

# *Los Angeles Unified School District*

## International Studies Learning Center Addition Project SCH No. 2016071011

### Volume I Draft Environmental Impact Report



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# **INTERNATIONAL STUDIES LEARNING CENTER ADDITION PROJECT**

**SCH No. 2016071011**

**Volume I**

## **Draft Environmental Impact Report**

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# TABLE OF CONTENTS

Section	Page
Executive Summary.....	ES-1
1.0 Introduction .....	1.0-1
2.0 Project Description .....	2.0-1
3.0 Environmental Impact Analysis.....	3.0-1
3.1 Air Quality .....	3.1-1
3.2 Geology and Soils.....	3.2-1
3.3 Hazards .....	3.3-1
3.4 Noise .....	3.4-1
3.5 Pedestrian Safety .....	3.5-1
3.6 Transportation .....	3.6-1
3.7 Energy .....	3.7-1
4.0 Alternatives .....	4.0-1
5.0 Other CEQA Considerations .....	5.0-1
6.0 Effects Found Not to be Significant .....	6.0-1
7.0 References.....	7.0-1
8.0 List of Preparers.....	8.0-1

## Appendices

1.0	Notice of Preparation (NOP), Initial Study, and Comments on the NOP
	Notice of Preparation
	Initial Study
	Comments on the NOP
3.1	Air Quality
	Air Quality Analysis
	CalEEMod
3.2	Geology and Soils
	Group Delta Geology Report
3.3	Hazards and Hazardous Materials
	Operable Unit 2 Remedial Action Plan
	Remedial Action Plan Operable Unit 3
	Remedial investigation and Feasibility Study Operable Unit 3
	Hazard Reports
3.4	Noise
	Noise Analysis
	Noise Monitoring Results
3.5	Transportation and Pedestrian Safety
	Traffic Study for Los Angeles Unified School District International Learning Center
	Addition

## LIST OF FIGURES

Figure	Page
2.0-1 Regional and Project Vicinity Map .....	2.0-4
2.0-2 Project Location .....	2.0-5
2.0-3 Surrounding Land Uses.....	2.0-6
2.0-4 Proposed Project Site Plan.....	2.0-12
2.0-5 Building 1 & 2 Schematic Design .....	2.0-13
2.0-6 Building 1 Exterior Elevations .....	2.0-14
2.0-7 Building 2 Exterior Elevations .....	2.0-15
2.0-8 Proposed Project Rendering.....	2.0-16
2.0-9 Proposed Project Rendering.....	2.0-17
2.0-10 Schematic Design, Building 3 .....	2.0-18
2.0-11 Building 3 Exterior Elevations .....	2.0-19
3.0-1 Map of Related Projects .....	3.0-5
3.2-1 Regional Geology Map .....	3.2-3
3.2-2 Final Excavation Areas Map .....	3.2-4
3.2-3 Regional Fault Map .....	3.2-6
3.2-4 Historic High Groundwater Map.....	3.2-14
3.3-1 Location of Cooper Drum Site .....	3.3-24
3.3-2 Contamination from Cooper Drum Site.....	3.3-25
3.6-1 Intersections Selected for Analysis.....	3.6-9
3.6-2 Intersection Geometry .....	3.6-10
3.6-3a Existing Intersection Traffic volumes, AM Peak Hour .....	3.6-11
3.6-3b Existing Intersection Traffic volumes, PM Peak Hour .....	3.6-12
3.6-4 Existing Bus Service in the Project Area.....	3.6-18
3.6-5 Project Trip Distribution Percentages.....	3.6-32
3.6-6a Existing with Project Intersection Traffic Volumes, AM Peak Hour.....	3.6-33
3.6-6b Existing with Project Intersection Traffic Volumes, PM Peak Hour .....	3.6-34
3.6-7a Future Without Project Volumes, AM Peak Hour .....	3.6-42
3.6-7b Future Without Project Volumes, PM Peak Hour.....	3.6-43
3.6-8a Future With Project Volumes, AM Peak Hour.....	3.6-44
3.6-8b Future With Project Volumes, PM Peak Hour .....	3.6-45
3.6-9 Atlantic-Chakemco Signalization Plan.....	3.6-51



## LIST OF TABLES

Table	Page
ES-1 Summary of Project Impacts, Mitigation Measures, and Residual Impacts.....	ES-8
2.0-1 Estimated Earthwork Quantities .....	2.0-21
2.0-2 LAUSD Standard Conditions for the Project.....	2.0-23
3.0-1 List of Related Projects: LADOT Record of Proposed Project .....	3.0-4
3.1-1 State and Federal Ambient Air Quality Standards .....	3.1-3
3.1-2 2012-2014 Ambient Air Quality Data in Project Vicinity .....	3.1-8
3.1-3 State and national Ambient Air Quality Standards and Attainment Status for South Coast Air Basin .....	3.1-11
3.1-4 Project Consistency with AQMP Growth Forecast.....	3.1-16
3.1-5 Project Consistency with City of South Gate General Plan .....	3.1-16
3.1-6 Proposed Construction Schedule .....	3.1-17
3.1-7 Estimated Daily Construction Emissions - Unmitigated .....	3.1-18
3.1-8 Estimated Daily Operation Emissions - Unmitigated .....	3.1-19
3.2-1 Earthquake Faults near the Project site .....	3.2-7
3.3-1 Distance Criteria for School Siting .....	3.3-12
3.4-1 Outside-to-Inside Noise Attenuation (db(A)) .....	3.4-2
3.4-2 Land use Disruption vibration Thresholds (VdB) .....	3.4-6
3.4-3 Land Use Compatibility for Community Noise Environments .....	3.4-8
3.4-4 Building Damage Vibration Guidelines (PPV).....	3.4-9
3.4-5 Human Annoyance Vibration Guidelines (PPV) .....	3.4-9
3.4-6 Noise Zone Standards.....	3.4-14
3.4-7 Permitted Temporary Noise Level Increase .....	3.4-15
3.4-8 Construction Noise Levels – Unmitigated: Grading .....	3.4-18
3.4-9 Construction Noise Levels – Unmitigated: Demolition .....	3.4-19
3.4-10 Construction Noise Levels – Mitigated; Grading .....	3.4-24
3.4-11 Existing A.M. Peak Hour Mobile Source Noise Levels.....	3.4-27
3.4-12 Existing P.M. Peak Hour Mobile Source Noise Levels.....	3.4-28
3.4-13 PPV Vibration Levels at Off-Site Structures (Unmitigated) .....	3.4-29
3.4-14 VdB Vibration Levels at Off-site Structures (Unmitigated).....	3.4-30
3.4-15 Existing A.M. Peak Hour Mobile Source Noise Levels.....	3.4-32
3.4-16 Existing P.M. Peak Hour Mobile Source Noise Levels.....	3.4-33
3.6-1 Existing Study Area Intersection Levels of Service .....	3.6-8
3.6-2 Existing Area Transit Service.....	3.6-13
3.6-3 Level of Service Definitions .....	3.6-19
3.6-4 LOS Value Range Signalized and Unsignalized Intersections.....	3.6-22
3.6-5 Project Construction Period Traffic.....	3.6-28
3.6-6 Existing Plus Project Study Intersection Levels of Service .....	3.6-30
3.6-7 Trip Generation - Related Projects .....	3.6-40
3.6-8 Future (2019) Without Project Conditions LOS.....	3.6-41
3.6-9 Future (2019) With Project Conditions LOS.....	3.6-46
3.6-10 Future LOS With and Without the Project (2019) .....	3.6-47
3.6-11 Impacted Intersection with Mitigation –Future (2019) With Project Condition .....	3.6-49
3.7-1 Off-Road Construction Equipment Diesel Fuel Consumption .....	3.7-10
3.7-2 Construction Worker Petroleum Fuel Consumption .....	3.7-11

**LIST OF TABLES (continued)**

Table	Page
3.7-3	Estimated Petroleum-Based Fuel Usage at Project Buildout.....3.7-14
4.0-1	Comparison of Alternatives to the Proposed Project .....4.0-16

# EXECUTIVE SUMMARY

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## INTRODUCTION

The purpose of the executive summary is to provide a clear and simple description of the project and its potential environmental impacts. Section 15123 of the *California Environmental Quality Act (CEQA) Guidelines*<sup>1</sup> requires the executive summary to identify each significant effect with proposed mitigation measure(s) and alternatives that would minimize or avoid that effect. The summary is also required to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public, and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

## PROJECT LOCATION AND SETTING

The Project site is located at 5225 Tweedy Boulevard, and is bounded by Tweedy Boulevard to the north, Chakemco Street to the south, Adella Avenue to the east, and an aluminum forger and a truck sale business to the west. The Project site is within the Tweedy Boulevard Specific Plan Area of the City of South Gate (City). The Project site is located on 4.9 undeveloped acres on the 35.2 Legacy High School Complex (LHSC) campus in the southeastern portion of Los Angeles County.

A surface parking lot with 58 parking spaces occupies the northeast portion of the Project site and is currently in use as overflow parking for Legacy High School. The rest of the Project site is vacant; however several electrical poles traverse the site with ruderal vegetation located intermittently throughout.

The main LHSC campus is located directly north of the Project site across Tweedy Boulevard. A concrete channelized portion of the Los Angeles River is located approximately 1,200 feet to the east, beyond which is Interstate 710 (I-710). A strip mall comprised of commercial uses (e.g., a post office, produce store, auto service shop and car wash) is located west of the site along Atlantic Avenue. A vacant parcel owned by the Los Angeles Unified School District (LAUSD or District) separates the Project site from existing single-family residences that are located approximately 550 feet to the south.

As part of the original LHSC development plan, the District is still executing various on-site and off-site improvements. These improvements include building new regional athletic fields on the southern 16 acres of the LHSC site (directly to the east of the Project site), widening Tweedy Boulevard between

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<sup>1</sup> California Environmental Quality Act, *State CEQA Guidelines*, Section 15123.

Atlantic Avenue and the LHSC, vacating portions of Chakemco Street, Tweedy Boulevard, and Adella Avenue; and creating a new perimeter roadway (to be called Legacy Lane) between Tweedy Boulevard and Burtis Ave. These various improvements were analyzed as part of the original CEQA documentation for the LHSC and are expected to be completed prior to completion of the proposed Project.

## **PROJECT OBJECTIVES**

The following objectives have been established for the School Upgrade Program (SUP) and will aid decision makers in their review of the project and associated environmental impacts:

- Repair aging schools and improve student safety;
- Upgrade schools to modern technology and educational needs;
- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of new small, high quality Pre-k through adult schools;
- Promote healthier environment through green technology.

In addition, LAUSD has developed the following project specific objectives.

- Consolidate ISLC middle school and high school students on one campus under its one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;
- Relieve overcrowding at South Gate Middle School, which is currently one of the densest middle school sites in the District;
- Reduce the District's reliance on relocatable buildings at South Gate Middle School;
- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;
- Use land owned by LAUSD to construct expanded middle school options in the South Gate area.

## **PROJECT CHARACTERISTICS**

The proposed Project is comprised of the following components: (1) an addition to LHSC for International Studies Learning Center (ISLC) middle school students; and (2) removal of portable buildings from the South Gate Middle School campus. The ISLC would be constructed on 4.9 acres of current undeveloped land located at 5225 Tweedy Boulevard. The site would be developed with 16 permanent classrooms, an administration building, a lunch shelter, staff and student restrooms, outdoor basketball/volleyball courts, a surface parking lot with 40 parking spaces, and a multi-purpose room

(MPR) and gym. Buildings constructed under the proposed project would be a maximum of two stories tall and up to 30 feet high. The proposed Project includes, but is not limited to:

- Construction of a new 4,528 square foot administration building on the northeast portion of the Project site
- Construction of new 16,195 square foot building with a Multipurpose Room (MPR)/gymnasium
- Construction of a new two-story 28,915 square foot classroom building to accommodate 16 classrooms and a library
- Construction of a new 2,147 square foot lunch shelter in the center of the Project site, and
- Construction of secured teacher parking with 40 spaces

Subsequent to the construction of the proposed Project, approximately 17 classrooms in aging and deteriorating portable buildings located on the South Gate Middle School campus will be removed. It is unknown at this time whether the portable buildings will be relocated to a separate site or if the buildings will be demolished. For the purpose of this analysis, it was assumed that the portable buildings would be demolished. The South Gate Middle School campus is located approximately 1.5 miles northwest of the project site at 4100 Firestone Boulevard in the City of South Gate.

## **Access and Circulation**

The primary access for pick-up and drop-off operations for the existing LHSC is currently along Tweedy Boulevard which is accessible from Atlantic Avenue and Adella Street. Vehicles from Atlantic Avenue travel in an easterly direction on Tweedy Boulevard into drop-off and pick-up zones for passenger cars. Traffic then loops around a one-way dedicated drop off area in front of LHSC along the northern side of Tweedy Boulevard and exit west back out to Atlantic Avenue. Pedestrian access to the existing LHSC is from both Tweedy Boulevard and Adella Avenue and includes an eight-foot sidewalk along the northern side of Tweedy Boulevard.

As part of the original LHSC development plan, portions of Tweedy Boulevard, Chakemco Street and Adella Avenue will be vacated. Tweedy Boulevard will be widened to include a sidewalk on the south side of the street and will be turned into a cul-de-sac where it currently intersects with Adella Avenue. A new perimeter roadway (to be called Legacy Lane), will be constructed between Tweedy Boulevard and Burtis Avenue. These improvements are expected to be completed prior to the completion of construction of the proposed Project.

A separate curbed vehicular drop-off and pick-up lane, similar to the existing LHSC drop-off and pick-up lane, would be located along the south side of Tweedy Boulevard. Under the proposed Project, Tweedy Boulevard would be widened to accommodate a tree-lined median and an eastbound 12 foot drop-off and pick-up lane, as well as two eastbound 12 foot drive-through lanes. The vehicle queueing area would extend from the classroom building to the administration building and will allow for approximately 16 vehicles to queue completely on-site during drop-off and pick-up times. Speed humps would be installed in the two drive-through lanes to reduce vehicle speed. Signage would be installed along the parkway that and would restrict parking in the drop off and pick up area during arrival and dismissal times.

