XIIIa.iii: The Head-Royce Master Plan proposes a five-year phased expansion program that calls for upgrades to its physical facilities in order to provide high-quality educational choices and recreational options to parents and students. Upon completion, Head-Royce would have created classroom space in a private school to serve an additional 180 K-12 students. The proposed expansion, therefore, would have no impact on faculty-student ratios within public schools.

Comment to Question XIIIa.iv: The proposed project would not increase demand for other public facilities that would result in the need to construct new buildings or structures.

Sources: Oakland General Plan
Project Application for Environmental Review

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION -- Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Comments to Questions XIVa-XIVb: As discussed in Section XIII, Public Services, the area is served by the City of Oakland and the East Bay Regional Park District (EBRPD). City parks located near the project site include Diamond Park, which has a public swimming pool, Joaquin Miller Park, and Shepherd Canyon Park. Regional parks and preserves include the Anthony Chabot Regional Park, the Leona Canyon Regional Open Space Preserve, Redwood Regional Park, and the Robert Sibley Volcanic Regional Preserve. Therefore, the area surrounding the project site is well-served by existing parks and preserves. Since the project would only involve an increase in the school population, with related improvements in on-site recreational facilities, it would not increase the use of existing parks or require the construction or expansion of recreational facilities. Therefore, the project would have no impact on recreational facilities.

Source: Oakland General Plan

[34] *Oakland General Plan, Safety Element*, 2004, Figure 2.1.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e.) street closures, changing direction of travel) in a manner that would substantially impact access or traffic load capacity of the street system? Specifically:				
i) At a study, signalized intersection which is located outside the Downtown area, the project would cause the level of service (LOS) to degrade to worse than LOS D (i.e., E)?	☐	☐	☐	☒
ii) At a study, signalized intersection which is located within the Downtown area, the project would cause the LOS to degrade to worse than LOS E (i.e., F)?	☐	☐	☐	☒
iii) At a study, signalized intersection outside the Downtown area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., F)?	☐	☐	☐	☒
iv) At a study, signalized intersection for all areas where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., F),	☐	☐	☐	☒
v) At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately)?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A project's contribution to cumulative impacts is considered "considerable" when the project contributes 5% or more of the cumulative traffic increase as measured by the difference between the existing and future cumulative (with project) conditions?	☐	☐	☒	☐
c) Cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the V/C ratio by more than 3% for a roadway segment that would operate at LOS F without the project?	☐	☐	☐	☒
d) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
e) Substantially increase hazards due to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) that does not comply with Caltrans design standards or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
f) Result in less than two emergency access routes for streets exceeding 600 feet in length?	☐	☐	☐	☒
g) Fundamentally conflict with adopted policies, plans, programs supporting alternative transportation (e.g. bus turnouts, bicycle routes)?	☐	☐	☐	☒
h) Generate added transit ridership that would:				
i) Increase the average ridership on AC Transit lines by three (3) percent at bus stops where the average load factor with the project in place would exceed 125% over a peak thirty minute period;	☐	☐	☐	☒
ii) Increase the peak hour average ridership on BART by three (3) percent where the passenger volume would exceed the standing capacity of BART trains; or	☐	☐	☐	☒
iii) Increase the peak hour average ridership at a BART station by three (3) percent where average waiting time at fare gates would exceed one minute.	☐	☐	☐	☒

Comments to Questions XVa-XVc: A transportation analysis was prepared for the proposed project by Dowling Associates, Inc.[35] The following discussion summarizes information from that analysis. Lincoln Avenue is one of the busiest roadways in the vicinity of the school; it connects Interstate 580 and State Route 13. It is a two-lane street between MacArthur Boulevard and Route 13. Parking is permitted on both sides of the street within this segment. Lincoln Avenue has two traffic signals along the school frontage that slow traffic and facilitate pedestrian crossings and entrances/exits at the school's parking lot driveway. Other streets near the project site are primarily two-lane residential streets.

"Level of Service" (LOS) describes roadway operating conditions. LOS is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. Levels of Service are designated "A" through "F" from best to worst. LOS "A" through "D" generally represent traffic volumes at acceptable levels, while LOS "E" and "F" represent unacceptable conditions. For this analysis, LOS were evaluated for five key intersections surrounding the project site: Lincoln Avenue/Monterey Boulevard, Lincoln Avenue/Head-Royce driveway to upper parking lot, Lincoln Avenue/Alida Street, Lincoln Avenue/Tiffin Road-Ravenwood Lane, and Whittle Avenue/Funston Place.[36] LOS was analyzed for the AM peak hour (the peak traffic hour during the 7:00 to 9:00 AM morning peak period), the after-school peak hour (3:00 to 4:00 PM) and the PM peak hour (the peak traffic hour during the 4:00 to 6:00 PM afternoon peak hour).

All of the study intersections currently operate at LOS A or B, except for the Lincoln Avenue/Monterey Boulevard intersection which operates at LOS C in the AM peak hour and the after school peak hour, and LOS D in the PM peak. The City has established LOS D as the lowest acceptable service level for signalized intersections outside the Downtown area. As none of the study intersections operates at LOS E, none operate at unacceptable levels.

In the immediate vicinity of the school, sidewalks are provided along most of the roadways. Striped crosswalks are located at each of the intersections along the school frontage.

The campus currently has 110 designated off-street parking spaces, located in the upper parking lot, the upper parking lot driveway, and along internal roads. Students and staff share the upper parking lot. Parking on the lower campus is reserved for staff and visitors. During school hours, the campus parking is fully occupied and some vehicles can be found in unmarked spaces in and around the upper parking lot. On-street parking is available on the local streets in the project vicinity. Parking on Lincoln Avenue, closest to the campus, is limited to two hours. All-day parking is allowed on the side streets.

The main transportation activities generated by the school occur during the morning drop-off and afternoon pickup periods. These activities take place primarily along Lincoln Avenue. There is a

[35] Dowling Associates, Inc., *Transportation Analysis for: Head Royce School Master Plan*, December 7, 2005.

passenger loading zone on the north side of Lincoln Avenue to accommodate these activities. During the drop-off and pickup periods, the lower driveway is closed to vehicular traffic and passenger loading takes place at the curb on Lincoln Avenue. During the after-school pickup period, monitors facilitate the queuing so that through traffic on Lincoln Avenue is not impeded. In the morning, when monitors are not present, drop-offs are less orderly and traffic flow is slightly restricted along Lincoln Avenue near the school entrances during the peak 15-minute period between about 8:00 and 8:15 AM, although intersections near the school entrances operate at acceptable LOS A and B.

At the completion of Phase 1, the proposed project would generate approximately 298 new daily trips, that would include 95 new AM peak hour trips and 66 new after-school peak hour trips. During the AM peak hour, the addition of project traffic would result in a change in LOS at two of the five study intersections. The AM peak LOS at the intersection of Lincoln/Monterey would deteriorate from LOS C to LOS D, adding 3.3 seconds to the average delay. At the intersection of Lincoln/Upper driveway, the AM peak LOS would decrease from LOS A to LOS B, although most of the delay would be associated with the traffic signal at this location. No intersections would deteriorate to unacceptable LOS E during the AM peak. The after-school and PM peak hour LOS would be unaffected at all study intersections.

At completion of the Master Plan, the proposed project would generate approximately 447 new daily trips that would include 142 new AM peak hour trips and 99 new after-school peak hour trips. The traffic that would be generated by the full buildout of the Master Plan was added to a future baseline condition for 2025. This future 2025 condition is based on traffic forecasts from the Alameda Countywide Travel Demand Model. The addition of project traffic to the future cumulative conditions would not result in a change in LOS at the analysis intersections during the after-school peak hour or the PM peak hour. However, during the AM peak, the addition of project traffic would cause the Lincoln/Tiffin-Ravenwood intersection to deteriorate from LOS B to LOS C. Nonetheless, LOS C is within the City's acceptable LOS threshold. Therefore, the project would not create a "considerable" contribution to cumulative impacts.

The increase in enrollment at the completion of the Master Plan could result in extension of the parking queue along Lincoln during the after-school pickup period, as parents wait in the queue for their riders to be dismissed from classes. If the queue were to extend beyond the upper driveway and block traffic along Lincoln Avenue, this would be considered a potentially significant impact to safety and traffic flow. The project sponsor proposes to reduce this impact to a less-than-significant level by incorporating Mitigation Measure T1 to reduce the length of the queue along Lincoln Avenue.

Based on the above analysis, the proposed project would result in a potentially significant impact at the Lincoln/upper driveway intersection that would be reduced to less-than-significant with mitigation included in the project.

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[36] These intersections were identified by the City of Oakland as critical intersections to include in the transportation analysis.

Mitigation Measure T1

The project sponsor would monitor the extent of the after-school pickup queue along Lincoln Avenue. If the queue extends past the upper driveway and the "no parking" zone above the driveway, the school would implement as many of the following actions as would be necessary to accomplish the necessary reduction in the length of the queue:

- Stagger pickup times so that the buses are loaded and leave prior to the start of pickup,
- Discourage early arrival for pickup,
- Actively encourage carpools or school buses as an alternative with an incentive for use of these alternatives, then
- If the previous measures do not reduce the queue, work with the City to restrict on-street parking during after-school pickup on Lincoln Avenue above the upper driveway to allow for the longer queue.

These measures would reduce impacts to a less-than-significant level.

The project would not satisfy the Caltrans peak hour volume warrant for an unsignalized intersection. Therefore, no new traffic signals would be needed. The project would not cause any roadway segment on the Metropolitan Transportation System to operate at LOS F.

Comment to Question XVd: The proposed project would have no impact on air traffic patterns.

Comment to Question XVe: The proposed project would not result in transportation hazards or incompatible uses.

Comment to Question XVf: The proposed project would have no impact on emergency access (see Public Services XIIIa and XIIIb and Hazards VIIg).

Comment to Question XVg: The proposed project would have no conflict with adopted policies supporting alternative transportation. Use of public transit and school buses is encouraged and facilitated by the school. The Head-Royce School Master Plan would improve pedestrian circulation on school grounds. The project would not change pedestrian access from the street. Overall, the project would not result in significant impacts on pedestrian and bicycle circulation.

Comment to Question XVh: AC Transit operates five bus routes that serve the school; four are school bus routes that operate only on school days. Head-Royce School operates two private school buses to supplement the AC Transit service. The AC Transit buses serve approximately 80 to 100 Head-Royce students and the private school buses serve about 70 to 80 students. There is available capacity on both systems. The proposed project would add 180 students and 18 staff to the population at the project site. This would not result in substantial impact on either AC Transit or BART ridership.

Additional Comment: The Court of Appeal has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.[37] Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, the City of Oakland, in its review of the proposed project, wants to ensure that the project's provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as effects on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document.

Parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects, caused by congestion resulting from drivers circling as they look for a parking space. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, shuttles, taxis, bicycles, or travel by foot), may induce drivers to shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy.

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts that might result from a shortfall in parking in the vicinity of the proposed project are considered less than significant.

This Initial Study evaluates whether the project's estimated parking demand (both project-generated and project-displaced) would be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the project site. Project-displaced parking results from the project's removal of standard on-street parking, City or Agency owned/controlled parking and/or legally required off-street parking (non-open-to-the-public parking which is legally required). The discussion is based on a memorandum on parking issues at Head-Royce School prepared by Dowling Associates, Inc.[38]

The school has 110 designated parking spaces: 72 in the upper parking lot at the east end of the campus and 38 at various locations along roads and in small lots among the buildings on the west end of the campus. Some cars are found parked along the driveway leading from Lincoln Avenue to the upper

[37] San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco (2002) 102 Cal.App.4th 656.

[38] Memorandum to Barbara W. Sahm, Turnstone Consulting, from Alice Chan and Debbie Chen, Dowling Associates, Inc., September 21, 2005.

parking lot and along the edges of this lot in non-designated areas. In total, approximately 131 vehicles were observed to be parked off-street on campus on the day parking was surveyed.

The project would not remove any on-street parking. Construction and renovation of buildings during Phase I would remove 23 of the 38 west campus parking spaces, leaving a total of 87 designated spaces (72 in the upper lot and 15 in the west campus accessible only from Whittle Avenue.) Thirty-five new spaces would be added during Phase 1 by re-structuring the upper parking area: constructing a series of retaining walls, re-striping the upper lot, widening and striping an area along the edge of the soccer field, and widening and striping the driveway to the lot. These new spaces would replace the 23 spaces lost and increase the number of designated spaces from 72 to 107 in the upper parking lot. The new Lincoln Avenue Gatehouse/Administration building would have 15 spaces in its lower level accessible only from Lincoln Avenue; 10 of the spaces would be tandem using lifts. A yellow-curb delivery space for the administration building would be located at the street curb if approved by the Public Works Agency Tranporation Services division. These new spaces would increase the number of designated spaces from 15 to 30 in the west end of the campus. The total number of designated spaces on-site following Phase 1 would increase from 110 to 137 (107 in the upper lot and 30 in the west campus).

In later phases, an additional 20 parking spaces would be added either by constructing a parking deck structure over a portion of the upper parking lot, constructing a parking deck over the new swimming pool adjacent to the gym, or in some other manner, for a total of 157 designated spaces on the campus.

The Oakland Planning Code requires 16 additional parking spaces at the completion of the Master Plan, to accommodate 18 new staff and approximately 100 new high school students. As the proposed project parking improvements would provide at least 27 additional parking spaces, the project would meet the full amount of Code-required parking in Phase I. The additional 20 spaces to be provided in later phases would more than exceed code requirements, and would satisfy parking demand that occurs in excess of the Code requirements.

The demand for parking spaces on the campus would increase in the future because there would be additional staff and high school students on campus. After completion of Phase I there would be a demand for about 146 spaces, where only about 137 spaces would be provided, resulting in a deficit of about 9 spaces. A survey of on-street parking in the vicinity of the campus showed that while parking along the first block of Alida Street south of Lincoln Avenue is nearly fully occupied during the day, other locations, including the next block of Alida Street and Lincoln Avenue adjacent to the school, have substantial amounts of on-street parking available. Therefore the parking deficit could easily be met with on-street parking spaces. At buildout, the demand for parking on campus would increase to about 156 spaces and would be fully met with the proposed 157 campus parking spaces.

Parking for events such as graduations, sports and plays is planned by the school administration well in advance of the activities. Graduations and sports activities are not held for the entire school on a single day; for example, the Upper School graduation is not held on the same day as commencement from the

Middle School. While some attendees use on-street parking, for large events arrangements are made for parents and other attendees to park at one of the churches east of the campus on Lincoln Way and shuttles transport people to and from those parking lots. Information about parking is provided to the attendees in advance of the events. This arrangement is expected to continue in the future.

Source: Transportation Analysis for: Head-Royce School Master Plan

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☒
e) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☒
f) Violate applicable federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
g) Violate applicable federal, state and local statutes and regulations relating to energy standards?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☒

Comments to Question XVIa and XVId: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. The Head-Royce Master Plan delineates a five-year phased expansion program that calls for a net increase of 51,624 sq. ft. of new building space after removal of several existing structures, and a 198-person increase in the school population by the year 2020. The increase in the school population of 180 students and 18 faculty/staff in that period of time is not expected to impose a burden on existing utilities and services systems. Existing wastewater from the school is collected for treatment and disposal at the East Bay Municipal Utility District (EBMUD) wastewater treatment plant near the Oakland-San Francisco Bay Bridge. The volume of wastewater from the site would increase as a result of the proposed project; however, the nature of the wastewater and type of treatment needed would not change. Therefore, the proposed project would not result in any exceedances of treatment requirements established in the National Pollutant Discharge Elimination System permit issued to EBMUD by the Regional Water Quality Control Board, San Francisco Bay Region.

The increase in volume of wastewater would be small in relation to the average annual volume of about 80 million gallons per day (MGD) treated at the treatment plant.[39] The treatment plant has a capacity of 168 MGD; therefore, capacity exists to handle the increased flows from the project site.

Comment to Question XVIb: Storm water is collected in a culvert on the school campus; the culvert discharges to the Whittle Creek channel at the western edge of the campus. Storm water runoff from the campus would increase very little. Following implementation of the Master Plan, the impervious surface would increase by approximately 12 percent. Some rerouting and modification of the existing campus storm drain system would be required to facilitate construction of new buildings at some locations. However, the overall capacity of the system would not be affected. Therefore, the proposed project would not require construction of new storm water drainage facilities or expansion of existing facilities.

Comments to Questions XVIc: The school has previously been unable to provide water to irrigate landscaping on the steeply sloped hill above the north side of the playing fields. Recent improvements in

[39] East Bay Municipal Water District website, www.ebmud.com/wastewater/treatment, accessed March 4, 2005.

water service to the area have made it possible to complete landscaping plans, including installing irrigation on this hillside.

The increased demand for water for additional students, faculty, and staff and for irrigation of new landscaping would be small in relation to overall demand for water in the EBMUD regional system, which supplies nearly 2 million users with water. The project would not require as much water as 500 residential units, a 250,000 sq. ft. office building, or a 500,000 sq. ft. shopping center and therefore would not be required to be analyzed in a Water Supply Assessment under California Water Code Section 10912 (SB610). No new water supply facilities would be necessary to serve the proposed Head-Royce School Master Plan.

Comments to Question XVIe-XVIf: The City is required to comply with the California Integrated Waste Management Act (also referred to as AB 939), which requires the diversion of waste materials from landfills in order to preserve the decreasing capacity of landfills. Cities and counties in California were required to divert 25 percent of solid waste by 1995, and 50 percent of solid waste by the year 2000. AB 939 further requires every city and county to prepare two documents demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element describes the chief sources of the jurisdiction's waste, the existing diversion program, and current rates of waste diversion and new or expanded diversion programs. Oakland's Source Reduction and Recycling Element was approved in 1995 by the California Integrated Waste Management Board.[40] The City provides curbside recycling throughout Oakland, including the project site. Curbside recycling includes glass, aluminum and tin, motor oil, cardboard, magazines and newsprint, yard trimmings and food scraps, and plastic. Recyclable materials are delivered to the Davis Street Transfer Center where they are processed.

The City's construction and demolition debris recycling ordinance (Oakland Municipal Code Chapter 15.34) requires building permit applications for new construction, demolition, or alterations and additions (with a valuation of $50,000 or greater) to be accompanied by an approved Waste Reduction and Recycling Plan (WRRP). The City will not approve a building permit for a project until the WRRP is approved. Compliance with the City's recyling programs will result in no impact on solid waste disposal.

Comments to Questions XVIg and XVIh: The project would not violate applicable federal, state and local statutes and regulations relating to energy standards. The project would not result in a determination by PG&E that it does not have adequate capacity to serve the project's projected demand in addition to its existing commitments.

Sources: Oakland General Plan, Land Use and Transportation Element
Oakland Community Services Analysis, Technical Report #5, October 1995
California Water Code

[40] California Integrated Waste Management Board, 2002, Waste Stream Information Profiles. Website: http://www.ciwmb.ca.gov/profiles/Juris/JurProfile3.asp?RG=C&JURID=345&JUR=Oakland, accessed July 6, 2005.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

CONCLUSION

Based upon the foregoing analysis, no further environmental review is required for the Head-Royce Expansion project.

SUMMARY OF IMPACTS, AND MITIGATION MEASURES INCORPORATED IN PROJECT

XV. Transportation

Impact T1

The increase in enrollment at the completion of the Master Plan could result in extension of the parking queue along Lincoln during the after-school pickup period.

Mitigation T1

The project sponsor would monitor the extent of the after-school pickup queue along Lincoln Avenue. If the queue extends past the upper driveway and the “no parking” zone above the driveway, the school would implement as many of the following actions as would be necessary to accomplish the necessary reduction in the length of the queue:

- Stagger pickup times so that the buses are loaded and leave prior to the start of pickup,
- Discourage early arrival for pickup,
- Actively encourage carpools or school buses as an alternative with an incentive for use of these alternatives, then
- If the previous measures do not reduce the queue, work with the City to restrict on-street parking during after-school pickup on Lincoln Avenue above the upper driveway to allow for the longer queue.

Implementation of this measure would reduce the impact of traffic interference during after-school pickup to a less-than-significant level.

APPENDIX A

Sponsor's Letter of Agreement

Head-Royce School
4315 Lincoln Avenue · Oakland · California · 94602 TEL 510·531·1300 www.headroyce.org

December 7, 2005

Heather Klein, Planner II
Community & Economic Development
Planning & Zoning Services
250 Frank Ogawa Plaza, Second Floor
Oakland, CA 94612

Facsimile: (510) 238-4730

Re: Head Royce School Mitigation Measure/Initial Study/Master Plan

Dear Ms. Klein,

The project sponsor agrees to the following mitigation measures.
The project sponsor will monitor the extent of the after-school pickup queue along Lincoln Avenue. If the queue extends past the upper driveway and the no-parking zone above the driveway, the school will implement as many of the following actions as will be necessary to accomplish the necessary reduction in the length of the queue.

- Stagger pickup times so that the buses are loaded and leave prior to the start of pickup.
- Discourage early arrival for pickup.
- Actively encourage carpools or school buses as an alternative with an incentive for use of these alternatives, then:
- If the previous measures do not reduce the queue, work with the City to restrict on-street parking during after-school pickup on Lincoln Avenue above the upper driveway to allow for a longer queue.

Sincerely,

Paul Chapman
Head of School

APPENDIX B

Noise Analysis

GEIER & GEIER CONSULTING, INC.