The 40 space surface parking lot located on the southern portion of the Project site would be designated for faculty and staff use. Faculty and staff would access the secured surface parking lot via the future Legacy Lane.

The proposed Project has been designed as a secure campus with access to the site controlled by gates and fences. The main school entrance would be located along Tweedy Boulevard, between the classroom and administration buildings. Access to the ISLC facility would be provided through a gated breezeway. A chain link fence would be installed along the faculty and staff parking lot and the basketball and volleyball courts (along the eastern and southern perimeters). A wrought iron fence buffered with hedges and trees would be installed along the western boundary of the site. Secured gates will be located along the perimeter of the Project site. Students will be able to access the site using the main entrance and the Legacy Lane gate.

## **Recreation and Landscaping**

A large courtyard with landscaping and bench seating would be located in the center of the Project site providing students with an outdoor gathering and learning area. Basketball and volleyball courts would be located along the eastern portion of the site. New trees and hedges would be planted around the perimeter of the Project site. Vines are proposed for the wrought iron fence along Tweedy Lane. In addition, the proposed project includes planting areas throughout the project site including a Fruitless Maidenhair tree grove and circle gardens located adjacent to the MPR and gym building, accent trees, and a variety of succulent plantings at the northwest corner of the site.

The Tweedy Boulevard median would be landscaped with trees and a dry creek with decorative rocks, as well as hedge concealed fencing. The median circle would be decorated with a number of flag poles carrying international flags. The main entrance to the campus would be accented with colored paving. The perimeter of the site would be lined with a variety of trees including Southern Live Oak and Fruitless

Olive. The east and south perimeter would be lined with chain link fencing. Desert Palo Verde trees would be included as accent trees in the interior of the site.

## **ALTERNATIVES TO THE PROJECT**

CEQA requires that an environmental impact report (EIR) describe a range of reasonable alternatives to a proposed project that could feasibly avoid or lessen any significant environmental impacts, while attaining the basic objectives of the project. Comparative analysis of the impacts of these alternatives is required. In response to the significant impacts associated with the proposed Project, LAUSD developed and considered several alternatives to the Project. These alternatives include:

### **Alternative 1 – No Project Alternative/No Development**

Under a No Project/No Development scenario, the discussion compares the environmental effects of the property remaining in its current vacant state against the environmental effects that would occur if the proposed Project were approved and constructed. The site would remain vacant.

### **Alternative 2 – No Project/Reasonable Development**

CEQA Guidelines require a discussion of what is “reasonably” expected to occur on a particular project site. Therefore, the No Project/Reasonable Development Alternative assumes the Project site were to proceed with a use other than the proposed Project.

### **Alternative 3 – Reduced Project Alternative**

This alternative evaluates a smaller project. Under the Reduced Project Alternative a smaller school that would accommodate fewer students would be constructed.

The alternatives analysis considers two alternatives that were rejected as infeasible and therefore not studied in detail in the EIR. These alternatives were: Alternative Location, and Alternative Pick-up/Drop Off Location.

This EIR concludes that the proposed project would result in significant and unavoidable impacts related to the following:

Construction Noise: The Project’s construction noise impact inclusive of the existing ambient noise level would be 54.1 dBA which would exceed the 50 dBA threshold set by the City of South Gate. Project construction would elevate ambient noise levels at the Aldrich Road residences beyond the City’s 50 dBA

standard for duration of greater than 30 minutes per hour during construction work hours, and would therefore be considered significant and unavoidable.

Construction Vibration: The Project would exceed the vibration standards set by the FTA and the SGMC at Aldrich Road Residences and the commercial/industrial land uses west of the Project site. As a result, the Project's construction vibration impacts would be significant and unavoidable.

Cumulative Traffic: Project traffic would contribute to a cumulative intersection impact at Atlantic Avenue and Chakemco Street, resulting in a significant and unavoidable cumulative traffic impact.

## **AREAS OF KNOWN CONTROVERSY**

Concerns raised in comments submitted to the LAUSD in response to the NOP and at the Scoping Meeting included the following:

- **Air Quality** – Concerns were raised regarding potential pollutants and emissions that may be generated during construction and operation of the proposed project. Project impacts related to pollutant emissions and air quality are addressed in Section 3.1. (Air Quality).
- **Noise** – Concerns were raised regarding noise that may be generated during construction and operation of the proposed project. Project impacts related to noise are addressed in Section 3.4. (Noise).
- **Transportation** – Concerns were raised regarding traffic congestion. Project impacts related to traffic and transit are addressed in Section 3.6. (Traffic/Transportation).

## **ISSUES TO BE RESOLVED**

The *State CEQA Guidelines* require an EIR to present issues to be resolved by the lead agency. These issues include the choice between alternatives and whether or how to mitigate potentially significant impacts. The major issues to be resolved by LAUSD, as the Lead Agency for the project include the following:

- Whether the recommended mitigation measures should be adopted or modified;
- Whether additional mitigation measures need to be applied to the project; and
- Whether the project or an alternative should be approved.

## **SUMMARY OF PROJECT IMPACTS**

A summary of the environmental impacts associated with implementation of the proposed project, mitigation measures included to avoid or lessen the severity of potentially significant impacts, and



residual impacts, is provided in **Table ES-1, Summary of Project Impacts, Mitigation Measures, and Residual Impacts**, below.

**Table ES-1**  
**Summary of Project Impacts, Mitigation Measures, and Residual Impacts**

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Air Quality</b>		
<b>Impact AIR-1:</b> The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	No mitigation is required.	Less than significant.
<b>Impact AIR-2:</b> The proposed project would not violate any air quality standard or contribute substantially to an existing or project air quality violation.	No mitigation is required.	Less than significant
<b>Impact AIR-3:</b> The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	No mitigation is required.	Less than significant
<b>Impact AIR-4:</b> The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	No mitigation is required.	Less than significant.
<b>Cumulative AIR:</b> The Project would not result in daily construction emissions that would exceed the thresholds of significance recommended by the SCAQMD. Applying the SCAQMD criteria, the Project would not result in a cumulatively considerable contribution to regional air pollutant emissions.	No mitigation is required	Not cumulatively considerable.
<b>Geology and Soils</b>		
<b>Impact GEO-1:</b> The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic groundshaking	No mitigation is required	Less than significant

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Geology and Soils (continued)</b>		
<b>Impact GEO-2:</b> The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; and be located on expansive soil, as defined in Table 18.1 B of the Uniform Building Code (1994), creating substantial risks to life or property.	No mitigation is required.	Less than significant
<b>Cumulative GEO:</b> As Project development and each related project would have to be consistent with recommendations contained in each project's future preliminary geotechnical investigation report and be designed in accordance with the applicable CBC, the project would not result in a cumulatively considerable impact related to geology and soils.	No mitigation is required	Not cumulatively considerable
<b>Hazards and Hazardous Materials</b>		
<b>Impact HAZ-9:</b> The proposed project would not be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood	No mitigation is required.	Less than significant
<b>Impact HAZ-10:</b> The proposed project would not be located on a site where the property line less than the following distance from the edge of respective power line easement: 100 feet of a 50-133 kV line, 150 feet of a 220,230 kV line, or 350 feet of a 500-550 kV line	No mitigation is required	Less than significant
<b>Impact HAZ-12:</b> The site is not adjacent or near to a major arterial roadway or freeway that may pose a safety hazard.	No mitigation is required	Less than significant

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Hazards and Hazardous Materials (continued)</b>		
<b>Impact HAZ-14:</b> The proposed project would not be located within 1,500 feet of a pipeline that may pose a safety hazard.	No mitigation is required.	Less than significant
<b>Impact HAZ-18:</b> The proposed project would not be located on a site with a traffic pattern for school buses that can pose a safety hazard.	No mitigation is required	Less than significant
<b>Impact HAZ-19:</b> The proposed project would not be located on a site that is within 2,000 feet of a significant disposal of hazardous waste.	No mitigation is required.	Less than significant
<b>Noise</b>		
<b>Impact NOI-1:</b> The proposed project would result in an exposure of persons to, or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	<b>NOI-1</b> The construction contractor, or its designee shall ensure all construction areas for staging and warming-up equipment shall be located as far as feasible from noise-sensitive land uses. This condition shall be included as a note on construction plans.	Even with implementation of <b>Mitigation Measure NOI-1 through NOI-4</b> , Project construction would still elevate ambient noise levels further beyond the City's 50 dBA standard for duration of greater than 30 minutes per hour during construction work hours, and would therefore be considered significant and unavoidable. Impacts would occur at the Aldrich Road residences. Operational impacts would be less than significant without mitigation.
	<b>NOI-2</b> The construction contractor or its designee shall ensure portable noise sheds for smaller, noisy equipment, such as air compressors, dewatering pumps, and generators are provided as feasible. This condition shall be included as a note on construction plans.	
	<b>NOI-3</b> The construction contractor or its designee shall ensure that operation of hydraulic breakers and mounted impact hammers shall be restricted from occurring during Legacy High School's regularly scheduled hours of operation. Furthermore, these pieces of equipment shall not be operated concurrently with any other pieces of heavy machinery in order to prevent elevated cumulative noise impacts. This condition shall be included as a note on construction plans.	
	<b>NOI-4</b> Prior to issuance of a grading permit, the construction contractor or its designee shall install temporary noise barriers at least 10 feet in height and with a transmission loss value of at least 25 dBA (e.g., 1" plywood with acoustical blankets or aluminum sheets with a thickness of at least 0.125 inches) capable of attenuating on-site construction noises by 15 dBA.	

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Noise (continued)</b>		
<b>Impact NOI-2:</b> The proposed Project would result exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	<b>NOI-5</b> The construction contractor or its designee shall ensure that hoe ram and hydraulic breaker activities shall be conducted outside of Legacy High School hours of operation so as to limit any disruption of learning activities. Similarly, any impact pile driving activities within 250 feet of Legacy High School facilities shall also be conducted outside of regular school hours. This condition shall be included on all construction plans for the project.	Even with implementation of <b>Mitigation Measure NOI-5</b> , the Project would still exceed the vibration standards set by the FTA and the SGMC at Aldrich Road Residences and the commercial/industrial land uses west of the Project site. Impacts would be significant and unavoidable.
<b>Impact NOI-3:</b> The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	No mitigation is required	Less than significant
<b>Impact NOI-4:</b> The proposed project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	<b>Mitigation Measures NOI-1 through NOI-5</b> would be implemented.	With implementation of <b>Mitigation Measure NOI-1 through NOI-5</b> , Project construction and vibration impacts would remain significant and unavoidable.
<b>Cumulative Noise:</b> The project, combined with related projects, would not result in a cumulative noise impact.	No mitigation is required.	The project would not contribute to a cumulatively considerable noise impact
<b>Pedestrian Safety</b>		
<b>Impact PED-1:</b> The proposed Project would not substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses, with mitigation incorporated.	<b>PED-1:</b> The construction contractor or its designee shall ensure that during construction activities, construction trucks shall not access the site during specific peak student loading/unloading times as specified by LAUSD and the Legacy High School Complex. This requirement shall be included on all construction documents.	With implementation of <b>Mitigation Measure PED-1</b> , impacts would be less than significant.
<b>Impact PED-2:</b> The proposed Project would not create unsafe routes to schools for students walking from local neighborhoods, with mitigation incorporated.	<b>Mitigation Measures PED-1</b> would be implemented.	With implementation of <b>Mitigation Measure PED-1</b> , impacts would be less than significant.

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Pedestrian Safety (continued)</b>		
<b>Impact PED-3:</b> The proposed Project would not be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard.	No mitigation is required.	Less than significant.
<b>Cumulative Pedestrian Safety:</b> The Project combined with related projects would not combine to create areas of cumulative impacts related to pedestrian safety	No mitigation is required.	Not cumulatively considerable.
<b>Transportation/Traffic</b>		
<b>Impact TRA-1:</b> The proposed Project not would 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)?	No mitigation is required	Less than significant
<b>Impact TRA-2:</b> The proposed Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways.	No mitigation is required	Less than significant
<b>Impact TRA-3:</b> The proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No mitigation is required.	Less than significant
<b>Impact TRA-4:</b> The proposed Project would not result in inadequate emergency access.	No mitigation is required.	Less than significant
<b>Cumulative Traffic:</b> the proposed Project combined with related projects would result in a significant and unavoidable intersection impact at Atlantic Avenue and Chakemco Street.	MM-TRA-1      The Project applicant shall install a three-way traffic signal in the Atlantic Avenue/Chakemco Street intersection. The signalization would cover the northbound Atlantic Avenue Approach, the Chakemco Street approach, and the Wright Road approach. Southbound Atlantic Avenue would not be controlled by the signal.	Due to the uncertainty of LAUSD to implement the proposed mitigation in the necessary timeframe, the cumulative impact at the intersection of Atlantic Avenue and Chakemco Street is found to remain significant and unavoidable

Significance Threshold and Project Impacts	Mitigation Measures	Residual Impact
<b>Energy</b>		
ENE-1: The Project would not involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the project.	No mitigation is required.	Less than significant.

# 1.0 INTRODUCTION

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## PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This introduction is intended to provide the reader with general information regarding the (1) Project proposed by the District, (2) purpose of an environmental impact report (EIR), (3) standards for EIR adequacy, (4) format and content of this EIR, and (5) EIR procedural requirements for the proposed Project. This section is intended to educate the reader regarding the intent, format, and content of this EIR so that it can be easily understood.

All projects within the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project in accordance with CEQA.