Memorandum

To: Heather Klein, Oakland Community and Economic Development Agency, Planning

From: Valerie Chew Geier

Date: December 8, 2005

Subject: Head-Royce School Master Plan Noise Analysis

This construction noise impact analysis evaluates the potential noise impacts that could result from implementation of the Head-Royce School Master Plan on the existing 14.2-acre school campus at 4315 Lincoln Avenue. The Master Plan would involve renovation of 159,226 square feet and net new construction of 51,624 square feet (after removal of several existing structures) in at least two phases. The project architect provided a list of proposed phasing (by building), proposed action on each identified building, distance from each identified building to the nearest residential receptor, and duration of exterior construction associated with each identified building.

Approach

This analysis identifies potential construction-related impacts on the existing noise environment that could result from implementation of the proposed Master Plan. This analysis uses typical equipment noise levels to estimate temporary construction-phase noise impacts, especially as they affect sensitive receptors. Construction noise generation potential is based on noise levels for various types of construction equipment specified by the U.S. Environmental Protection Agency and they are presented in Table 1. These noise levels were adjusted for specific distances provided by the project architect assuming an attenuation rate of six decibels (dB) for every doubling of distance from a point source.

These estimates are then compared to the construction noise limits specified in the City's noise ordinance and this comparison is presented in Table 2. On weekends, Table 2 indicates that maximum construction noise levels associated with demolition activities during all phases could exceed the City's construction short-term weekend noise limits at the nearest residential receptors. Some types of equipment could also periodically exceed the City's construction short-term daily noise limit. During construction activities (all phases), maximum construction noise levels could exceed the City's daily and weekend long-term noise limits at the nearest residential receptors (see Table 2). The Initial Study identifies all feasible noise attenuation measures and lists them as Conditions of Approval. These conditions are consistent with applicable City Council-Adopted Construction Noise Mitigation Measures. The project's noise impacts are considered by the City to be mitigated to a less-than-significant level with implementation of these Conditions of Approval.

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Table 1
Noise Levels and Abatement Potential of Construction Equipment Noise at 25, 50, and 100 Feet

Equipment	Noise Level at 25 Feet in dBA		Noise Level at 50 Feet in dBA		Noise Level at 100 Feet in dBA	
	Without Controls[1]	With Controls[1]	Without Controls[1]	With Control[1]	Without Controls[1]	With Controls[1]
Earthmoving						
Front Loader	85	81	79	75	73	69
Backhoe	91	81	85	75	79	69
Dozer	86	81	80	75	74	69
Tractor	86	81	80	75	74	69
Grader	91	81	85	75	79	69
Truck	97	81	91	75	85	69
Materials Handling						
Concrete Mixer	91	81	85	75	79	69
Concrete Pump	88	81	82	75	76	69
Crane	89	81	83	75	77	69
Derrick	94	81	88	75	82	69
Stationary						
Pump	82	81	76	75	70	69
Generator	84	81	78	75	72	69
Compressor	87	81	81	75	75	69
Impact						
Pile Driver	107	101	101	95	95	89
Rock Drill	104	86	98	80	92	74
Jack Hammer	94	81	88	75	82	69
Pneumatic Tool	92	86	86	80	80	74
Other						
Saw	84	81	78	75	72	69
Vibrator	82	81	76	75	70	69

Notes:

(1) Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost (e.g., improved mufflers, equipment redesign, use of silencers, shields, shrouds, ducts, and engine enclosures).

Source: U.S. Environmental Protection Agency, 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* December.

Table 2

Maximum Construction Noise Levels at Identified Receptors

Receptor Location	Maximum Noise Source	Reference Hourly Leq in dBA @ 50 feet(1)	Distance Between Closest Project & Receptor	Distance Adjustment(2)	Adjusted Leq	Exterior Speech Interference Criterion	Exceeds Criterion?	Construction Duration	Long-Term Daily Noise Ordinance Standard	Exceeds Long-Term Daily Ord. Limit?	Long-Term Weekend Noise Ordinance Standard	Exceeds Long-Term Weekend Ord. Limit?	Short-Term Daily Noise Ordinance Standard	Exceeds Short-Term Daily Ord. Limit?	Short-Term Weekend Noise Ordinance Standard	Exceeds Short-Term Weekend Ord. Limit?
Phase I																
Science Classrooms (Demolition)	Earthmoving Equipment	85	125	-8	77	70	Yes	3 Days	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	125	-8	83	70	Yes	3 Days	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	125	-8	77	70	Yes	3 Days	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 125 feet away	Stationary Equipment	81	125	-8	73	70	Yes	3 Days	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	125	-8	79	70	Yes	3 Days	65	Yes	55	Yes	80	No	65	Yes
Foreign Language Classrooms (Demolition)	Earthmoving Equipment	85	115	-7	78	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	115	-7	84	70	Yes	2 Days	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	115	-7	78	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 115 feet away	Drilling/Stationary Equipment	80	115	-7	73	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	115	-7	80	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
Summer Program (Demolition)	Earthmoving Equipment	85	232	-13	72	70	Yes	1 Day	65	No	55	Yes	80	No	65	Yes
	Trucks	91	232	-13	78	70	Yes	1 Day	65	No	55	Yes	80	No	65	Yes
	Materials Handling	85	232	-13	72	70	Yes	1 Day	65	No	55	Yes	80	No	65	Yes
Closest Residential Receptor is 232 feet away	Drilling/Stationary Equipment	80	232	-13	67	70	No	1 Day	65	No	55	Yes	80	No	65	Yes
	Impact Equipment	87	232	-13	74	70	Yes	1 Day	65	No	55	Yes	80	No	65	Yes
4309 Lincoln Ave. (Demolition)	Earthmoving Equipment	85	82	-4	81	70	Yes	3 Days	65	Yes	55	Yes	80	Yes	65	Yes
	Trucks	91	82	-4	87	70	Yes	3 Days	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	82	-4	81	70	Yes	3 Days	65	Yes	55	Yes	80	Yes	65	Yes
Closest Residential Receptor is 82 feet away	Drilling/Stationary Equipment	80	82	-4	76	70	Yes	3 Days	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	82	-4	83	70	Yes	3 Days	65	Yes	55	Yes	80	Yes	65	Yes
Swimming Pool (Demolition)	Earthmoving Equipment	85	160	-10	75	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	160	-10	81	70	Yes	2 Days	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	160	-10	75	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 160 feet away	Drilling/Stationary Equipment	80	160	-10	70	70	No	2 Days	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	160	-10	77	70	Yes	2 Days	65	Yes	55	Yes	80	No	65	Yes

Table 2 (Cont'd)

Maximum Construction Noise Levels at Identified Receptors

Receptor Location	Maximum Noise Source	Reference Hourly Leq in dBA @ 50 feet(1)	Distance Between Closest Project & Receptor	Distance Adjustment(2)	Adjusted Leq	Exterior Speech Interference Criterion	Exceeds Criterion?	Construction Duration	Long-Term Daily Noise Ordinance Standard	Exceeds Long-Term Daily Ord. Limit?	Long-Term Weekend Noise Ordinance Standard	Exceeds Long-Term Weekend Ord. Limit?	Short-Term Daily Noise Ordinance Standard	Exceeds Short-Term Daily Ord. Limit?	Short-Term Weekend Noise Ordinance Standard	Exceeds Short-Term Weekend Ord. Limit?
Upper School Library (New Construction)	Earthmoving Equipment	85	95	-6	79	70	Yes	10 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	95	-6	85	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	95	-6	79	70	Yes	10 Months	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 95 feet away	Drilling/Stationary Equipment	80	95	-6	74	70	Yes	10 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	95	-6	81	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
Upper School Classrooms (New Construction)	Earthmoving Equipment	85	120	-8	77	70	Yes	15 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	120	-8	83	70	Yes	15 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	120	-8	77	70	Yes	15 Months	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 120 feet away	Drilling/Stationary Equipment	80	120	-8	72	70	Yes	5 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	120	-8	79	70	Yes	15 Months	65	Yes	55	Yes	80	No	65	Yes
Upper School Classrooms (New Construction)	Earthmoving Equipment	85	230	-13	72	70	Yes	8 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	230	-13	78	70	Yes	8 Months	65	Yes	55	Yes	80	No	65	Yes
	Materials Handling	85	230	-13	72	70	Yes	8 Months	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 230 feet away	Drilling/Stationary Equipment	80	230	-13	67	70	No	8 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	230	-13	74	70	Yes	8 Months	65	Yes	55	Yes	80	No	65	Yes
Gatehouse/Garage (New Construction)	Earthmoving Equipment	85	75	-4	81	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Trucks	91	75	-4	87	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	75	-4	81	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
Closest Residential Receptor is 75 feet away	Drilling/Stationary Equipment	80	75	-4	76	70	Yes	10 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	75	-4	83	70	Yes	10 Months	65	Yes	55	Yes	80	Yes	65	Yes
Natatorium (New Construction)	Earthmoving Equipment	85	150	-10	75	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	150	-10	81	70	Yes	6 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	150	-10	75	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
Closest Residential Receptor is 150 feet away	Drilling/Stationary Equipment	80	150	-10	70	70	No	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	150	-10	77	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes

Table 2 (Cont'd)

Maximum Construction Noise Levels at Identified Receptors

Receptor Location	Maximum Noise Source	Reference Hourly Leq in dBA @ 50 feet(1)	Distance Between Closest Project & Receptor	Distance Adjustment(2)	Adjusted Leq	Exterior Speech Interference Criterion	Exceeds Criterion?	Construction Duration	Long-Term Daily Noise Ordinance Standard	Exceeds Long-Term Daily Ord. Limit?	Long-Term Weekend Noise Ordinance Standard	Exceeds Long-Term Weekend Ord. Limit?	Short-Term Daily Noise Ordinance Standard	Exceeds Short-Term Daily Ord. Limit?	Short-Term Weekend Noise Ordinance Standard	Exceeds Short-Term Weekend Ord. Limit?
LATER PHASES																
Lower School Classrooms (Demolition)	Earthmoving Equipment	85	50	0	85	70	Yes	3 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
	Trucks	91	50	0	91	70	Yes	3 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
	Materials Handling	85	50	0	85	70	Yes	3 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
Closest Residential Receptor is 50 feet away	Drilling/Stationary Equipment	80	50	0	80	70	Yes	3 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Impact Equipment	87	50	0	87	70	Yes	3 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
Former Upper School Library (Demolition)	Earthmoving Equipment	85	90	-5	80	70	Yes	5 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Trucks	91	90	-5	86	70	Yes	5 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
	Materials Handling	85	90	-5	80	70	Yes	5 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
Closest Residential Receptor is 90 feet away	Drilling/Stationary Equipment	80	90	-5	75	70	Yes	5 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Impact Equipment	87	90	-5	82	70	Yes	5 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
Arts Center/Admin. (Demolition)	Earthmoving Equipment	85	225	-13	72	70	Yes	2 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Trucks	91	225	-13	78	70	Yes	2 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Materials Handling	85	225	-13	72	70	Yes	2 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
Closest Residential Receptor is 225 feet away	Drilling/Stationary Equipment	80	225	-13	67	70	No	2 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Impact Equipment	87	225	-13	74	70	Yes	2 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
Auditorium (Demolition)	Earthmoving Equipment	85	145	-9	76	70	Yes	10 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Trucks	91	145	-9	82	70	Yes	10 Days	65	Yes	55	Yes	**80**	**Yes**	65	Yes
	Materials Handling	85	145	-9	76	70	Yes	10 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
Closest Residential Receptor is 145 feet away	Drilling/Stationary Equipment	80	145	-9	71	70	Yes	10 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
	Impact Equipment	87	145	-9	78	70	Yes	10 Days	65	Yes	55	Yes	**80**	**No**	65	Yes
Lower School Classrooms (New Construction)	Earthmoving Equipment	85	40	2	87	70	Yes	12 Months	**65**	**Yes**	**55**	**Yes**	80	Yes	65	Yes
	Trucks	91	40	2	93	70	Yes	12 Months	**65**	**Yes**	**55**	**Yes**	80	Yes	65	Yes
	Materials Handling	85	40	2	87	70	Yes	12 Months	**65**	**Yes**	**55**	**Yes**	80	Yes	65	Yes
Closest Residential Receptor is 40 feet away	Drilling/Stationary Equipment	80	40	2	82	70	Yes	12 Months	**65**	**Yes**	**55**	**Yes**	80	Yes	65	Yes
	Impact Equipment	87	40	2	89	70	Yes	12 Months	**65**	**Yes**	**55**	**Yes**	80	Yes	65	Yes

Table 2 (Cont'd)

Maximum Construction Noise Levels at Identified Receptors

Receptor Location	Maximum Noise Source	Reference Hourly Leq in dBA @ 50 feet(1)	Distance Between Closest Project & Receptor	Distance Adjustment(2)	Adjusted Leq	Exterior Speech Interference Criterion	Exceeds Criterion?	Construction Duration	Long-Term Daily Noise Ordinance Standard	Exceeds Long-Term Daily Ord. Limit?	Long-Term Weekend Noise Ordinance Standard	Exceeds Long-Term Weekend Ord. Limit?	Short-Term Daily Noise Ordinance Standard	Exceeds Short-Term Daily Ord. Limit?	Short-Term Weekend Noise Ordinance Standard	Exceeds Short-Term Weekend Ord. Limit?
Middle School Classrooms (New Construction) Closest Residential Receptor is 74 feet away	Earthmoving Equipment	85	74	-3	82	70	Yes	12 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Trucks	91	74	-3	88	70	Yes	12 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	74	-3	82	70	Yes	12 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Drilling/Stationary Equipment	80	74	-3	77	70	Yes	12 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	74	-3	84	70	Yes	12 Months	65	Yes	55	Yes	80	Yes	65	Yes
Arts Center/Admin. (New Construction) Closest Residential Receptor is 225 feet away	Earthmoving Equipment	85	225	-13	72	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	225	-13	78	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Materials Handling	85	225	-13	72	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Drilling/Stationary Equipment	80	225	-13	67	70	No	6 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	225	-13	74	70	Yes	6 Months	65	Yes	55	Yes	80	No	65	Yes
Auditorium (New Construction) Closest Residential Receptor is 145 feet away	Earthmoving Equipment	85	145	-9	76	70	Yes	12 Months	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	145	-9	82	70	Yes	12 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	145	-9	76	70	Yes	12 Months	65	Yes	55	Yes	80	No	65	Yes
	Drilling/Stationary Equipment	80	145	-9	71	70	Yes	12 Months	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	145	-9	78	70	Yes	12 Months	65	Yes	55	Yes	80	No	65	Yes
Residence/Admin. (New Construction) Closest Residential Receptor is 10 feet away	Earthmoving Equipment	85	10	14	99	70	Yes	2 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Trucks	91	10	14	105	70	Yes	2 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Materials Handling	85	10	14	99	70	Yes	2 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Drilling/Stationary Equipment	80	10	14	94	70	Yes	2 Months	65	Yes	55	Yes	80	Yes	65	Yes
	Impact Equipment	87	10	14	101	70	Yes	2 Months	65	Yes	55	Yes	80	Yes	65	Yes
Gymnasium Entry (New Construction) Closest Residential Receptor is 260 feet away	Earthmoving Equipment	85	260	-14	71	70	Yes	90 Days	65	Yes	55	Yes	80	No	65	Yes
	Trucks	91	260	-14	77	70	Yes	90 Days	65	Yes	55	Yes	80	No	65	Yes
	Materials Handling	85	260	-14	71	70	Yes	90 Days	65	Yes	55	Yes	80	No	65	Yes
	Drilling/Stationary Equipment	80	260	-14	66	70	No	90 Days	65	Yes	55	Yes	80	No	65	Yes
	Impact Equipment	87	260	-14	73	70	Yes	90 Days	65	Yes	55	Yes	80	No	65	Yes

NOTES:

(1) Reference noise levels represent the highest noise level by equipment type (without controls) listed in Table N-1 at 50 feet.

(2) The distances represent the minimum distance between the receptor and the closest facility construction site boundary.

APPENDIX C

Transportation Analysis

Transportation Analysis for:

Head Royce School Master Plan

Prepared for:
Turnstone Consulting
San Francisco, CA

Submitted by:

Dowling Associates, Inc.
Transportation Engineering • Planning • Research • Education

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December 7, 2005

Dowling Associates, Inc.
Transportation Engineering • Planning • Research • Education

December 7, 2005

Ms. Barbara Sahm
Turnstone Consulting
330 Townsend Street, Suite 216
San Francisco, CA 94107
415/536-2883

Subject: Final Technical Report for the Head Royce School Master Plan [P04-100]

Dear Barbara:

Enclosed are eight copies of the final technical report for the Head Royce School Master Plan. The impacts of the proposed project on the intersection operations, circulation, and site access were assessed. The results are summarized in the Executive Summary.

In this final report, where appropriate, we have addressed the comments from the City dated July 29, 2005. A separate memo has been prepared to address each comment in more detail.

The parking analysis has been included as a separate memo that could be included a part of the technical appendices.

Please let me know if you have any questions or comments.

Sincerely,

Dowling Associates, Inc.

[Sent via email]

Alice Chen, AICP
Principal Associate

Debbie Chan
Associate Planner

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Executive Summary

The Head Royce School Master Plan entails the renovation and expansion of the Head Royce campus. It consists of a series of construction improvements phased over a 15-year period. Phase 1 addresses primarily the entry and the Upper and Middle Schools. Later phases improve the auditorium and Lower School. At the conclusion of Phase 1, school enrollment is projected to increase by 120 students. This phase is expected to commence in 2005 and complete by 2007. The later phase(s) would add an additional 60 students; however, these increments are to take place no sooner than June 2019.

The key findings of the analysis can be summarized as follows:

Trip Generation

- The proposed Master Plan project would generate an estimated total of 447 **new** daily trips, 142 **new** AM peak hour trips, and 99 **new** Afterschool peak hour trips. At the completion of Phase 1, the increase of 120 new students would generate 298 daily trips, 95 AM peak hour trips, and 66 Afterschool peak hour trips.

Phase 1 Intersection Operations

- During the AM peak hour, the addition of project traffic to the existing conditions would result in a change in LOS at two of the analysis intersections. At the intersection of Lincoln/Monterey, the LOS deteriorates from LOS C to LOS D, adding 3.3 seconds to the average delay. At the intersection of Lincoln/Upper driveway, the LOS drops from LOS A to B, although most of the existing delay is a function of the signal which is on a fixed cycle to slow traffic coming down the hill along Lincoln whether or not there are vehicles using the driveway. However, these intersections would still operate within the acceptable standard.

- During the Afterschool peak hour, the addition of project traffic to the existing conditions would not result in a change in LOS at the analysis intersections. All analysis intersections would operate within acceptable standards.

- During the PM peak hour, the addition of project traffic to the existing conditions would not result in a change in LOS at the analysis intersections with the exception of Lincoln/Tiffin-Ravenwood. At this intersection, the LOS deteriorates from LOS

A to LOS B, adding 0.1 seconds to the average delay. The intersection would still operate within the acceptable standard.

Buildout Intersection Operations

- During the AM peak hour, the addition of project traffic from the completion of the Master Plan to the cumulative (Year 2025) conditions would cause the Lincoln/Tiffin-Ravenwood intersection to deteriorate from LOS B to LOS C. Nonetheless, LOS C is within the City's acceptable LOS threshold.
- During the Afterschool peak hour, the addition of buildout project to the cumulative (Year 2025) conditions traffic to the cumulative (Year 2025) conditions would not result in a change in LOS at the analysis.
- During the PM peak hour, the addition of buildout project traffic to the cumulative (Year 2025) conditions would not result in a change in LOS at the analysis

School Access and Circulation

- For the proposed parking along the driveway to the upper parking area, the driveway needs to meet the City code requirements for width as well as the maneuvering aisle for parking.
- The driveway accessing the gatehouse parking would need to provide two-way access as well as meet the City code requirements for driveways and maneuvering aisles for parking.
- The closure of the lower driveway to vehicular access and the creation of a pedestrian Campus Walk that leads from Lincoln Avenue to the central Quadrangle would eliminate campus through traffic as well as improve pedestrian safety by eliminating auto/pedestrian conflicts at the entry as well as along the former driveway.
- With the addition of 180 students, the queue could potentially extend further back along Lincoln beyond the school driveway and block traffic before the buses depart and vacate the curb for pick-up. Based on the trip generation estimates for the Afterschool peak hour, it is assumed that 41 vehicles would arrive and depart during the hour, but only a portion may arrive prior to the start of the afternoon pickup. If the queue were to extend beyond the upper driveway and block traffic along Lincoln Avenue, this would be considered a potentially significant impact to safety and traffic flow along Lincoln Avenue.

  The school should monitor the extent of the afternoon queue to determine if through traffic along Lincoln Avenue is obstructed. If

the queue were to extend beyond the upper driveway and "no parking" zone above the driveway to obstruct through traffic along Lincoln Avenue, the school should implement the following measures:

- Stagger pickup time so that the buses are loaded and leave prior to the start of pickup to reduce the queue length.
- Discourage early arrival for pick-up.
- Encourage carpools or school buses as an alternative.

However, if these measures do not reduce the queue at the start of the afternoon pick-up to less than the available curb lane the school should:

- Work with the City to restrict on-street parking during afternoon pick-up further up along Lincoln Avenue beyond the upper driveway to allow for the longer queue.