CEQA was enacted in 1970 by the California legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and ways to avoid or reduce the environmental effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to all California governmental agencies at all levels, including local agencies, regional agencies, state agencies, boards, commissions, and special districts (such as LAUSD). LAUSD is the lead agency for the proposed Project and, as such, is required to conduct an environmental review to analyze the potential environmental effects associated with the proposed Project.

One of the primary objectives of CEQA is to enhance public participation in the planning process. Community members are encouraged to participate in the environmental review process, request to be notified of meetings and release of documents, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the lead agency. The environmental review process provides ample opportunity for the public to participate through scoping, public review of CEQA documents, and public hearings.

## PROJECT BACKGROUND AND PLANNING PROCESS

### Project Location

The project is the development of the International Studies Learning Center (ISLC) Addition Project located at 5225 Tweedy Boulevard in the City of South Gate, Los Angeles County, California (“proposed Project” or “Project”). The Project site is bounded by Tweedy Boulevard on the north, Chakemco Street to the south, Adella Avenue to the east and an aluminum forger and a truck sale business to the west. The Project site is located within the Tweedy Boulevard Specific Plan Area, as defined by the City of South Gate.



The main Legacy High School Complex (LHSC) campus is located directly north of the Project site across Tweedy Boulevard. A 58 space surface parking lot occupies the northeast portion of the Project site. The rest of the Project site is vacant; however several electrical poles traverse the site with ruderal vegetation located intermittently throughout.

A concrete channelized portion of the Los Angeles River is located approximately 1,200 feet to the east of the Project site, beyond which is Interstate 710 (I-710). A strip mall comprised of commercial uses (e.g., a post office, produce store, auto service shop and car wash) is located west of the site along Atlantic Avenue. A vacant area owned by the District separates the Project site from existing single-family residences that are located approximately 550 feet to the south. A landscaped area is planned for this site.

## **Project Background**

The Project site consists of 4.9 undeveloped acres on the 35.2 LHSC campus in the southeastern portion of Los Angeles County. As part of the original LHSC development plan, the District is still executing various on-site and off-site improvements. These improvements include building new regional athletic fields on the southern 16 acres of the LHSC site (directly to the east of the Project site); widening Tweedy Boulevard between Atlantic Avenue and the LHSC; vacating portions of Tweedy Boulevard, Chakemco Street and Adella Avenue; and creating a new perimeter roadway (to be called Legacy Lane) between Tweedy Boulevard and Burtis Avenue. These various improvements were analyzed as part of the original CEQA documentation for the LSHC and are expected to be completed prior to completion of the proposed Project.

## **Project Summary**

The proposed Project is an educational facility that would provide programming and a new campus for the ISLC middle school students. Three buildings, including a 4,528 square foot administration building, 16,195 square foot MPR/gymnasium, and 28,915 square foot classroom building would be constructed on the Project site (totaling 49,638 square feet), as well as a 2,147 square foot lunch shelter.

The two-story classroom building would be comprised of 16 permanent classrooms and a library. The classroom building would be located on the northern portion of the Project site immediately adjacent to the middle school student drop-off and pick-up lane (along Tweedy Boulevard) and the administration building. The administration building would be located in the northeastern corner of the Project site and would provide office space for school administrators, as well as the school nurse and a parent center. The MPR/gym would be located on the southern end of the Project site. The MPR/gym would be available for student gatherings, community events, and indoor eating as necessary. The covered lunch shelter would be contiguous to the MPR/gym. The buildings and lunch shelter would be configured in a courtyard

formation to optimize supervision and sight lines from the administration building and all other programmed spaces on the Project site. The main courtyard would be located in the center of the site and would be separated from the six basketball/volleyball courts by a tree grove and three small gardens.

## Purpose and Legal Authority

Subsequent to the passage of CEQA in 1970, a process was established that would (1) inform governmental decision makers and the public about the potentially significant environmental effects of proposed projects, (2) identify ways that environmental damage can be avoided or significantly reduced, (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible, and (4) disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.<sup>1</sup> This information is the basis of any EIR.

This EIR is an informational document for the public, and decision makers of the Los Angeles Unified School District. The EIR process will culminate with a District Board hearing to consider whether to certify a Final EIR and approve the Project.

## EIR Adequacy

The principal use of an EIR is to provide input and information as one aspect of a comprehensive planning analysis. Given the important role of the EIR in the planning and decision-making process, it is imperative that the information presented in the EIR be factual, adequate, and complete. The standards for adequacy of an EIR, defined in Section 15151 of the *State CEQA Guidelines*, are as follows:

*An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

This EIR has been prepared by LAUSD in accordance with CEQA, the *State CEQA Guidelines* and LAUSD guidelines for the implementation of CEQA.

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<sup>1</sup> State of California, *State CEQA Guidelines*, as amended, Section 15002(a) of the California Code of Regulations, Title 14, Chapter 3.

## ENVIRONMENTAL REVIEW PROCESS

The environmental review process, as required under CEQA, is summarized below. The steps are presented in sequential order.

1. **Notice of Preparation (NOP) Distributed.** Immediately after deciding that an EIR is required, the lead agency files an NOP soliciting input on the EIR scope to “responsible,” “trustee,” and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. A scoping meeting to solicit public input on the issues to be assessed in the EIR, while not always required, may be conducted by the lead agency.
2. **Draft Environmental Impact Report (EIR) Prepared.** The Draft EIR must contain a (1) table of contents or index, (2) summary, (3) project description, (4) environmental setting, (5) environmental impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts), (6) alternatives, (7) mitigation measures, (8) irreversible changes, and (9) organizations and persons consulted.
3. **Public Notice and Review.** The lead agency must prepare a Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092.3) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: (1) publication in a newspaper of general circulation, (2) posting on and off the Project site, and (3) direct mailing to owners and occupants of contiguous properties. LAUSD anticipates providing public notice through all three procedures. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the State Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse.
4. **Notice of Completion.** The lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.
5. **Final EIR.** A Final EIR must include (1) the Draft EIR or a revision thereof, (2) copies of comments received during public review, (3) list of persons and entities commenting, and (4) responses to comments.

6. **Certification of Final EIR.** Prior to approving a project, the lead agency shall certify that (1) the Final EIR has been completed in compliance with CEQA, (2) the Final EIR was presented to the decision-making body of the lead agency, and (3) the decision-making body reviewed and considered the information in the Final EIR.
7. **Lead Agency Project Decision.** The lead agency may (1) disapprove a project because of its significant environmental effects; (2) require changes to a project to reduce or avoid significant environmental effects; or (3) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.
8. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either (1) the project has been changed to avoid or substantially reduce the magnitude of the impact; (2) changes to the project are within another agency's jurisdiction and such changes have been or should be adopted; or (3) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
9. **Mitigation Monitoring/Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
10. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared. A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

## EIR Report Format and Content

Among the principal objectives of CEQA is that the environmental review process be a public one, and that the EIR be an informational document for governmental decision makers and the public about potential significant environmental effects of proposed activities.

The environmental impact analysis presented in this EIR is divided into four major sections within **Section 3.0, Environmental Impact Analysis**, which describe the existing conditions present in the area

surrounding the Project site, predict the potential individual and cumulative impacts attributable to the proposed Project, present mitigation measures that are intended to minimize or avoid significant impacts caused by the proposed Project, and identify the significant impacts that would occur after implementation of mitigation measures.

## Notice of Preparation

In compliance with Section 21080.4 of the California Public Resources Code, a Notice of Preparation (NOP) was prepared by LAUSD and distributed to the State Clearinghouse, Office of Planning and Research, identified responsible and trustee agencies, as well as interested parties on July 06, 2016. The NOP for the EIR was circulated for a 30-day review period starting on July 06, 2016, and ending on August 08, 2016. A Scoping Meeting was held on July 13, 2016. The Initial Study attached to the NOP identified those environmental topics for which the proposed Project could have adverse environmental effects and concluded that an EIR would need to be prepared to document these effects. Written comments were received from agencies and from interested parties during the review period. Refer to **Appendix 1.0-1** to this EIR for a copy of the Initial Study and NOP, and refer to **Appendix 1.0-2** to this EIR for written comments submitted to LAUSD in response to the NOP.

The NOP was available for review at the following locations:

- LAUSD Office of Environmental Health and Safety, 333 South Beaudry Avenue, 21<sup>st</sup> Los Angeles 90017
- LAUSD Local District East Office, 2151 N. Soto Street, Los Angeles, 90032
- Legacy High School – International Studies Learning Center Office, 5225 Tweedy Boulevard, South Gate 90280
- Leland R. Weaver Library, 4035 Tweedy Boulevard, South Gate, CA 90280

In addition, the NOP and Initial Study were posted on the LAUSD website at: <http://achieve.lausd.net/ceqa>.

## Environmental Issues Assessed in the EIR

This EIR addresses the issues determined to be potentially significant based on the Project's Initial Study, input from neighbors in the community, and responses to the NOP. The NOP and Initial Study are provided in **Appendix 1.0**. This EIR addresses these issues and identifies potentially significant environmental impacts of the Project and cumulative development in the City in accordance with provisions set forth in the *State CEQA Guidelines*. The EIR also recommends feasible mitigation measures,

where possible, that would reduce or eliminate adverse environmental effects. The issues addressed in this EIR include:

- Air Quality
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Pedestrian Safety
- Transportation and Traffic
- Energy

### **Environmental Review Process**

This Draft EIR will be circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 calendar days. All comments or questions about the Draft EIR should be addressed to the following:

Edward S. Paek, AICP CEQA Project Manager  
Los Angeles Unified School District  
Office of Environmental Health & Safety  
333 South Beaudry Avenue, 21<sup>st</sup> Floor  
Los Angeles, CA 90017

Email: [ceqa-comments@lausd.net](mailto:ceqa-comments@lausd.net)

Please include “International Studies Learning Center” in the subject line.

The Draft EIR for the proposed Project will be distributed directly to numerous agencies, organizations, groups, and interested persons during the comment period. The Draft EIR is available for review at the following locations:

- Los Angeles Unified School District, Office of Environmental Health & Safety 333 South Beaudry Avenue, 21<sup>st</sup> Floor, Los Angeles, CA 90017
- LAUSD Office of Environmental Health and Safety, 333 South Beaudry Avenue, 21<sup>st</sup> Los Angeles 90017
- LAUSD Local District East Office, 2151 N. Soto Street, Los Angeles, 90032
- Legacy High School – International Studies Learning Center Office, 5225 Tweedy Boulevard, South Gate 90280
- Leland R. Weaver Library, 4035 Tweedy Boulevard, South Gate, CA 90280

As well as on LAUSD’s website at: <http://achieve.lausd.net/CEQA>

After public review of the Draft EIR, a Final EIR will be prepared in response to comments received during the public review period. The Final EIR will be posted on the LAUSD website at <http://achieve.lausd.net/ceqa> prior to consideration of certification of the document by the District's Board of Education.

## Organization of the EIR

The EIR is organized into the following chapters so the reader can easily obtain information about the proposed Project and its specific issues:

Executive Summary presents a summary of the proposed Project; considered alternatives; potential impacts and mitigation measures, and describes the analysis and conclusions pertaining to potential growth inducement and cumulative effects.

Chapter 1 Introduction: describes the purpose and use of the EIR, provides a brief overview of the proposed Project, and outlines the organization of the EIR.

Chapter 2 Project Description: This section provides a detailed description of the Project including the Project location, objectives, characteristics, and anticipated public agency actions.

Chapter 3 Environmental Impact Analysis: This section is the primary focus of this EIR. Each environmental issue area contains a discussion of existing conditions for the Project area, an assessment and discussion of the significance of impacts associated with the Project, an assessment of cumulative impacts, an identification of mitigation measures (where applicable), and a discussion of level of impact significance after mitigation.

Chapter 4 Alternatives: This section includes an assessment of a reasonable range of alternatives to the proposed Project. The range of alternatives selected is based on their ability to feasibly attain most of the basic objectives of the proposed Project and to avoid or substantially lessen any of the significant effects of the proposed Project.

Chapter 5 Other CEQA Considerations: This section provides a summary of significant and unavoidable impacts of the proposed Project and a discussion of potential growth inducing effects of the proposed Project.

Chapter 6 Effects Found Not to be Significant: This section provides analysis of topics that were found not to be significant and did not need to be further analyzed in individual topic areas in the EIR.

Chapter 7 References: This section provides a list of sources used in the development of the EIR.

Chapter 8: List of Preparers: This section lists the individuals involved in preparing the EIR and organizations and persons consulted.



## 2.0 PROJECT DESCRIPTION

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### INTRODUCTION

The purpose of the project description is to describe the project in a way that will be meaningful to the public, reviewing agencies, and decision makers. This project description provides information pertaining to the International Studies Learning Center Addition Project (“proposed Project” or “Project”). As described in Section 15124 of the *California Environmental Quality Act (CEQA) Guidelines*, the project description in an EIR is required to contain the following information: (1) the location of the proposed project; (2) a statement of project objectives; (3) a general description of the project’s technical, economic, and environmental characteristics; and (4) a statement briefly describing the intended uses of the EIR. The *State CEQA Guidelines* state that a project description need not be exhaustive, but should provide the level of detail needed for the evaluation and review of potential environmental impacts.

The project description is the starting point for all environmental analysis required by the *State CEQA Guidelines*. Section 15146 of the *State CEQA Guidelines* states that the degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity, which is described in the EIR. In this case, the proposed Project consists of the following components: (1) an addition to the existing Legacy High School Complex (LHSC) campus for International Studies Learning Center (ISLC) middle school students; and (2) removal of portable buildings from the South Gate Middle School campus. The following project description serves as the basis for the environmental analysis contained in this Draft EIR.

### PROJECT LOCATION

The Project site is located at 5225 Tweedy Boulevard, and is bounded by Tweedy Boulevard to the north, Chakemco Street to the south, Adella Avenue to the east, and an aluminum forger business and a truck sale business to the west. The Project site is within the Tweedy Boulevard Specific Plan Area of the City of South Gate (the “City”). (**Figure 2.0-1, Regional and Project Vicinity Map**). The Project site is located on 4.9 undeveloped acres within the 35.2 acre LHSC campus in the southeastern portion of Los Angeles County. (**Figure 2.0-2 Project Location**).