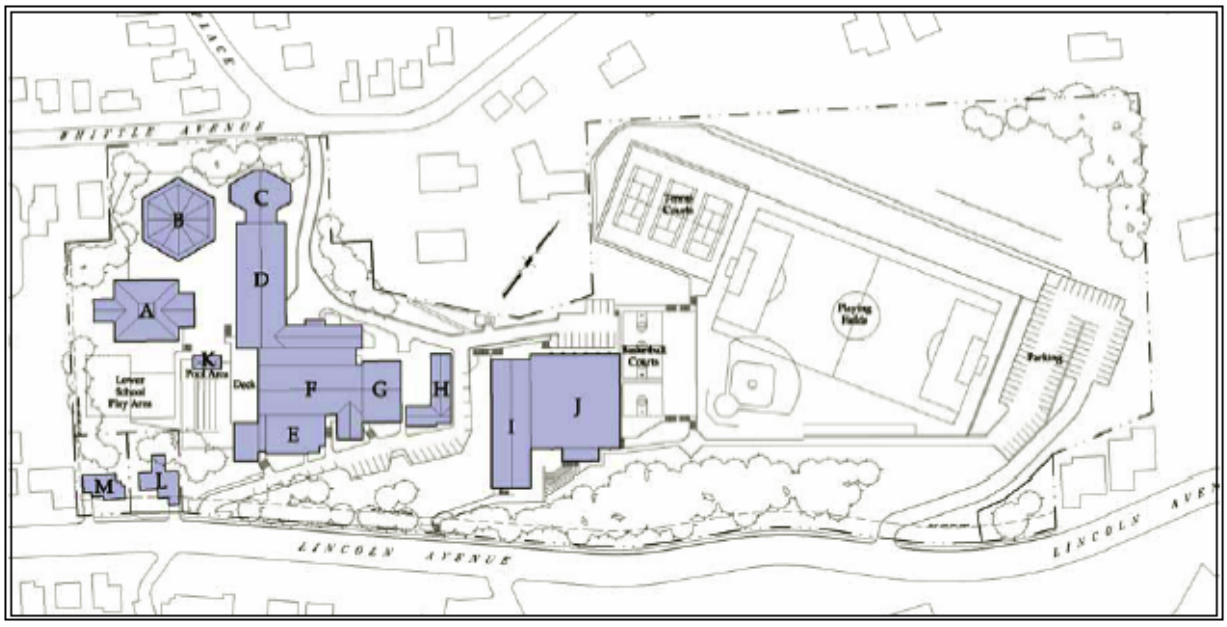
These measures would reduce this impact to less than significant levels.

Introduction

The Head Royce School Master Plan entails the renovation and expansion of the Head Royce campus. It consists of a series of construction improvements phased over a 15-year period. Phase 1 addresses primarily the entry and the Upper and Middle Schools. Later phases improve the auditorium and Lower School. At the conclusion of Phase 1, school enrollment is projected to increase by 120 students. This phase is expected to commence in 2005 and complete by 2007. The later phase(s) would add an additional 60 students; however, these increments are to take place no sooner than June 2019.

The project site is located at 4315 Lincoln Avenue between Lincoln Avenue and Whittle Avenue in a naturally occurring canyon in Oakland, California. Adjacent land use consists primarily of single-family housing. Institutional uses such as child care center and religious institutions can be found along Lincoln Avenue near the project site. Vehicle access to the project is from Lincoln Avenue and Whittle Avenue. A location map is show in Figure 1.

Figure 1 - Location Map



Source: Head Royce School Master Plan, Detailed Project Description, Exhibit B, August 12, 2004.

Existing Conditions

This section presents the existing site access and transportation conditions in the project vicinity. Key streets in the vicinity are first described followed with existing traffic conditions, transit availability, pedestrian facilities, parking, and school circulation activities.

Local Circulation

The roadway system to the south of the site is laid out in a semi-grid system; while the rest of the site vicinity takes on the characteristics of the hillside.

Lincoln Avenue is one of the busiest roadways in the area connecting Interstate 580 and State Route (SR) 13. It is a two-lane street that runs from MacArthur Boulevard northeast, passes the front of the Head Royce School campus and crosses Monterey Boulevard. Lincoln Avenue becomes Joaquin Miller Road after the SR 13 underpass and continues up the hill. Along most segments, parking may be found on both sides of the street. Lincoln Avenue has two signals along the school frontage – one at the parking lot driveway and one at the mid-block crossing at the main entry. These signals serve to slow traffic and facilitate crossings.

Whittle Avenue is a curvilinear discontinuous street that branches to the east from Fruitvale Avenue/Lyman Road then turns northeast to run parallel with Lincoln Avenue. It is disjointed at Tiffin Road and terminates in the hillside after crossing Funston Place. Whittle Avenue runs partially behind the school campus and provides service vehicle driveway access to Head Royce at Funston Place.

Monterey Boulevard is a frontage road that runs along the west side of Highway 13 from approximately Park Boulevard on the north to just beyond Redwood Road on the south. In the vicinity of the school, it operates as a two-lane roadway. Parking is allowed on the west side of Monterey Boulevard south of the Lincoln Avenue intersection.

Alida Street is a discontinuous residential street stemming from Lincoln Avenue southeast through the neighborhood for about six blocks; then it turns southwestward and becomes Barner Avenue. Alida Street at Lincoln Avenue is the intersection nearest to the main entrance to the school.

Tiffin Road is a residential street that connects Lincoln Avenue with Whittle Avenue. Tiffin Road provides access to the hillside neighborhood, Diamond Park, and Park Boulevard.

Peak Hour Intersection Traffic Volumes

Turning movement counts were conducted at five key intersections that surrounding the project site.[1] These counts were conducted on Thursday, November 18, 2004 and Tuesday, January 25, 2005. The morning counts were conducted between 7:00 AM and 9:00 AM to coincide with the start of a typical school day. The midday counts were conducted between 3:00 PM and 4:00 PM to correspond with the end of a school day, while the evening counts were conducted between 4:00 PM and 6:00 PM to document the evening peak commute period of travel. The traffic volumes represent those vehicles passing through the intersection during the described periods and are detailed in Figure 2.

Intersection Level of Service

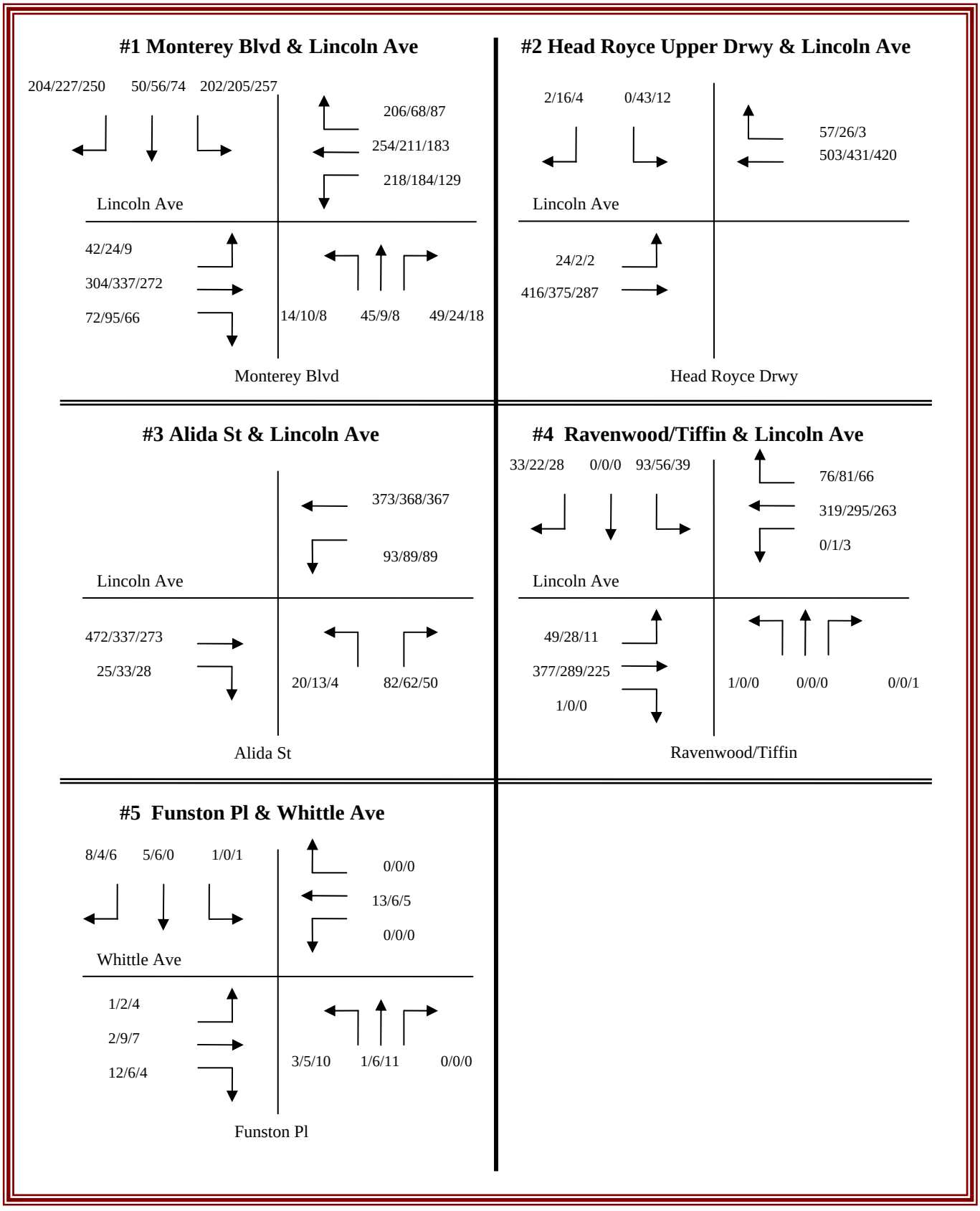
The level of service (LOS) is a qualitative assessment of the motorists and passengers' perceptions of traffic conditions. The LOS is generally described in terms of travel time and speed, freedom to maneuver, traffic interruptions, comfort and convenience. The LOS applies quantifiable traffic measures such as average speed, intersection delays, and volume-to-capacity ratios to approximate driver satisfaction. These measures differ by roadway type because the user's perceptions and expectations vary by roadway type.

Individual levels of service are designated by letters "A" for most favorable to "F" for least favorable with each representing a range of conditions. LOS D can be described as conditions where increased traffic affects maneuverability, causes speeds to drop well below the speed limit, and results in long delays at some intersections. LOS E, which is generally the limit of acceptable delay, would occur with excessive delays at some intersections causing traffic to back -up into the adjacent intersection.

The intersection level of service is determined based on the average total delay per vehicle. The Highway Capacity Manual 2000 methodologies were applied. For signalized intersections, the delay includes the stopped delay as well as time to move up within the vehicle queue. For unsignalized intersections, delay represents the average stopped delay for the overall intersection.

[1] These intersections were identified by the City of Oakland as critical intersections to include in the transportation analysis.

Figure 2 - Existing Peak Hour Traffic Volumes (AM/After School/PM)



The existing AM peak, Afterschool, and PM peak hour intersection LOS are shown in Table 1. All analysis intersections currently operate at LOS D or better overall. However, it should be noted that the southbound approach on Monterey Boulevard at Lincoln Avenue operates at LOS F and LOS E in the After School and PM peak hours, respectively, due to traffic coming off the SR 13.

Table 1 - Existing Intersection Level of Service Summary

Analysis Intersection	Intersection Control	AM Peak Hour		Afterschool Peak Hour		PM Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
Lincoln Avenue/Monterey Boulevard	4-way stop sign	C	23.6	C	20..0	D	26.4
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	9.8	A	8.2	A	7.8
Lincoln Avenue/Alida Street	2-way stop sign	A	2.2	A	1.8	A	1.6
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	B	12.6	B	10.5	A	9.4
Whittle Avenue/Funston Place	2-way stop	A	3.6	A	4.6	A	5.8

Source: Dowling Associates, Inc., 2005.

Transit

The transit services in the project vicinity include AC Transit buses. In addition, Head Royce School also operates yellow school bus service.

AC Transit

AC Transit operates the local and school bus service in Oakland. AC Transit provides four school bus routes and one local bus route along Lincoln Avenue in the proximity of Head Royce School. These bus lines are listed in Table 2. The school bus service is a limited service that operates only on school days. For special school bus routes that serve the Head Royce School (Lines 604, 605, and 606), the buses pickup and drop-off by the main entrance along the marked bus loading area on Lincoln Avenue. For other AC Transit buses, the nearest bus stops are located by the lower and upper driveways (westbound) and in front of the child care center (eastbound).

Currently, AC Transit provides four special school buses in the morning for drop-off and only three special school buses in the

afternoon for pick-up. Lines 605 and 606 operate only one bus in the morning and one in the afternoon, while Line 604 operates 2 buses in the morning and one bus in the afternoon. It is estimated that the AC Transit buses serve from 80 to 100 Head Royce students.

Table 2 – AC Transit Bus Routes

Line	Route Description	Frequency
604	North Berkeley BART station to Route 13 via University Avenue, Durant Avenue, College Avenue and Ashby Avenue, to Head Royce School via Lincoln Avenue	School day at 7:43 AM and 3:30 PM.
605	University Avenue at Shattuck Avenue to Rockridge BART station and College Preparatory School via Oxford Street, Durant Avenue and College Avenue, to Head Royce School via Broadway Terrace, Moraga Avenue and Lincoln Avenue.	School day at 7:25 AM and 3:30 PM.
606	Moraga Avenue at Highland Avenue to Head Royce School via Highland Avenue, Crocker Avenue, Mandana Boulevard, MacArthur Boulevard, Park Boulevard/Lincoln Avenue (AM/PM), Monterey Boulevard and Lincoln Avenue.	School day at 7:41 AM and 3:30 PM.
643	Fruitvale Avenue at MacArthur Boulevard to Head Royce School via MacArthur Boulevard, Coolidge Avenue, Alida Street and Lincoln Avenue. The bus continues to Skyline High School.	School day at 7:20 AM and 3:10 PM.
53	Fruitvale BART Station crossing Foothill Boulevard and MacArthur Boulevard to Tiffin Road at Whittle Avenue (two blocks from Head Royce School) via Whittle Avenue, to Fruitvale Avenue at MacArthur via Tiffin Road, Lyman Road and Fruitvale Avenue, to Fruitvale BART Station. This route offers special school service and travels up Lincoln Avenue during school days.	Weekday (5:00 AM to 9:30 PM): every 30 min.

Source: AC Transit. Route and Bus Schedules for Lines 604, 605, 606, 643 and 53, Effective August 29, 2004.

School Bus

Head Royce provides two private school buses to supplement the AC Transit service. One bus serves Danville, Walnut Creek, Lafayette, and Orinda, while the other starts in North Berkeley and serves Berkeley and North Oakland. It is estimated that these buses carry between 70 and 80 students each day to and from school.

Pedestrian Facilities

In the immediate vicinity of the project, sidewalks are provided along most of the roadways. Striped crosswalks are located at each of the intersections along the school frontage. Pedestrian signal heads are found on both legs of the mid-block crosswalk located near the lower main entrance of the school and at the upper driveway crossing. A crossing guard is present at the lower crosswalk and the monitors are available to assist students if necessary.

Parking

Both off-street and on-street parking are available on or near the project site. The project site has approximately 110 designated off-street parking spaces, two-thirds of which are located in the upper parking lot and the remaining distributed throughout the middle and lower portions of the campus. These spaces are reserved for students, visitors, staff and administrations. On-street parking is available on the local streets near the project vicinity. While parking is generally limited to two hours for vehicles without parking permits in the residential neighborhood, all day parking may be found on Lincoln Avenue, Clemens Road, and Alida Street.

School Circulation Activities

The main circulation activities generated by the school surround the morning drop-off and the afternoon pickup periods. These activities primarily take place along Lincoln Avenue, where parking is restricted along the school (north) side of the street to accommodate such activities.

Currently, access to the school is from four locations: one on Whittle Avenue at Funston Place and three along the school frontage on Lincoln Avenue. The Whittle Avenue access is used primarily by service and delivery vehicles as well as staff for parking and some campus through traffic once the front gate is closed between 8:10 am and 8:40 am. Students from the surrounding neighborhood and up to 20 staff, who by agreement park in the neighborhood, use this rear gate to access the school. A card-key controlled gate restricts vehicular and pedestrian access. Cards are available to all staff and faculty as well as students who live in the neighborhood.

The three Lincoln Avenue access points consist of the upper (easterly) and lower (westerly) vehicular driveways and a pedestrian stairway in between. The upper driveway leads to the student/staff parking lot. Since a large playing field separates the parking lot and the classroom clusters, pickup and drop-off activities are not common through this

access point. The middle stairways lead directly to the middle school classroom building and the school gymnasium. The lower driveway serves as the main entrance to the school and allows for through traffic from the service driveway on Whittle Avenue. The lower driveway provides easy access for lower and upper classmen.

During drop-off and pickup, the lower driveway is gated and closed to vehicular traffic between approximately 8:10 am and 8:40 am and for the rest of the day from 3:10 pm. It reopens in the morning at 7 am on school days. Gate closing enhances safety not only by limiting vehicular access to the driveway but also minimizing conflicts between students and turning vehicles.

A crossing guard is present at the crosswalk in front of the main entrance during before and after school periods to ensure safe crossing for students. In addition, five monitors outfitted in orange vests are posted along Lincoln Avenue, from the upper driveway to Alida Avenue, to facilitate pickup and drop-off and to help reduce illegal vehicular maneuvers near project vicinity. During after school pickup period from around approximately 3:10 pm to 3:50 pm, the monitors, equipped with walkie-talkie, find out the names of the students to be picked up from the queuing vehicles along the Lincoln Avenue parking lane and call down to the school entrance, where students await. As a result, the queuing is generally first-in-first-out, with vehicles constantly moving forward in an orderly manner. The only exception is when there is an illegally parked vehicle, which forces the queuing traffic to weave in and out of the travel lane in order to pass the parked automobile.

Just before school lets out and before the buses vacate the curb, the queues may extend beyond the upper driveway by about two or three vehicles, but the travel lane was not obstructed. Limited pickups were observed on the south side of Lincoln Avenue and on the lower side of the main entrance. The Lincoln Child Care Center, located directly across from the main entrance of Head Royce, lets out its students at about 3:00 pm. Although this timing does not directly conflict with Head Royce, the presence of large school buses parked on the south side of Lincoln Avenue slows traffic.

Morning drop-offs were less orderly. They are observed on both sides of Lincoln Avenue. Drop-off mainly occurs between 7:45 am to 8:45 and peaks between 8:00 am to 8:15 pm on both westbound and eastbound approaches. During this fifteen-minute period, traffic flow is slightly impeded. Although traffic queues extend to beyond Alida Street to the west and the upper project access driveway to the east for short durations on a typical school day, it is primarily caused by frequent signal phases for pedestrian crossings.

Project Traffic

Trip Generation

The project traffic was estimated by applying standard trip generation rates for private school (K-12) (Land Use Code 536) as published by the Institute of Transportation Engineers (ITE), *Trip Generation 7th Edition*.

The proposed Master Plan project would generate an estimated total of 447 new daily trips, 142 new AM peak hour trips, and 99 new Afterschool peak hour trips. At the completion of Phase 1, the increase of 120 new students would generate 298 daily trips, 95 AM peak hour trips, and 66 Afterschool peak hour trips. The traffic generated by the project at the analysis intersections is shown in Table 3.

Table 3 – New Trips Generated by Head Royce School Master Plan

	Daily	AM Peak Hour			Afterschool Hour			PM Peak Hour		
	Total Trips	Total	In	Out	Total	In	Out	Total	In	Out
Phase 1	298	95	58	37	66	27	39	20	9	11
Later Phases	149	47	29	18	33	14	19	10	4	6
Total	447	142	87	55	99	41	58	30	13	17

Source: Dowling Associates, Inc., 2005.