A surface parking lot with 58 parking spaces occupies the northeast portion of the Project site. The parking lot is owned by LAUSD and is in use by the existing school as overflow parking. This parking lot is in excess of the amount of parking required for the school and will be removed to accommodate the proposed Project. Once removed all parking for the existing school will be accommodated on campus. As described further in the Project characteristics below, the proposed Project includes secure parking with

40 stalls. The remaining portion of the Project site is vacant; however several electrical poles traverse the site with ruderal vegetation located intermittently throughout the site.

The main LHSC campus is located directly north of the Project site across Tweedy Boulevard. A concrete channelized portion of the Los Angeles River is located approximately 1,200 feet to the east, beyond which is Interstate 710 (I-710). A strip mall comprised of commercial uses (e.g., a post office, produce store, auto service shop and car wash) is located west of the site along Atlantic Avenue. A vacant area owned by the Los Angeles Unified School District (LAUSD or District) separates the Project site from existing single-family residences that are located approximately 550 feet to the south. A future landscaped area is planned for this site (refer to **Figure 2.0-3, Surrounding Land Uses**).

As part of the original LHSC development plan, the District is still executing various on-site and off-site improvements. These improvements include building new athletic fields on the southern 16 acres of the LHSC site (directly to the east of the Project site); widening Tweedy Boulevard between Atlantic Avenue and the LHSC; vacating portions of Tweedy Boulevard, Chakemco Street and Adella Avenue; and creating a new perimeter roadway (to be called Legacy Lane) between Tweedy Boulevard and Burtis Avenue (see **Figure 2.0-3**). These various improvements were analyzed as part of the original CEQA documentation for the LHSC and are expected to be completed prior to completion of the proposed Project.

## PROJECT BACKGROUND

As described above, the proposed Project is comprised of the following components: (1) an addition to the existing LHSC campus for ISLC middle school students; and (2) removal of portable buildings from the South Gate Middle School campus.

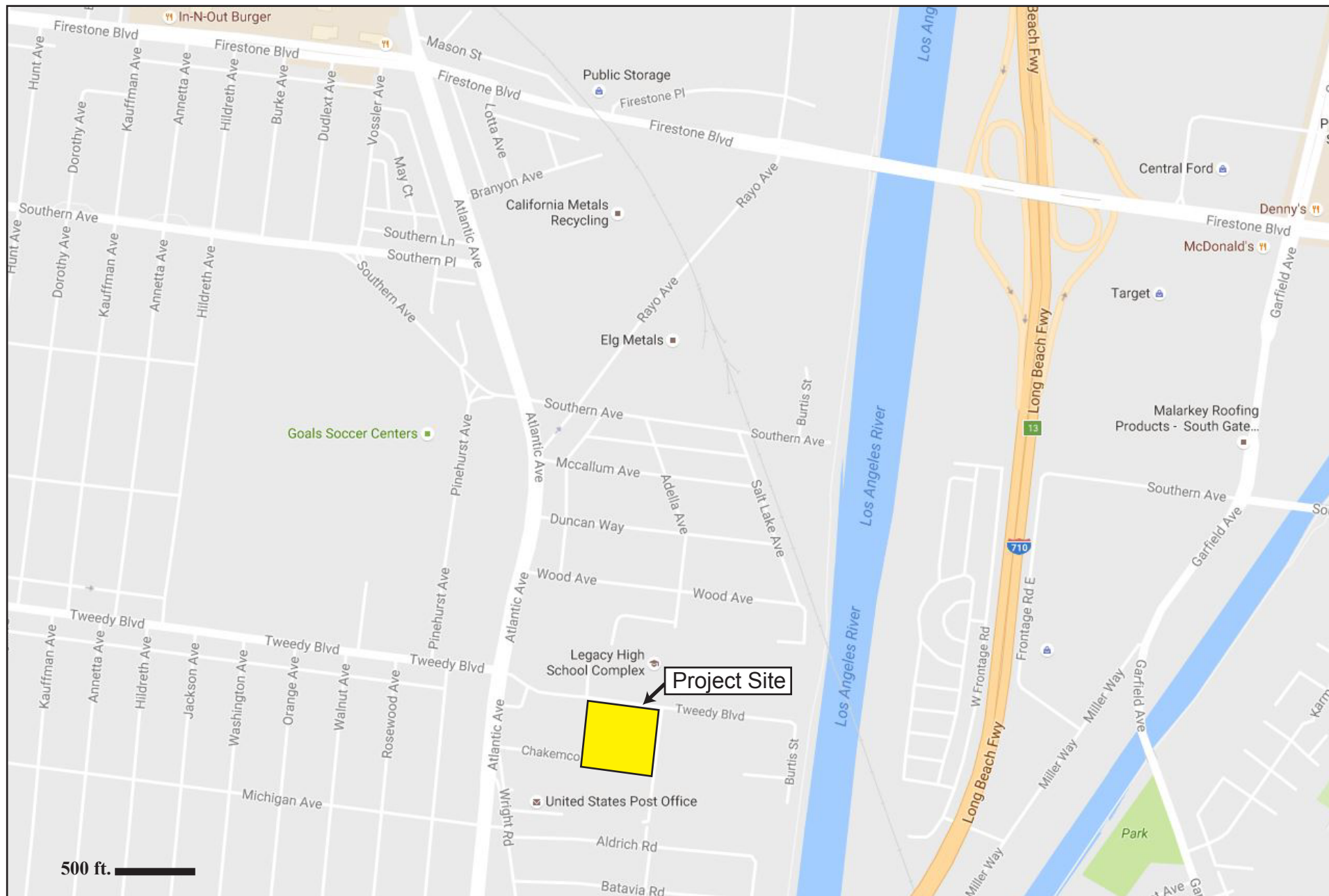
The proposed Project would be constructed on an undeveloped portion of the LHSC campus located at 5225 Tweedy Boulevard, South Gate, California. Formerly known as South Region High School #9 (or SRHS #9), the LHSC has been in operation on the Project site since 2012 and is comprised of three individual high schools; Science Technology Engineering Arts and Math (STEAM) High School, Visual And Performing Arts (VAPA) High School, and ISLC High School. ISLC currently operates on two campuses. Classes for middle school students (grades 6 through 8) are held on the Southeast Middle School campus located at 2560 Tweedy Boulevard while classes for high school students (grades 9 through 12) are offered at the LHSC campus.

During the 2015-2016 school year, 868 middle and high school students attended ISLC, including 408 students in 6th, 7th, and 8th grades, and 460 students in 9th through 12th grades. Upon completion of the proposed Project, the ISLC middle school program that is currently operating on the Southeast Middle

School campus would be relocated to the ISLC campus. No changes would be made to the ISLC high school program, and the classes for the ISLC high school students would continue to be held on the LHSC campus.

The LHSC campus is owned by the District. Prior to being purchased by the District in the 1980s, the Project site was used for light industrial and commercial operations including: automotive repair, fabrication of metal parts for automotive use, machining of metals, woods, and plastics, and pesticide formulation and testing. These historic uses resulted in contamination of the soil, soil vapor and groundwater on the Project site. Through a series of environmental investigations and subsequent remedial actions, the District has received a “No Further Action” determination from the Department of Toxic Substances Control (DTSC) in 2013 which allows for school construction to proceed. The District continues to monitor groundwater and soil vapor concentrations in the vicinity of the LHSC campus. Ongoing monitoring is expected to continue until at least 2020.





SOURCE: Google Maps, 2016

FIGURE 2.0-2

Project Location





SOURCE: Google Maps, 2016

FIGURE 2.0-3

## Surrounding Land Uses

## *Land Use and Zoning*

The City of South Gate General Plan land use designation for the Project site is currently 'Industrial', as indicated in the Community Design Element.<sup>1</sup> In addition, the General Plan includes a District Map, on the District Map of the General Plan, the Project site is located within the 'Tweedy Educational District.' In the General Plan, Districts consist of streets or areas emphasizing specific types of activities or characteristics. They often serve as a focal point for anticipated growth, and are targeted for significant change and evolution over the time horizon of the plan.

### *Tweedy Boulevard Specific Plan*

The Project site is located within the future Tweedy Boulevard Specific Plan. Tweedy Boulevard is more than three miles in length and is one of the main commercial corridors in the City. The Specific Plan area is approximately 650 acres in size, and contains Tweedy Mile – the downtown area of South Gate. The draft plan was released in November 2016. The specific plan aims to revitalize Tweedy Boulevard through guiding future development of mixed uses in a walkable environment, streamlining the development process, and serving as an incentive for economic development. The Project site would be located within the Tweedy East Sub-Area.<sup>2</sup>

### *Zoning*

The current zoning for the Project site is Residential Neighborhood Zone: Civic (CV). The civic zone is intended to provide for public civic and recreational uses near residential neighborhoods and existing or planned transit. This zone captures the existing public and quasi-public uses within South Gate, including government buildings, public assembly, public offices, and schools. The zone is intended to foster future civic investment in the community.<sup>3</sup>

## **PROJECT CHARACTERISTICS**

### **School Buildings**

The proposed Project is an educational facility that would provide programming and a new campus for the ISLC middle school students. The proposed Project consists of three new buildings on a vacant lot that would be one to two stories in height (approximately 30 feet to the top of the highest roof and

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<sup>1</sup> City of South Gate, General Plan, Community Design Element, adopted May 2009

<sup>2</sup> City of South Gate, Tweedy Boulevard Specific Plan, website: <http://tweedy.arroyogroup.com/>, accessed August 1, 2016

<sup>3</sup> City of South Gate, Comprehensive Zoning Code, March 2015

approximately 35 feet to the top of the mechanical screens on the two-story classroom building) and the removal of portables at South Gate Elementary School (**Figure 2.0-4 Project Site Plan**). The proposed Project includes, but it not limited to.

- Construction of a new 4,528 square foot administration building on the northeast portion of the Project site
- Construction of new 16,195 square foot building with a Multipurpose Room (MPR)/gymnasium;
- Construction of a new two-story 28,915 square foot classroom building to accommodate 16 class rooms and a library;
- Construction of a new 2,147 square foot lunch shelter in the center of the Project site, and
- Construction of secured teacher parking (on the southern perimeter of the site) with 40 spaces.

The focal point of the campus would be the main courtyard with landscaping and decorative paving with a world map theme. The classroom building would be located on the northern portion of the Project site immediately adjacent to the middle school student drop-off and pick-up lane (along Tweedy Boulevard). The one-story administration building would be located in the northeastern corner of the Project site and would provide office space for school administrators and the school nurse, as well as a parent center. The MPR/gym would be located on the southern end of the Project site. The MPR/gym would be available for student gatherings, community events, and indoor eating as necessary. The covered lunch shelter would be contiguous to the MPR/gym. The buildings and lunch shelter would be configured in a courtyard formation to optimize supervision and sight lines from the administration building and all other programmed spaces on the Project site. The main courtyard would be located in the center of the site and would be separated from the six basketball/volleyball courts by a tree grove and three small gardens.

### ***Building 1/Administration***

Building 1, the administration building, would be located on the northeastern portion of the Project site. The administration building would house work rooms, conference rooms, and administrative offices, as well as space for the school nurse and exam room and a parent center. **Figure 2.0-5 Building 1 & 2 Schematic Design**, shows the proposed Building 1 plans. The building would be 27 feet to the top of the second story. The exterior would be a mix of brick and glass with large vertical windows comprising much of the north facing façade. The building would have an angled roof line. Administration building elevations are shown in **Figure 2.0-6 Building 1 Exterior Elevations**.



### ***Building 2/Classroom***

Building 2 would face Tweedy Boulevard and be connected to Building 1 via an outdoor breezeway. The two-story building 2 would be comprised of 16 classrooms in the main portion of the building. The library would be connected to the main portion of the building through the main corridor and could be accessed either through the main corridor or a covered breezeway to the south. The design of the building would consist of large vertical windows on the north elevation with brick accents and an angled roof. The overall design would not compete with the design of the existing LHSC, as both schools would have large glass facades. The building would be 27 feet to the top of the second floor and no more than 35 feet to the top of the mechanical screens. Building elevations are shown in **Figure 2.0-7 Building 2 Exterior Elevations**. The proposed design is shown in **Figure 2.0-8 Proposed Project Rendering** and **Figure 2.0-9 Proposed Project Rendering**.

### ***Building 3/MPR & Gymnasium***

Building 3 would be located on the southwestern portion of the Project site across the main courtyard. The two-story MPR/gym would be comprised of the main gym flanked by boys and girls lockers on the east and food service/teacher's lounge areas on the west. Trash and loading areas would be located at the rear of the MPR/gym building. The layout of the gym/MPR is shown in **Figure 2.0-10 Schematic Design, Building 3**. Building Elevations are shown in **Figure 2.0-11 Building 3 Exterior Elevations**. Building 3 would be 27 feet in height with no more than 33 feet to the top of the roofline. Similar to the other two buildings on the campus, the design of the building would include an angled roof line and brick and glass on the exterior.

### **Access and Circulation**

The primary access for pick-up and drop-off operations for the existing LHSC is currently along Tweedy Boulevard, which is accessible from Atlantic Avenue and Adella Street. Vehicles from Atlantic Avenue travel in an easterly direction on Tweedy Boulevard into drop-off and pick-up zones for passenger cars. Traffic then loops around a one-way dedicated drop off area in front of the LHSC campus along the northern side of Tweedy Boulevard and exit west back out to Atlantic Avenue. Pedestrian access to the existing LHSC is from both Tweedy Boulevard and Adella Avenue and includes an eight-foot sidewalk along the northern side of Tweedy Boulevard.