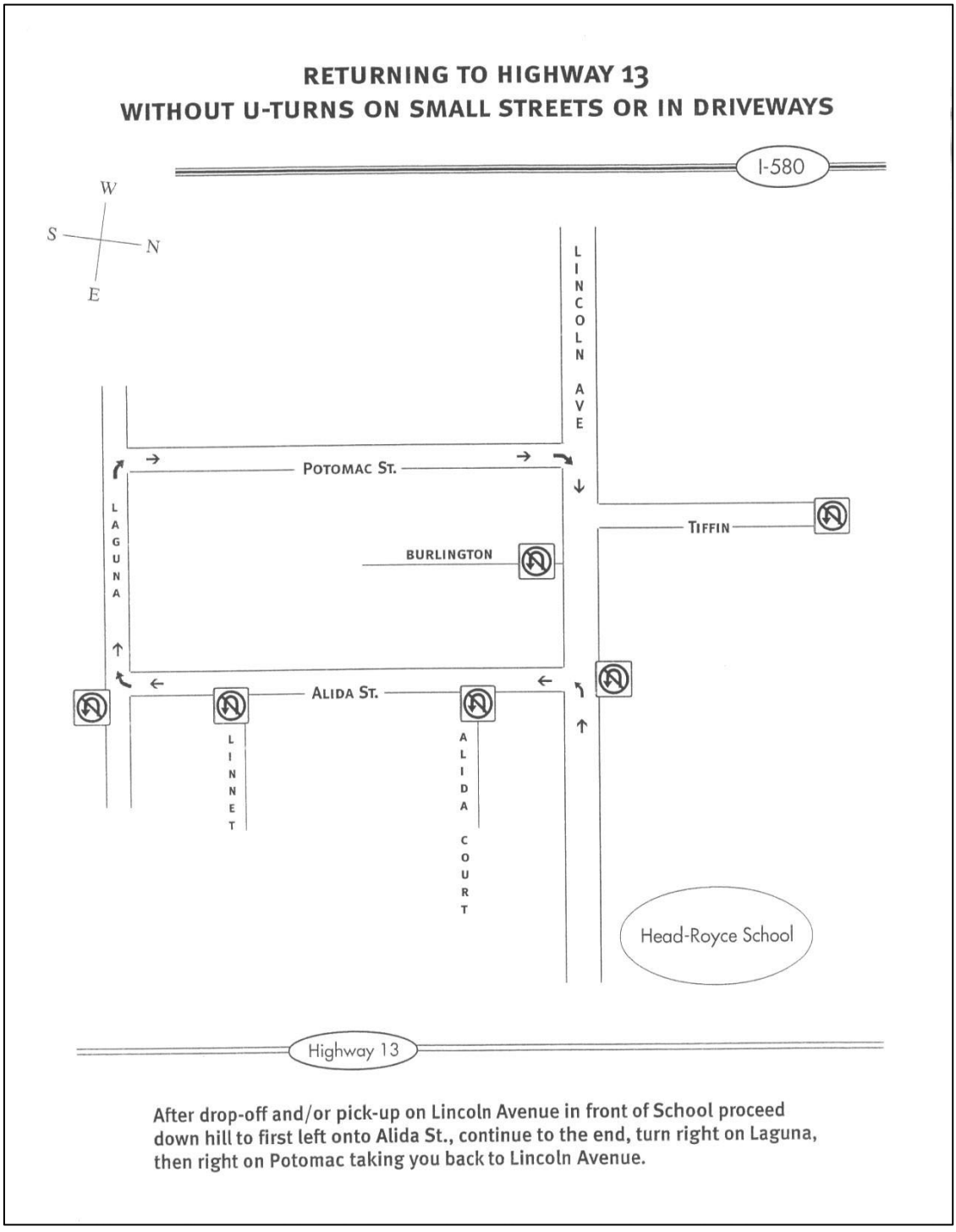
At full buildout, the total number of trips generated by The Head Royce School is estimated to be about 2,183 per day. As in the case with project trips, the total trips generated by existing number of students were calculated based on ITE standards.

Trip Distribution

For the trip distribution, existing travel patterns from the existing traffic counts are reviewed. General areas from which the school draws its student body (Berkeley and Oakland Hills)[2] and instructions provided to parents regarding route to return to Route 13 were also

[2] Discussed at meeting with Dennis Malone at The Head Royce School on January 31, 2005

Figure 3 Suggested School Route



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Source: The Head Royce School, 2005

considered. The suggested route is shown in Figure 3. The information is validated by a reasonableness comparison to existing count volumes. Adjustments were made if necessary. Local gateways were identified and used to describe where project trips would be distributed. These gateways are listed in Table 4 with the corresponding trip distribution percentages that were applied to the AM peak hour, Afterschool and PM peak hour trips.

Table 4 – Trip Distribution Patterns

	AM Peak	Afterschool	PM Peak
Lincoln Avenue West to I-580	32%	30%	20%
Lincoln Avenue East to Route 13 and Oakland Hills	64%	64%	80%
Tiffin Road North to Dimond Park	4%	6%	0%
Total	**100%**	**100%**	**100%**

Source: Dowling Associates, Inc., 2005.

Trip Assignment

The project trips were assigned to the surrounding roadways based on existing travel patterns in the area as well as anticipated changes to circulation that would results from the Master Plan. Traffic was assigned to the parking lots and the curb for drop-off and pickup. The assignment also accounted for the loop using Alida, Laguna, and Potomac to return to SR 13. The project traffic at the key intersections is shown in Figure 4 for Phase 1 project traffic and in Figure 5 for Buildout project traffic.

Project Impacts

The impact analysis of the proposed project covered:

- Operations at key intersections,
- Site Access and Circulation

The significance criteria applied for the analysis is consistent with that established by the City of Oakland and applied for other transportation analyses conducted for the City. The criteria are thepresented first, followed by the approach and methodologies applied for the analysis as well as the results.

Significance Criteria

Intersection Operations

The project impacts at key intersections were considered significant if the project would:

- Cause the existing or future baseline LOS to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown area;
- Cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., F) at a signalized intersection outside the Downtown area where the existing or future baseline level of service is LOS E;
- Cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., F) at a signalized intersection for all areas where the existing or future baseline level of service is LOS E.
- Add ten (10) or more vehicles and after Project completion satisfy the Caltrans peak hour volume warrant at an unsignalized intersection for all areas.

Site Access

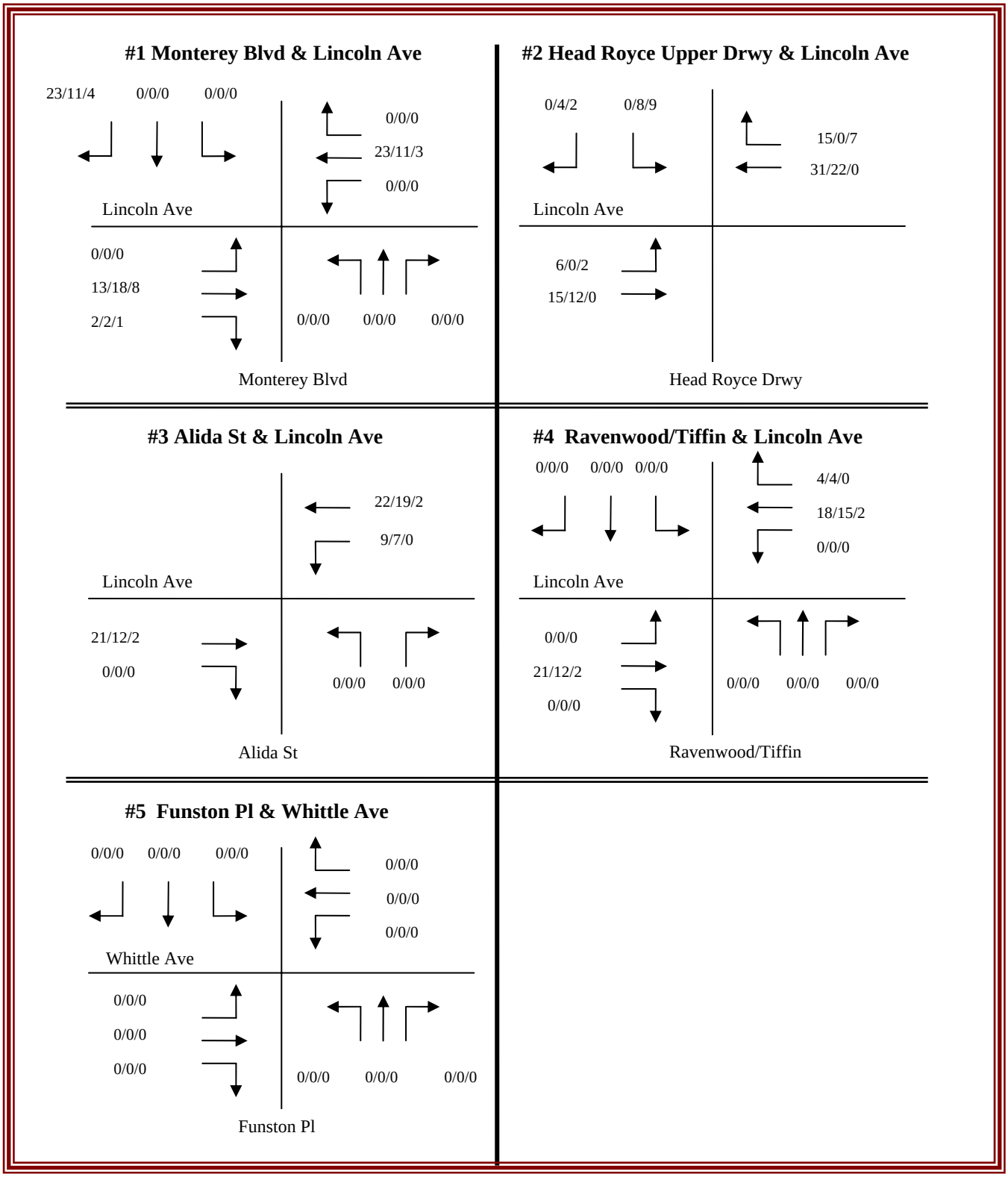
The project impacts were considered significant if the project would:

- Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) that does not comply with Caltrans design standards or incompatible uses (e.g., farm equipment).

Intersection Level of Service

Several intersections were selected for the impact analysis based on the proposed access to the project and existing traffic conditions in the area. These intersections were determined after consultation with the City of Oakland Planning staff and considered to be those locations where project impacts would be the greatest.

Figure 4 Phase 1 Project Traffic Volumes (AM/After School/PM)



Phase 1 Conditions

The Phase 1 project traffic was added to the existing AM and PM peak hour and Afterschool peak hour volumes at the four analysis intersections. The analysis was conducted using the *Highway Capacity Manual (HCM) 2000* methodologies.[3] The resulting operations are summarized in Table 5 for the AM peak hour, Table 6 for the Afterschool peak hour, and Table 7 for the PM peak hour.

During the AM peak hour, the addition of project traffic would result in a change in LOS at two of the analysis intersections. At the intersection of Lincoln/Monterey, the LOS deteriorates from LOS C to LOS D, adding 3.3 seconds to the average delay. At the intersection of Lincoln/Upper driveway, the LOS drops from LOS A to B, although most of the existing delay is a function of the signal which is on a fixed cycle to slow traffic coming down the hill along Lincoln whether or not there are vehicles using the driveway. However, these intersections would still operate within the acceptable standard.

Table 5 – AM Peak Hour Intersection Level of Service Summary

		Existing		With Phase 1	
Analysis Intersection	**Intersection Control**	**LOS**	**Delay**	**LOS**	**Delay**
Lincoln Avenue/Monterey Boulevard	4-way stop sign	C	23.6	D	26.9
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	9.8	B	10.7
Lincoln Avenue/Alida Street	2-way stop sign	A	2.2	A	2.2
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	B	12.6	B	13.3
Whittle Avenue/Funston Place	2-way stop sign	A	3.6	A	3.6

Note:

The delay shown represents the average intersection delay in seconds per vehicle passing through the intersection.

Source: Dowling Associates, Inc., 2005.

During the Afterschool hour, the addition of project traffic would not result in a change in LOS at the analysis intersections.

During the PM peak hour, the addition of project traffic would not result in a change in LOS at the analysis intersections with the exception of Lincoln/Tiffin-Ravenwood. At this intersection, the LOS deteriorates from LOS A to LOS B, adding 0.1 seconds to the average

[3] Transportation Research Board. *Highway Capacity Manual*, 209, 2000.

delay. The intersection would still operate within the acceptable standard.

The addition of traffic from Phase 1 of the proposed project would not significantly impact the operations of these key intersections.