As part of the original LHSC development plan, portions of Tweedy Boulevard, Chakemco Street and Adella Avenue will be vacated. Tweedy Boulevard will be widened to include a sidewalk on the south side of the street and will be turned into a cul-de-sac where it currently intersects with Adella Avenue. A new perimeter roadway (to be called Legacy Lane), will be constructed between Tweedy Boulevard and

Burtis Avenue. These improvements are expected to be completed prior to the completion of construction of the proposed Project.

The proposed Project drop-off and pick-up operation would be designed to address safety and congestion issues regarding the additional vehicles of ISLC middle school students. A separate curbed vehicular drop-off and pick-up lane, similar to the existing LHSC drop-off and pick-up lane, would be located along the south side of Tweedy Boulevard. Under the proposed Project, Tweedy Boulevard would be widened to accommodate a tree-lined median and an eastbound 12 foot drop-off and pick-up lane, as well as two eastbound 12 foot drive-through lanes. As shown in **Figure 2.0-4**, the vehicle queueing area would extend from the classroom building to the administration building and will allow for approximately 16 vehicles to queue completely on-site during drop-off and pick-up times. Speed humps would be installed in the two drive-through lanes to reduce vehicle speed. Signage would be installed along the parkway that would restrict parking in the drop off and pick up area during arrival and dismissal times.

The 40 space surface parking lot located on the southern portion of the Project site would be designated for faculty and staff use. Faculty and staff would access the secured surface parking lot via the future Legacy Lane.

The proposed Project has been designed as a secure campus with access to the site controlled by gates and fences. The main school entrance would be located along Tweedy Boulevard, between the classroom and administration buildings. Access to the ISLC facility would be provided through a gated breezeway. A chain link fence would be installed along the faculty and staff parking lot and the basketball and volleyball courts (along the eastern and southern perimeters). A wrought iron fence buffered with hedges and trees would be installed along the western boundary of the site. Secured gates will be located along the perimeter of the Project site. Students will be able to access the site using the main entrance and the Legacy Lane gate.

## **Architectural Features**

**Figures 2.0-8 and 2.0-9, Proposed Project Renderings**, illustrate the design scheme for the proposed buildings. The massing of the buildings would be broken up with expansive windows that would be visually compatible with the buildings located on the developed portion of the LHSC campus. The proposed project would incorporate a large central courtyard with seating and trees. Two patios would flank the courtyard. The patio constructed along the south side of the classroom building would include a student reading garden, while the patio located along the north side of the MPR and gym building would include a faculty lunch garden. Security lighting would be provided using lighting fixtures that are

designed to reduce glare, light trespass, and sky glow. Utilities located at ground level and on the roof would be screened with landscaping, fencing, and/or walls, as appropriate and depending on location. The proposed Project would not include the use of materials that are highly reflective. Prior to the issuance of a building permit, the type or categories of all exterior glass and architectural features on the building façade and rooftop would be submitted for review by the Division of the State Architect (DSA) to ensure that highly reflective materials are not utilized.

## **Recreation and Landscaping**

As shown in **Figure 2.0-4**, a large courtyard with landscaping and bench seating would be located in the center of the Project site providing students with an outdoor gathering and learning area. Basketball and volleyball courts would be located along the eastern portion of the site. New trees and hedges would be planted around the perimeter of the Project site. Vines are proposed for the wrought iron fence along Tweedy Lane. In addition, the proposed project includes planting areas throughout the project site including a Fruitless Maidenhair tree grove and circle gardens located adjacent to the MPR and gym building, accent trees, and a variety of succulent plantings at the northwest corner of the site.

The Tweedy Boulevard median would be landscaped with trees and a dry creek with decorative rocks, as well as hedge concealed fencing. The median circle would be decorated with a number of flag poles carrying international flags. The main entrance to the campus would be accented with colored paving. The perimeter of the site would be lined with a variety of trees including Southern Live Oak and Fruitless Olive. The east and south perimeter would be lined with chain link fencing. Desert Palo Verde trees would be included as accent trees in the interior of the site. An additional feature includes laser-cut steel screen and projection screen to be located on the front wall of the MPR/gym. Patios would be enhanced with paving and small trees; a student reading garden would be provided on the north and a faculty lunch garden would be provided on the south.

As part of the proposed project, nighttime field lights would be added to the athletic fields planned for the southern portion of the LHSC campus. These lights would conform to the District's Design Standards for field lighting.





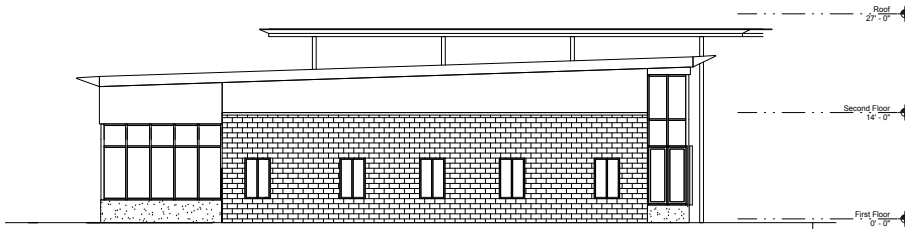
SOURCE: Kemp Bros Construction, Inc.

FIGURE 2.0-5

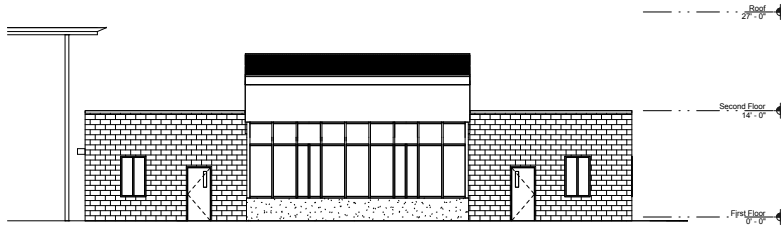
## Building 1 & 2 Schematic Design



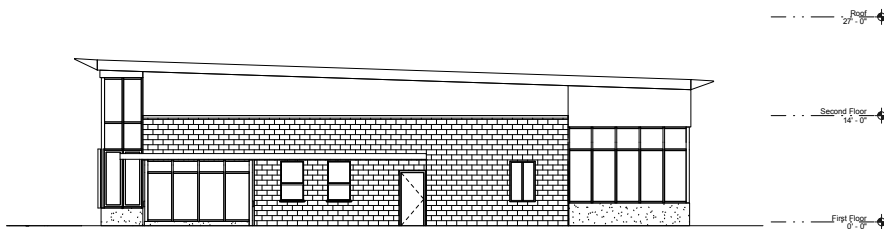
1 BUILDING 1 - NORTH  
1/8" = 1'-0"



2 BUILDING 1 - EAST  
1/8" = 1'-0"



3 BUILDING 1 - SOUTH  
1/8" = 1'-0"



4 BUILDING 1 - WEST  
1/8" = 1'-0"

LOS ANGELES UNIFIED SCHOOL DISTRICT  
INTERNATIONAL STUDIES  
LEARNING CENTER  
ADDITION PROJECT  
LAUSD PROJECT NO. 10367011  
Project Address  
5225 TWEEZY BLVD.  
SOUTH GATE, CALIFORNIA 90280  
FINAL SCHEMATIC DESIGN

The ideas and designs represented herein and this drawing, all prepared by GONZALEZ (GOODALE) Architects, are for the use solely with respect to this project and GONZALEZ (GOODALE) Architects shall retain all common law, statutory and other reserved rights including copyright and they shall not be used by others for any other purpose without written permission of GONZALEZ (GOODALE) Architects.

client approval	
principal in charge	
issues / revisions	
Issue Date	Description

IDENTIFICATION STAMP			
DIV. OF THE STATE ARCHITECT			
OFFICE OF REGULATION SERVICES			
FILE ID:	vcv	no	
APPL:	cv	cv	
ACS	FLS	SS	
DATE			

drawing title

EXTERIOR ELEVATIONS

scale

1/8" = 1'-0"



project number

15780

date

Date

A3.11

Plot Date: 5/12/2016 5:41:55 PM  
File Path:

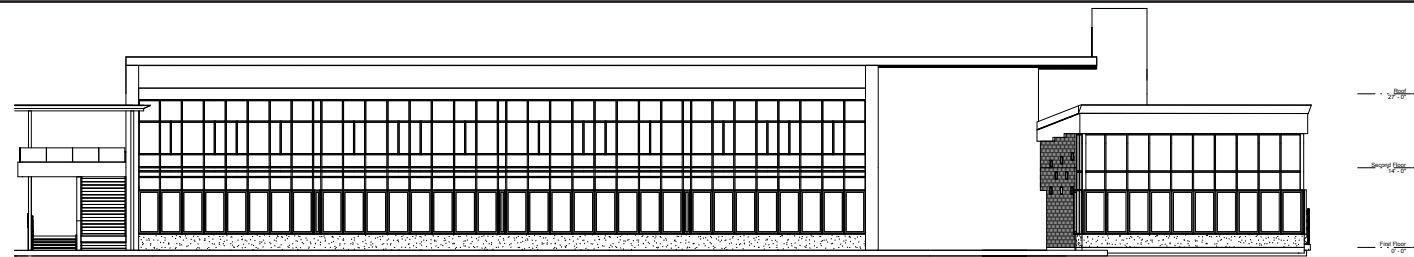
SOURCE: Kemp Bros Construction, Inc.

FIGURE 2.0-6

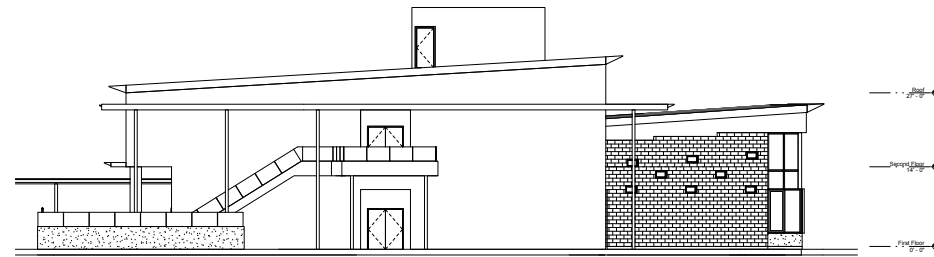
IMPACT  
SCIENCES

0695.015•10/16

Building 1 Exterior Elevations



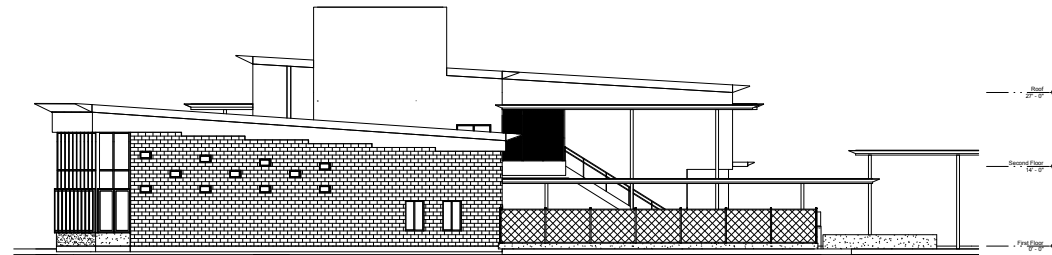
1 BUILDING 2 - NORTH  
1/8" = 1'-0"



2 BUILDING 2 - EAST  
1/8" = 1'-0"



3 BUILDING 2 - SOUTH  
1/8" = 1'-0"



4 BUILDING 2 - WEST  
1/8" = 1'-0"

LOS ANGELES UNIFIED SCHOOL DISTRICT  
INTERNATIONAL STUDIES  
LEARNING CENTER  
ADDITION PROJECT  
PROJECT NUMBER: 15780  
PROJECT NAME: 15780  
SCHOOL NAME: 15780  
SCHOOL TYPE: 15780  
FINAL SCHEMATIC DESIGN

The ideas and designs represented herein and this drawing, all prepared by  
CONCEAL/CONCEAL Architects, are for the use only with respect to the project  
and shall not be used for any other purpose without the prior written consent of  
CONCEAL/CONCEAL Architects.

Principal in Charge	
Architect/Designer	
Issue Date	Description

REGISTERED ARCHITECT	
DIV. OF THE STATE ARCHITECT	
OFFICE OF REGULATION SERVICES	
FILE NO.	15780
APPLIC.	15780
DATE	15780

EXTERIOR ELEVATIONS  
SCALE  
1/8" = 1'-0"  
PROJECT NUMBER  
15780  
DATE  
A3.21  
File Date: 6/12/2016 4:42:09 PM  
File Path:

SOURCE: Kemp Bros Construction, Inc.