Table 6 – After School Hour Intersection Level of Service Summary

		Existing		With Phase 1	
Analysis Intersection	**Intersection Control**	**LOS**	**Delay**	**LOS**	**Delay**
Lincoln Avenue/Monterey Boulevard	4-way stop sign	C	20.0	C	21.4
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	8.2	A	8.4
Lincoln Avenue/Alida Street	2-way stop sign	A	1.8	A	1.9
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	B	10.5	B	10.8
Whittle Avenue/Funston Place	2-way stop sign	A	4.6	A	4.6

Note:
The delay shown represents the average intersection delay in seconds per vehicle.
Source: Dowling Associates, Inc., 2005.

Table 7 – PM Peak Hour Intersection Level of Service Summary

		Existing		With Phase 1	
Analysis Intersection	**Intersection Control**	**LOS**	**Delay**	**LOS**	**Delay**
Lincoln Avenue/Monterey Boulevard	4-way stop sign	D	26.4	D	27.2
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	7.8	A	7.9
Lincoln Avenue/Alida Street	2-way stop sign	A	1.6	A	1.6
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	A	9.4	A	9.5
Whittle Avenue/Funston Place	2-way stop sign	A	5.8	A	5.8

Note:
The delay shown represents the average intersection delay in seconds per vehicle..
Source: Dowling Associates, Inc., 2005.

Buildout Conditions (Year 2025)

For the buildout condition, the traffic generated by the full buildout of the Master Plan was added to a future baseline condition. The future condition was estimated using the traffic forecasts from the Alameda Countywide Travel Demand Model. Growth rates were estimated by comparing 2025 volumes to 2005 volumes. These AM and PM peak hour growth rates were applied to the existing AM and PM peak hour counts at the analysis intersections. For the Afterschool time period, no background growth was assumed, since the total Master Plan traffic would be added. The resulting traffic volumes are shown in Figure 5.

The Head Royce School Master Plan build-out traffic volumes were added to the cumulative AM and PM peak hour and After School volumes at the four analysis intersections. The resulting operations are summarized in Table 8 for the AM peak hour, Table 9 for the After School, and Table 10 for the PM peak hour.

The addition of project traffic would not result in a change in LOS at the analysis intersection during the After School hour and the PM peak hour. However, during the AM peak hour, the addition of project traffic would cause the Lincoln/Tiffin-Ravenwood intersection to deteriorate from LOS B to LOS C. Nonetheless, LOS C is within the City's acceptable LOS threshold.

Table 8 – Cumulative AM Peak Hour Intersection Level of Service Summary

		Cumulative		With Master Plan Build-Out	
Analysis Intersection	**Intersection Control**	**LOS**	**Delay**	**LOS**	**Delay**
Lincoln Avenue/Monterey Boulevard	4-way stop sign	D	27.3	D	34.3
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	B	10.8	B	13.1
Lincoln Avenue/Alida Street	2-way stop sign	A	2.2	A	2.2
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	B	13.8	C	15.2
Whittle Avenue/Funston Place	2-way stop sign	A	3.6	A	3.6

Note:

The delay shown represents the average intersection delay in seconds per vehicle passing through the intersection.

Source: Dowling Associates, Inc., 2005.

Figure 5 Master Plan Buildout Project Traffic Volume (AM/After School/PM)

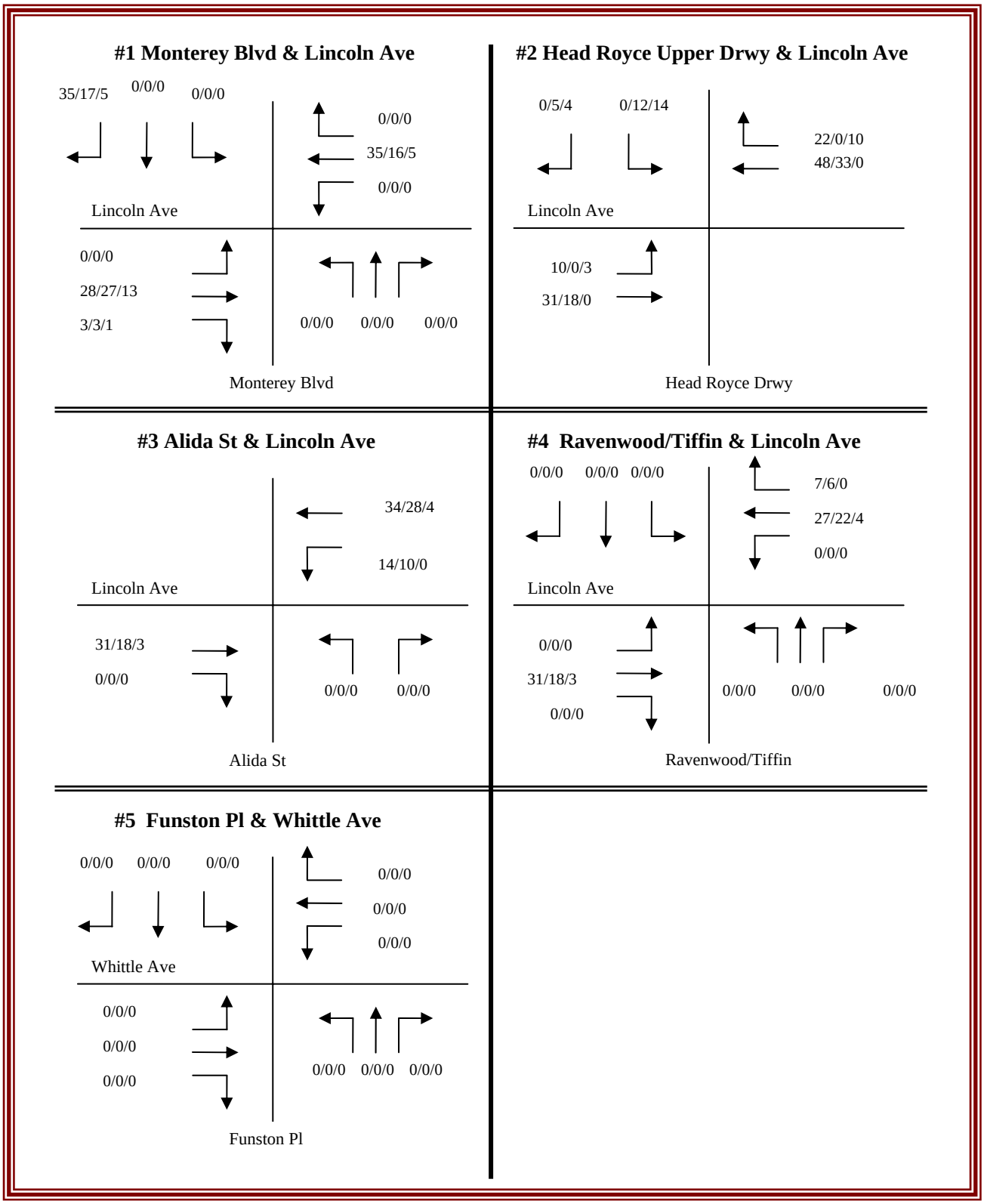


Table 9 – Cumulative After School Hour Intersection Level of Service Summary

Analysis Intersection	Intersection Control	Cumulative		With Master Plan Build-Out	
		LOS	Delay	LOS	Delay
Lincoln Avenue/Monterey Boulevard	4-way stop sign	C	20.0	C	22.2
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	8.2	A	8.5
Lincoln Avenue/Alida Street	2-way stop sign	A	1.8	A	1.9
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	B	10.5	B	10.9
Whittle Avenue/Funston Place	2-way stop sign	A	4.6	A	4.6

Note:
The delay shown represents the average intersection delay in seconds per vehicle.
Source: Dowling Associates, Inc., 2005.

Table 10 – Cumulative PM Peak Hour Intersection Level of Service Summary

Analysis Intersection	Intersection Control	Cumulative		With Master Plan Build-Out	
		LOS	Delay	LOS	Delay
Lincoln Avenue/Monterey Boulevard	4-way stop sign	D	32.3	D	34.0
Lincoln Avenue/Head Royce driveway to upper parking lot	Signal	A	7.9	A	8.0
Lincoln Avenue/Alida Street	2-way stop sign	A	1.6	A	1.6
Lincoln Avenue/Tiffin Road-Ravenwood Lane	4-way stop sign	A	9.5	A	9.6
Whittle Avenue/Funston Place	2-way stop sign	A	5.8	A	5.8

Note:
The delay shown represents the average intersection delay in seconds per vehicle.
Source: Dowling Associates, Inc., 2005.

School Circulation

The Head Royce School Master Plan would affect the vehicular and pedestrian circulation on campus.

Driveways and Parking Access

For the proposed parking along the driveway to the upper parking area, the driveway needs to meet the City code requirements for width as well as the maneuvering aisle for parking.

The driveway accessing the gatehouse parking would need to provide two-way access as well as meet the City code requirements for driveways and maneuvering aisles for parking.

Pedestrian Access and Circulation

The closure of the lower driveway to vehicular access and the creation of a pedestrian Campus Walk that leads from Lincoln Avenue to the central Quadrangle would eliminate campus through traffic as well as improve pedestrian safety by eliminating auto/pedestrian conflicts at the entry as well as along the former driveway.

The proposed campus walks and pathways would improve pedestrian access between major buildings and open space.

Curbside Loading

The increase in enrollment may potentially extend the queue along Lincoln Avenue at the start of the afternoon pickup. The current operations are such that **before** the buses depart in the afternoon, the vehicle queue along Lincoln Avenue can extend beyond the upper driveway along the curb lane, but was not observed to block traffic along Lincoln. Once the buses depart at about 3:30 pm, the entire curb lane along the school frontage is used for pickup. The queue moves quickly forward and dissipates by 3:45 pm. The end of the queue did not extend beyond the upper driveway once the buses departed.

With the addition of 180 students, the queue could potentially extend further back along Lincoln beyond the school driveway and block traffic before the buses depart and vacate the curb for pick-up. Based on the trip generation estimates for the Afterschool peak hour, it is assumed that 41 vehicles would arrive and depart during the hour, but only a portion may arrive prior to the start of the afternoon pickup. If the queue were to extend beyond the upper driveway and block traffic along Lincoln, this would be considered a potentially significant impact to safety and traffic flow.

The school should monitor the extent of the afternoon queue to determine if through traffic along Lincoln Avenue is obstructed. If the

queue were to extend beyond the upper driveway and "no parking" zone above the driveway to obstruct through traffic along Lincoln Avenue, the school should implement some of the following measures:

- Stagger pickup times so that the buses are loaded and leave prior to the start of pickup to reduce the extent of the queue.
- Discourage early arrival for pick-up.
- Encourage carpools or school buses as an alternative.

The school should implement these measures to reduce the queue.

However, if these measures do not reduce the queue at the start of the afternoon pick-up to less than the available curb lane the school should:

- Work with the City to restrict on-street parking during afternoon pick-up further up along Lincoln Avenue beyond the upper driveway to allow for the longer queue.

These measures would reduce the impact to less than significant levels.