FIGURE 2.0-7

IMPACT  
SCIENCES

0695.015•10/16

Building 2 Exterior Elevations



Los Angeles Unified School District  
THE INTERNATIONAL STUDIES LEARNING CENTER ADDITION



SOURCE: Kemp Bros Construction and Gonzalez Goodale Architects

FIGURE 2.0-8





View From Council Gardens Into Main Courtyard



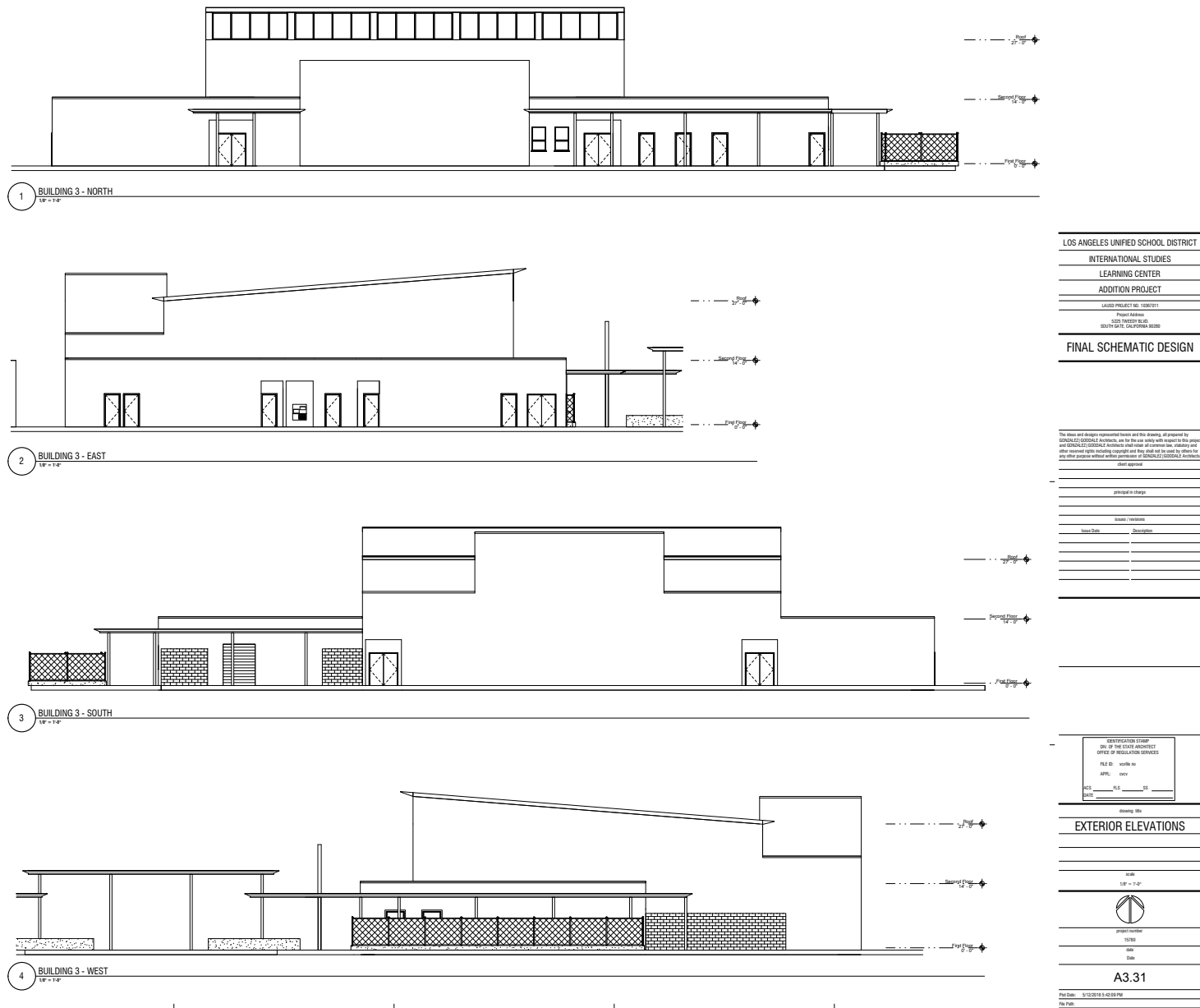
View Looking From Drop-Off Round-About To Middle School Entry Breezeway



SOURCE: Kemp Bros Construction and Gonzalez Goodale Architects

FIGURE 2.0-9





SOURCE: Kemp Bros Construction, Inc.

FIGURE 2.0-11

Building 3 Exterior Elevations

## Removal of Portables

Subsequent to the construction of the ISLC Addition, approximately 17 classrooms in aging and deteriorating portable buildings located on the South Gate Middle School campus will be removed. It is unknown at this time whether the portable buildings will be relocated to a separate site or if the buildings will be demolished. For the purpose of this analysis, it was assumed that the portable buildings would be demolished. The South Gate Middle School campus is located approximately 1.5 miles northwest of the project site at 4100 Firestone Boulevard in the City of South Gate. South Gate Middle School maintains the District's second largest middle school student population, with approximately 2,200 students. The relocation of the ISLC middle school students from the Southeast Middle School campus to the ISLC Addition would allow for the realignment of middle school enrollment in the South Gate area. Further, the District will enact a "Zone of Choice"<sup>4</sup> policy for middle school students in the South Gate Area. As such, the need for portable buildings at South Gate Middle School will be reduced.

## Off Site Improvements

The following street and sidewalk improvements would be made off-site as part of the proposed Project:

- Tweedy Boulevard would be vacated and widened to accommodate drop-off and pick-up accommodations for the ISLC addition;
- Appropriate traffic controls such as school warning signs, speed limit signs, school crosswalks, and pavement markings.

## Project Construction Schedule

Construction of the project is anticipated to begin August 2017 and would last approximately 24 months. Construction will happen in phases and the approximate durations are provided below:

- Demolition of the existing parking lot on the north side of the project site. Demolition is anticipated to last approximately one month.
- Mass and rough grading of the entire project site. **Table 2.0-1 Estimated Earthwork Quantities**, provides the estimated cubic yards of cut and fill anticipated with the proposed Project. Grading is expected to last approximately one month.
- Driving piles to support the proposed buildings. Pile driving would occur on various portions of the Project site during the one month duration of this phase.

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<sup>4</sup> Zones of Choice are geographic areas comprised of multiple high school options. The small school options in each Zone are open to all resident students and represent the demographics of the local area. All school options offer college preparatory curriculum, A-G standards-based instruction, and preparation for college and careers.

- Construction of buildings and installation of infrastructure. During this phase the three new buildings would be constructed, infrastructure such as roadways improvements and any necessary utility infrastructure would occur. The final phase would include landscaping improvements. Construction is expected to last approximately 21 months.

**Table 2.0-1  
Estimated Earthwork Quantities**

	<b>Cut (cubic yards)</b>	<b>Fill (cubic yards)</b>
Topsoil Removal	1,700	0
Other	4,286	13,650
Subsidence	0	556
Overexcavation & Recompaction	748	0
Shrinkage		888
Footing spoils	548	0
Trench spoils	184	0
Subtotal	7,466	15,842
Import	8,376	
<b>Total</b>	<b>15,842</b>	<b>15,842</b>

*Source: Los Angeles Unified School District, 2016*

Consistent with the City of South Gate's Noise Ordinance, construction is scheduled to occur Monday through Friday from 7:00 AM to 5:00 PM from November to February, and from 7:00 AM to 7:00 PM from March to October. No construction would occur on Saturday, Sundays or holidays.

## PROGRAM EIR FOR THE SCHOOL UPGRADE PROGRAM

The proposed project is part of the District's School Upgrade Program (Program), for which an EIR was prepared and certified by the District's Board of Education (Program EIR). Therefore, this EIR, where applicable, incorporates the Program EIR by reference, thereby providing project-level analysis that concentrates on site-specific issues related to the proposed Project. Applicable Standard Conditions of Approval (SC) provided in the Program EIR are cited in this EIR. The Program EIR is available for review online at <http://achieve.lausd.net/ceqa>.

## PROJECT OBJECTIVES

The following objectives have been established for the School Upgrade Program and will aid decision makers in their review of the project and associated environmental impacts:

- Repair aging schools and improve student safety;

- Upgrade schools to modern technology and educational needs;
- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of new, small, high quality Pre-k through adult schools;
- Promote a healthier environment through green technology.

### **Project Specific Objectives**

In addition, LAUSD has developed the following project specific objectives.

- Consolidate ISLC middle school and high school students on one campus under one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;
- Relieve overcrowding at South Gate Middle School, which is currently one of the most dense middle school sites in the District;
- Reduce the District's reliance on relocatable buildings at South Gate Middle School;
- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;
- Use land already owned by LAUSD to construct expanded middle school options in the South Gate area.

### **LAUSD STANDARD CONDITIONS**

The proposed project would include implementation of the following standard conditions (SC). These conditions are included in the SUP Program EIR to be incorporated into SUP projects as appropriate. The SC's applicable to the proposed Project are listed in **Table 2.0-2 Standard Conditions**.

**Table 2.0-2**  
**LAUSD Standard Conditions for the Project**

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Aesthetics</b>				
SC-AE-3	Visual Character	Project design	Prior	LAUSD shall assess a proposed project's consistency with the general character of the surrounding neighborhood, including any proposed changes to the density, height, bulk, and setback of new building (including stadium), addition, or renovation. Where feasible, LAUSD shall make appropriate design changes to reduce or eliminate viewshed obstruction and degradation of neighborhood character. Such design changes could include, but are not limited to, changes to campus layout, height of buildings, landscaping, and/or the architectural style of buildings.
SC-AE-6	Light and glare	Nighttime illumination	Lighting installation	During and after installation of lights, the Project shall comply with the School Design Guide, which outlines requirements for lighting and measures to minimize glare for pedestrians, drivers and sports teams, and to avoid light spilling onto adjacent properties.
SC-AE-7	Light and glare	Nighttime illumination	During project design	LAUSD shall reduce the lighting intensity from the new sources on adjacent residences to no more than two foot-candles, measured at the residential property line. LAUSD shall utilize hoods, filtering louvers, glare shields, and/or landscaping as necessary to achieve the standard. The lamp enclosures and poles shall also be painted to reduce reflection. Following installation of lights the lighting contractor shall review and adjust lights to ensure the standard is met.
SC-AE-8:	Light and glare	Nighttime illumination	During project design	<p>Design site lighting and select lighting styles and technologies to have minimal impact off-site and minimal contribution to sky glow. Minimize outdoor lighting of architectural and landscape features and design interior lighting to minimize trespass outside from the interior.</p> <p>International Dark-Sky Association (IDA) and the Illuminating Engineering Society (IES) Model Lighting Ordinance (MLO) shall be used as a guide for environmentally responsible outdoor lighting. The MLO outdoor lighting has outdoor lighting standards that reduce glare, light trespass, and skyglow. The Joint IDA-IESNA Model Outdoor Lighting Ordinance (MLO) uses lighting zones (LZ0-4) which allow the District to vary the stringency of lighting restrictions according to the sensitivity of the area as well as consideration for the community. The MLO also incorporates the Backlight-Uplight-Glare (BUG) rating system for luminaires, which provides more effective control of unwanted light. IDA-IESNA Model establishes standards to:</p> <ul style="list-style-type: none"> <li>o Limit the amount of light that can be used</li> <li>o Minimize glare by controlling the amount</li> </ul>

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Aesthetics (continued)</b>				
				<p>of light that tends to create glare</p> <ul style="list-style-type: none"> <li>o Minimize sky glow by controlling the amount of uplight</li> <li>o Minimize the amount of off-site impacts or light trespass</li> </ul>
<b>Air Quality</b>				
SC-AQ-3	Construction emissions	Removal of soil	During construction	<p>LAUSD's construction contractor shall:</p> <ul style="list-style-type: none"> <li>• Maintain slow speeds with all vehicles</li> <li>• Load impacted soil directly into transportation trucks to minimize soil handling</li> <li>• Water/mist soil as it is being excavated and loaded onto the transportation trucks</li> <li>• Water/mist and/or apply surfactants to soil placed transportation trucks prior to exiting the site</li> <li>• Minimize soil drop height into transportation trucks or stockpiles during dumping</li> <li>• During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks</li> <li>• Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed</li> <li>• Place stockpiled soil on polyethylene sheeting and cover with similar material.</li> <li>• Place stockpiled soil in areas shielded from prevailing winds.</li> </ul>
SC-AQ-4	Construction emissions	Exterior construction and the use of large, heavy or noisy construction equipment	During construction	<p>If site-specific review of a school construction project identified potentially significant adverse regional and localized construction air quality impacts, then LAUSD shall implement all feasible measures to reduce air pollutant emissions below the South Coast Air Quality Management District's (SCAQMD) regional and localized significance thresholds.</p> <p>LAUSD shall mandate that construction bid contract include measures identified in the air quality analysis. Measures shall reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations. Specific air emissions reduction measures include, but are not limited to, the following:</p> <p><b>Exhaust Emissions</b></p> <ul style="list-style-type: none"> <li>• Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM).</li> <li>• Consolidate truck deliveries and/or limit the number of haul trips per day.</li> <li>• Route construction trucks off congested streets.</li> <li>• Employ high pressure fuel injection systems or engine timing retardation.</li> </ul>



SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Air Quality (continued)</b>				<ul style="list-style-type: none"> <li>Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or lessb(ULSD) in all diesel construction equipment.</li> <li>Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower.</li> <li>Restrict non-essential diesel engine idle time, to not more than five consecutive minutes.</li> <li>Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction.</li> <li>Utilize electric or alternatively fueled equipment, if feasible.</li> <li>Utilize construction equipment with the minimum practical engine size.</li> <li>Utilize low-emission on-road construction fleet vehicles.</li> <li>Ensure construction equipment is properly serviced and maintained to the manufacturer's standards.</li> </ul> <p><b>Fugitive Dust</b></p> <ul style="list-style-type: none"> <li>Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more).</li> <li>Replace ground cover in disturbed areas as quickly as possible.</li> <li>Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).</li> <li>Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.</li> <li>Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles.</li> <li>Pave all construction access roads for at least 100 feet from the main road to the project site.</li> <li>Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall.</li> <li>Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content.</li> <li>Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph).</li> <li>Apply water at least three times daily, except</li> </ul>

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Air Quality (continued)</b>				
				<p>during periods of rainfall, to all unpaved road surfaces.</p> <ul style="list-style-type: none"> <li>• Limit traffic speeds on unpaved road to 15 mph or less.</li> <li>• Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD.</li> <li>• Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.</li> <li>• Limit the amount of daily soil and/or demolition debris loaded and hauled per day.</li> </ul>
<b>Cultural</b>				
SC-CUL-13	Archeological resources	In the event of an archeological find	During construction	The contractor shall halt construction activities in the immediate area and notify the LAUSD. LAUSD shall retain a qualified archeologist to make an immediate evaluation of significance and appropriate treatment of the resource. To complete this assessment, the qualified archeologist will be afforded the necessary time to recover, analyze, and curate the find. The qualified archeologist shall recommend the extent of archeological monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the building site while evaluation and treatment of historical or unique archaeological resources takes place.
SC-CUL-17	Archeological resources	In the event of an archeological find	During construction	LAUSD shall determine whether it is feasible to prepare and implement a Phase III Data Recovery/Mitigation Program. A Phase III Data Recovery/Mitigation Program would be designed by a Qualified Archaeologist to recover a statistically valid sample of the archaeological remains and to document the site to a level where the impacts can be determined to be less than significant. All documentation shall be prepared in the standard format of the ARMR Guidelines, as prepared by the OHP. Once a Phase III Data Recovery/Mitigation Program is completed, an archaeological monitor shall be present on site to oversee the grading, demolition activities, and/or initial construction activities to ensure that construction proceeds in accordance with the adopted Phase III Data Recovery/Mitigation Program. The extent of the Phase III Data Recovery/Mitigation Program and the extent and duration of the archaeological monitoring program depend on site-specific factors.
SC-CUL-18	Archeological resources	In the event of an archeological find	During construction	All work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist and the local Native American representative has been contacted and consulted to assist in the accurate recordation and recovery

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Cultural (continued)</b>				
				of the resources.
SC-CUL-19	Paleontological resources	Ground disturbance	During construction	LAUSD shall have a paleontological monitor on-call during construction activities. This monitor shall provide the construction crew(s) with a brief summary of the sensitivity, the rationale behind the need for protection of these resources, and information on the initial identification of paleontological resources. If paleontological resources are uncovered during construction, the on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbances to ensure the protection of any other resources that may be in the area.
SC-CUL-20	Paleontological resources	Ground disturbance	During construction	The paleontological monitor shall be on site for all ground altering activities and shall advise LAUSD as to necessary means of protecting potentially significant paleontological resources, including, but not limited to, possible cessation of construction activities in the immediate area of a find. If resources are identified during the monitoring program, the paleontologist shall be afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain on site for the duration of the ground disturbances to insure the protection of any other resources that may be in the area.
<b>Greenhouse Gas</b>				
SC-GHG-2	Greenhouse gas emissions	Water use for landscaping	During operation	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.
SC-GHG-3	Greenhouse gas emissions	Water use for landscaping	During operation	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.
SC-GHG-4	Greenhouse gas emissions	Water use/landscape planning	During project design and operation	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.
SC-GHG-5	Greenhouse gas emissions	Energy use	During project design	LAUSD shall ensure that the time dependent valued energy of the proposed project design is at least 10 percent, with a goal of 20 percent less than a standard design that is a minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the project is submitted to the Division of the State Architect.
<b>Hydrology and Water Quality</b>				
SC-HWQ-1	Storm water	Project design	Project design	Stormwater Technical Manual: This manual establishes design requirements and provides guidance for the cost-effective improvement of water quality in new and significantly

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Hydrology and Water Quality (continued)</b>				
				redeveloped LAUSD school sites. These guidelines are intended to improve water quality and mitigate potential impacts to the Maximum Extent Practicable (MEP). While these guidelines meet current post-construction SUSMP requirements. The guidelines address the mandated post-construction element of the NPDES program requirements.
SC-HWQ-2	Storm water	General Construction Permit	Construction	Compliance Checklist for Stormwater Requirements at a Construction Site: This checklist has requirements for compliance with the General Construction Activity Permit and is used by OEHS to evaluate permit compliance. Requirements listed include a SWPPP; BMPs for minimizing storm water pollution to be specified in a SWPPP; and monitoring storm water discharges to ensure that sedimentation of downstream waters remains within regulatory limits
<b>Noise</b>				
SC-AQ-2	Construction noise	If large construction equipment is used	During project construction	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive noise is not generated by unmaintained equipment.
SC-NOI-1	Exterior Campus Noise	Exterior noise levels are or would be great than 70 dBA	During project design	LAUSD shall include features such as sound walls, building configuration, and other design features in order to attenuate exterior noise levels on a school campus to less than 70 dBA L <sub>10</sub> or 67 dBA L <sub>eq</sub> .
SC-NOI-7	Vibration (Structural Damage)	Pile driving or heavy vibration activities	During Construction	For projects where pile driving activities are required within 150 feet of a structure, a detailed vibration assessment shall be provided by an acoustical engineer to analyze potential impacts related to vibration to nearby structures and determine feasible mitigation measures to eliminate potential risk of architectural damage.
SC-NOI-9	Construction Noise	Exterior construction and the use of large, heavy or noisy construction equipment	During Construction	<p>LAUSD shall prepare a noise assessment. If site-specific review of a school construction project identifies potentially significant adverse construction noise impacts, then LAUSD shall implement all feasible measures to reduce below applicable noise ordinances. Exterior construction noise levels exceed local noise standards, policies, or ordinances at noise sensitive receptors. LAUSD shall mandate that construction bid contracts include the measures identified in the noise assessment. Specific noise reduction measures include, but are not limited to, the following:</p> <p><b>Source Controls:</b></p> <ul style="list-style-type: none"> <li>• <u>Time Constraints</u> – prohibiting work during sensitive nighttime hours</li> <li>• <u>Scheduling</u> – performing noisy work during less sensitive time periods (on operating campus: delay the loudest noise generation until class instruction at the nearest classrooms has ended; residential: only between 7:00 AM and 7:00 PM)</li> </ul>

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Noise (continued)</b>				
				<ul style="list-style-type: none"> <li>• <u>Equipment Restrictions</u> – restricting the type of equipment used</li> <li>• <u>Noise Restrictions</u> – specifying stringent noise limits</li> <li>• <u>Substitute Methods</u> – using quieter methods and/or equipment</li> <li>• <u>Exhaust Mufflers</u> – ensuring equipment have quality mufflers installed</li> <li>• <u>Lubrication &amp; Maintenance</u> – well maintained equipment is quieter</li> <li>• <u>Reduced Power Operation</u> – use only necessary size and power</li> <li>• <u>Limit Equipment On-Site</u> – only have necessary equipment onsite</li> <li>• <u>Noise Compliance Monitoring</u> – technician on site to ensure compliance</li> <li>• <u>Quieter Backup Alarms</u> – manually-adjustable or ambient sensitive types Path Controls</li> <li>• <u>Noise Barriers</u> – semi-permanent or portable wooden or concrete barriers</li> <li>• <u>Noise Curtains</u> – flexible intervening curtain systems hung from supports</li> <li>• <u>Enclosures</u> – encasing localized and stationary noise sources</li> <li>• <u>Increased Distance</u> – perform noisy activities farther away from receptors, including operation of portable equipment, storage and maintenance of equipment</li> </ul> <p><b>Receptor Controls</b></p> <ul style="list-style-type: none"> <li>• <u>Window Treatments</u> – reinforcing the building's noise reduction ability</li> <li>• <u>Community Participation</u> – open dialog to involve affected residents</li> <li>• <u>Noise Complaint Process</u> – ability to log and respond to noise complaints. Advance notice of the start of construction shall be delivered to all noise sensitive receptors adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the District. In the event of noise complaints the LAUSD shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance.</li> <li>• <u>Temporary Relocation</u> – in extreme otherwise unmitigatable cases. Temporarily move residents or students to facilities away from the construction activity.</li> </ul>
<b>Transportation and Pedestrian Safety</b>				
SC-PED-1	Pedestrian safety	Increase in capacity by more than 25 percent or 10	During project design	Caltrans SRTS Program: The LAUSD is a participant in the SRTS program administered by Caltrans and local law enforcement and transportation agencies. OEHS provides pedestrian safety evaluations as a

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Transportation and Pedestrian Safety (continued)</b>				
		classroom		component of traffic studies conducted for new school projects. This pedestrian safety evaluation includes a determination of whether adequate walkways and sidewalks are provided along the perimeter of, across from, and adjacent to a proposed school site and along the paths of identified pedestrian routes within a 0.25 mile radius of a proposed school site. The purpose of this review is to ensure that pedestrians are adequately separated from vehicular traffic.
SC-PED -2	Safety analysis	Increase in capacity by more than 25 percent or 10 classroom	During project design	OEHS CEQA Specification Manual, Appendix C, Traffic and Pedestrian Safety Requirements for New Schools. LAUSD has developed these performance guidelines to minimize potential pedestrian safety risks to students, faculty and staff, and visitors at LAUSD schools. The performance guidelines include the requirements for student drop-off areas, vehicle access, and pedestrian routes to school. Appendix C states school traffic studies shall identify measures to ensure separation between pedestrians and vehicles along potential pedestrian routes, such as sidewalks, crosswalks, bike paths, crossing guards, pedestrian and traffic signals, stop signs, warning signs, and other pedestrian access measures.
SC-PED-3	Safety analysis	Increase in capacity by more than 25 percent or 10 classroom	During project design	OEHS CEQA Specifications Manual, Appendix D, Sidewalk Requirements for New Schools.  LAUSD shall coordinate with the responsible traffic jurisdiction/agency to ensure these areas are improved prior to the opening of a school. Improvements shall include but are not limited to: (1) Clearly designate passenger loading areas with the use of signage, painted curbs, etc (2) Install new walkway and/or sidewalk segments where none exist (3) Any substandard walk/sidewalk segments shall be improved to a minimum of eight feet wide (4) Provide other alternative measures that separate foot traffic from vehicular traffic, such as distinct travel pathways or barricades
SC-PED-4	Safety analysis	Increase in capacity by more than 25 percent or 10 classroom	Prior to project approval	School Traffic Safety Reference Guide REF – 4492.1: Guide sets forth requirements for traffic and pedestrian safety, and procedures for school principals to request assistance from OEHS, the Los Angeles Schools Police Department (LASPD), or the local police department regarding traffic and pedestrian safety. Distribution and posting of the Back to School Safety Tips flyer is required. This guide also includes procedures for traffic surveys, parking restrictions, crosswalks, advance warning signs (school zone), school parking signage, traffic controls, crossing guards, or for determinations on whether vehicle enforcement is required to ensure the safety of students and staff.
SC-PED-5	Access to school	Construction of bus loading area, student drop-off/pick-up area and/or	Prior to project approval	School Design Guide: The Guide states student drop-off and pick-up, bus loading areas, and parking areas shall be separated to allow students to enter and exit the school grounds safely

SC	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions
<b>Transportation and Pedestrian Safety (continued)</b>				
		parking		
SC-T-3	Traffic analysis	Increase in capacity by more than 25 percent or 10 classrooms	Prior to project approval	<p>Coordinate with the local City or County Jurisdiction and agree on the following:</p> <ul style="list-style-type: none"> <li>- Compliance with the jurisdiction's design guidelines for access, parking, and circulation in the vicinity of the project</li> <li>- Scope of analysis and methodology for the traffic and pedestrian studies, including trip generation rates, trip distribution, number and location of intersections, traffic impact thresholds</li> <li>- Implementation of SRTS, traffic control and pedestrian safety devices</li> </ul> <p>Traffic and pedestrian safety impacts studies shall address local traffic and congestion during morning arrival times, and before and after evening stadium events. Loading zones will be analyzed to determine adequacy of pick-up and dropoff points. Recommendations will be developed in consultation with the local jurisdiction for curb loading bays or curb parking restrictions to accommodate loading needs and will control double parking and across-the-street loading.</p>
SC-T-4	Construction traffic	Construction equipment to use public roadways	Prior to construction	<p>LAUSD shall require its contractors to submit a construction worksite traffic control plan to the LADOT for review prior to construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.</p>

## Collaborative for High Performance Schools Criteria

LAUSD is the first school district in the United States to adopt and implement the Collaborative for High Performance Schools (CHPS) Criteria.<sup>5</sup> The LAUSD Board of Education adopted a Resolution on High Performance School Facilities requiring Phase II of the New School Construction Program and future schools to be certified according to CHPS.<sup>6</sup> These measures are considered beneficial to improving environmental quality. LAUSD has incorporated these into the project design and operation of projects as part of standard LAUSD practices. The CHPS criteria are assumed to be part of the District's projects as

<sup>5</sup> Los Angeles Unified School District. Key OEHS Programs. Available at: <http://achieve.lausd.net/Page/3495>

<sup>6</sup> Los Angeles Unified School District. 28 October 2003. Los Angeles City Board of Education Resolution, Sustainability and the Design and Construction of High Performance Schools. Los Angeles, CA. Available at: [http://www.laschools.org/documents/download/sustainability%2Fhealthy\\_schools%2FBoard\\_Resolution\\_on\\_CHPS.pdf](http://www.laschools.org/documents/download/sustainability%2Fhealthy_schools%2FBoard_Resolution_on_CHPS.pdf)

they may apply to specific projects and are not included as mitigation measures. CHPS recommends flexible standards to promote energy efficiency, water efficiency, site planning, materials, and indoor environmental quality. Certain CHPS points are mandatory and are identified below as part of certain LAUSD Design Standards.

## LAUSD Design Standards Best Management Practices

In addition to the CHPS criteria, LAUSD applies best management practices (BMPs) in accordance with the 2016 School Design Guide for LAUSD, which are established and refined as part of LAUSD's current building efforts.<sup>7</sup> The mandatory CHPS criteria and standard LAUSD BMPs measures are presented below as they may be applied to this specific proposed project.

**Noise/Acoustics.** In accordance with CHPS Criteria EQ3.0: Minimum Acoustical Performance, unoccupied classrooms must have a maximum background noise level of no more than 45 dBA Leq. Background noise levels of 45 dBA are not sufficient for classrooms with young children, students with limited English proficiency, and those with hearing impairments or language disorders. Districts and designers are strongly encouraged to move beyond these prerequisites and achieve background noise levels of 35 dBA for all classrooms. An analysis of the acoustical environment of the proposed project site (such as traffic) and characterization of planned building components (such as heating, ventilation, and air conditioning) was conducted to achieve a classroom acoustical performance with 45 A-weighted decibels (dBA) at the equivalent sound level (Leq) for an interior background noise level (unoccupied with HVAC ) or better.<sup>8</sup> Where excessive noise from operation of the new school site could disturb adjacent residential uses, the proposed project might incorporate buffers, such as masonry walls, between playgrounds and adjacent residential uses.

**Hazards.** In accordance with CHPS Criteria SS1.0: Code Compliance, locally or privately funded new schools, new buildings at existing schools, or major modernizations shall undertake an environmental evaluation that assesses possible environmental hazards from existing or formal hazardous waste sites; existing hazardous material pipelines (other than natural gas supplied to school); freeways and other busy traffic corridors, large agricultural operations, or rail yards within ¼ mile; and other operations that might reasonably be anticipated to emit hazardous air emissions, or to handle hazardous, or extremely

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<sup>7</sup> Los Angeles Unified School District, Design Standards Department. October 2016. "School Design Guide: Los Angeles Unified School District." Available at: <http://www.laschools.org/new-site/asset-management/school-design-guide>

<sup>8</sup> The unit of measurement of environmental noise is the decibel (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale was devised. Because the human ear is less sensitive to low-frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel



hazardous materials, substances or waste. For state-funded classroom construction projects, LAUSD shall assess for the presence of, and remediate hazardous materials as and when required, under DTSC supervision. For classroom construction projects that do not receive DTSC oversight, LAUSD will assess and remediate hazardous material under supervision of the LAUSD OEHS. A Phase I Environmental Site Assessment, a supplemental soil survey, and a Remedial Action Plan have been completed for the project site that conclude that the proposed project would not result in these environmental hazards and that the the proposed development area would not be adversely impacted by chemicals of potential concern at the time of Project build out. Additionally, a Seismic Hazard Evaluation has been completed for the proposed project to satisfy certain state requirements.

**Light and Glare.** In accordance with CHPS Criteria SS5.1: Light Pollution Reduction, interior lighting shall be designed so that the angle of maximum candela from each interior luminaire as located in the building shall not exit out through the windows or maintain all non-emergency lighting on a programmable timer that turns lighting off during non-operable hours.<sup>9</sup> Additionally, exterior lighting shall only be provided when it is clearly required for safety and comfort and designed not to exceed 80 percent of the lighting power allowed by the California energy efficiency standards in effect at the time of submission of the project to the Division of the State Architect. For a new building on an existing campus, additions, and major modernizations, the exterior requirement applies to the entire school site, not just the lighting around the new building or the building(s) being modernized. In accordance with the 2014 School Design Guide, all luminaires or lighting sources in connection with school construction projects shall be installed in such a manner as to minimize glare for pedestrians and drivers and to minimize light spilling onto adjacent properties.

**Water Supply.** LAUSD shall require its construction contractor to coordinate with the City of Los Angeles Department of Water and Power (LADWP) or other appropriate jurisdiction and department prior to the relocation or upgrade of any water facilities to reduce the potential for disruptions in service. With respect to outdoor systems, in accordance with CHPS Criteria WE1.0: Create Water Use Budget, CHPS requires the landscape and ornamental water-use budget to conform to the California Model Water Efficient Landscape Ordinance.

**Fire Protection.** In accordance with the 2016 School Design Guide, LAUSD shall reduce impacts to fire protection services in connection with new construction projects by requiring local fire jurisdictions to review and approve site plans.

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<sup>9</sup> Collaborative for High Performance Schools. 2009. California Criteria for High Performance Schools Best Practices Manual. Volume III. 2009 Edition. Available at: <http://www.chps.net/manual/index.htm>

**Energy Efficiency.** Under CHPS Criteria EE1.0: Minimum Energy Performance, new school designs must exceed the California energy efficiency standards (Title 24 – 2008, Part 6) by 15 percent or energy-efficient lighting with occupancy controls and/or economizers on the package equipment must be included in the design.<sup>10, 11</sup> In addition, new buildings must meet 2013 Title 24 standards, which became effective on July 1, 2014.

**Waste Reduction and Efficient Material Use.** Under CHPS Criteria ME1.0: Storage and Collection of Recyclables, the proposed project must meet local ordinance requirements for recycling space and provide an easily accessible area serving the entire school that is dedicated to the separation, collection, and storage of materials for recycling including, at a minimum, paper, cardboard, glass, plastics, metals, and landscaping waste.

**Indoor Air Quality.** Under CHPS Criteria EQ2.0A: Minimum HVAC and Construction IEQ Requirements, the proposed project must meet the performance requirements of ASHRAE Standard 62.1-2007, which requires the design of building ventilation systems to ensure that the continuous delivery of outside air is no less than the governing design standard (Title 8, Sec. 5142), and occur at all times rooms are occupied. Ventilation rates shall be no less than required by California Title 24, Part 6, §121 or the outdoor ventilation rate calculated according to the outdoor air ventilation rate procedure in § 6.2 ASHRAE 62.1-2007. The design must ensure that the supply operates in continuous mode and is not readily defeated (i.e., blocked registers or windows) during occupancy periods.

**Thermal Comfort.** Under CHPS Criteria EQ2.0B: ASHRAE 55 Thermal Comfort Code Compliance and Moisture Control, the proposed project must comply, at minimum with the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) Standard 55-2004 for thermal comfort standards, including humidity control within established ranges per climate zone. Indoor design temperature and humidity conditions for general comfort applications shall be determined in accordance with appropriate American National Standards Institute (ANSI) or ASHRAE standards.<sup>12</sup>

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<sup>10</sup> Collaborative for High Performance Schools. 2009. California Criteria for High Performance Schools Best Practices Manual. Volume III. 2009 Edition. Available at: <http://www.chps.net/manual/index.htm>

<sup>11</sup> California Energy Commission. 2008 Building Energy Efficiency Standards. Available at: <http://www.energy.ca.gov/2008publications/CEC-400-2008-001/CEC-400-2008-001-CMF.PDF>

<sup>12</sup> Note: ASHRAE Standard 55-2013 -- Thermal Environmental Conditions for Human Occupancy (ANSI Approved) is the most up-to-date version of ASHRAE 55.

## LAUSD Construction BMPs

### *Water Quality and Hydrology*

LAUSD shall obtain a National Pollution Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board (RWQCB) with requirements for discharge, BMPs, and Stormwater Pollution Prevention Plan (SWPPP). LAUSD's construction contractor shall properly discharge any water accumulation within the excavation pit in accordance with BMPs and a dewatering plan that must be developed and approved prior to construction as part of the NPDES General Construction Stormwater Permit. LAUSD's construction contractor shall prevent sediment flows from entering storm drainage systems by constructing temporary filter inlets around existing storm drain inlets prior to the stabilization of the construction site area. The sediment trapped in these impounding areas shall be removed after each storm. LAUSD's construction contractor shall collect and discharge surface runoff into the storm water collection system. The design of the storm drain system (i.e., drain inlets and conveyances) must be adequate to prevent localized flooding due to foliage and debris entrapment from increased storm runoff and prevent contamination of any nearby water basins. To accommodate the additional storm water runoff and annual water yield resulting from the construction, storm drain improvements shall provide capacity to carry 25-year peak runoff rates. As required, an NPDES storm water permit application shall be submitted and the effluent quality criteria shall be specified in the permit, as determined by the Los Angeles RWQCB based on receiving water guidelines and waste load allocations. Monitoring of the outflow from the collection system may be required in the permit to ensure that the requirements and water quality criteria specified by the permit are achieved. The construction contractor shall use reclaimed water during the construction process, specifically for dust control, soil compaction, and concrete mixing, to the extent feasible.

### *Construction Traffic*

LAUSD shall require its contractors to submit a construction worksite traffic control plan to the LADOT for review prior to construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by the State of California Department of Transportation (Caltrans), applicable transportation related safety measures shall be implemented during construction.

### ***Construction Air Emissions***

LAUSD shall comply with all applicable South Coast Air Quality Management District (SCAQMD) rules and regulations in carrying out its Program. To reduce the potential for significant hazardous emissions during a removal action, LAUSD or its construction contractor shall:

- Maintain slow speeds with all vehicles
- Load impacted soil directly into transportation trucks to minimize soil handling
- Water/mist soil as it is being excavated and loaded onto the transportation trucks
- Water/mist and/or apply surfactants to soil placed in transportation trucks prior to exiting the site
- During dumping, minimize soil drop height into transportation trucks or stockpiles
- During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks
- Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed
- Place stockpiled soil on polyethylene sheeting and cover with similar material
- Place stockpiled soil in areas shielded from prevailing winds

### ***Construction Noise***

The LAUSD shall require the construction contractor to keep properly functioning mufflers on all internal combustion and vehicle engines used in construction. The LAUSD shall require its construction contractor to provide advance notice of the start of construction to all noise sensitive receptors, businesses, and residences adjacent to the project area. The announcement shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints. During construction activities, LAUSD's construction contractor or Owner's Authorized Representative (OAR) shall serve as the contact person in the event that noise levels become disruptive to local residents. During construction activities, the construction contractor shall locate portable equipment and shall store and maintain equipment as far as possible from the adjacent residents. LAUSD shall require the construction contractor to comply with all applicable noise ordinances of the affected jurisdiction (e.g., City of South Gate). In the event of complaints by nearby residents or receptors, LAUSD shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance. LAUSD shall include the applicable city or county ordinance in all construction contracts. LAUSD shall require its contractors to build a masonry wall or other noise reducing measures

along the property line adjacent to residential uses when necessary to reduce noise levels on adjacent sensitive receptors. If project construction noise levels are expected to exceed noise thresholds of significance, LAUSD may require the construction contractor to install effective noise attenuation measures that may be identified as part of the environmental review of each individual project.

### ***Sewer Services***

LAUSD or its construction contractor shall coordinate with the City of Los Angeles Department of Public Works, Bureau of Sanitation, and Bureau of Engineering or other appropriate jurisdictions and departments prior to the relocation or upgrade of any sewer facilities to reduce the potential for disruptions in service.

### ***Waste Management***

To ensure optimal diversion of solid resources generated by a project, the LAUSD shall require its contractors to prepare and implement, including reporting and documentation, a Waste Management Plan (Process) for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition [C&D] Waste), to foster material recovery and reuse and to minimize disposal in landfills. In accordance with the CHPS Criteria ME2.0: Minimum Construction Site Waste Management, all new construction work and major modernizations are required to recycle, compost, and/or salvage at least 50 percent (by weight) of the non-hazardous construction and demolition debris. In accordance with the 2014 School Design Guide, LAUSD shall establish a minimum non-hazardous construction and demolition debris recycling requirement of 75 percent of waste, as defined in Specification 01340, Construction & Demolition Waste Management. LAUSD has established procedures for C&D Waste management that must be complied with in meeting this requirement. The procedures establish a standard format for preparing the plan and monthly progress reporting.

## **REQUIRED PERMITS AND APPROVALS**

Consistent with Section 15065(b) of the *State CEQA Guidelines*, LAUSD is the lead agency for the project. As such, LAUSD would use this EIR to formulate its actions to either approve or deny the project. This section provides, to the extent the information is known to LAUSD, a list of the agencies that are expected to use the EIR in their decision-making and a list of permits and other approvals required to implement the project.

## Lead Agency Approval

The Final EIR must be certified by the LAUSD Board of Education as to its adequacy in complying with the requirements of CEQA before action can be taken on the proposed project. The Board of Education shall consider the information contained in the EIR in making a decision to approve or deny the proposed project. The analysis in the EIR is intended to provide environmental review for the whole of the proposed project, including the planning of the proposed project, site acquisition, site clearance, excavation and grading of the site, construction of school buildings and appurtenant facilities, and ongoing operation of the school and associated school programs in accordance with CEQA requirements. This EIR is intended to provide environmental review for the proposed project in accordance with the requirements of CEQA.

## Required Permits and Approvals

A public agency, other than the Lead Agency, that has discretionary approval power over a project is known as a Responsible Agency, as defined by State CEQA Guidelines. The Responsible Agencies and their corresponding approvals for this project include the following:

### *State of California*

- Department of Education
  - School Facilities Planning Division (approval of final plan)
- Department of General Services
  - Division of State Architect (approval of construction drawing)
- Department of Toxic Substances Control (Determination of “No Further Action”)

### *County of Los Angeles*

Fire Department (approval of site plan for emergency access)

### *City of South Gate*

- Department of Building and Safety (approval of permits)

### *Regional Agencies*

- Los Angeles Water Quality Control Board (NPDES permit, issuance of waste discharge requirement [WDR] permit, construction storm water run-off permits, 401 waiver of water quality certification)

## Reviewing Agencies

Reviewing agencies include those agencies that do not have discretionary powers, but that may review the EIR for adequacy. Potential reviewing agencies include the following:

### *Federal*

- U.S. Army Corps of Engineers

### *State of California*

- Environmental Protection Agency
  - Department of Toxic Substances Control
- Office of Historic Preservation
- Department of Transportation
- Natural Resources Agency
  - Department of Conservation
  - Department of Fish and Wildlife
  - Department of Parks and Recreation
  - Native American Heritage Commission
- California Highway Patrol

### *City of South Gate*

- Department of Community Development (City Planning)
- Department of Parks and Recreation
- Police Department

### *Regional Agencies*

- Los Angeles County Metropolitan Transportation Authority
- South Coast Air Quality Management District
- Southern California Association of Governments

## 3.0 ENVIRONMENTAL IMPACT ANALYSIS

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### INTRODUCTION

The purpose of this section is to inform decision makers and the public of the type and magnitude of the change to the existing environment that would result from the proposed Project. Environmental topics addressed in this Draft Environmental Impact Report (Draft EIR) have been identified in the Notice of Preparation and Initial Study (NOP/IS) prepared by the District for the proposed Project. The environmental impact analysis sections of this Draft EIR provide a comprehensive discussion of the existing local and regional environmental conditions, evaluate expected project level and cumulative impacts that would result from the proposed project, and determine the level of significance of reasonably foreseeable impacts. The environmental impact analysis sections also identify mitigation measures intended to reduce potentially significant environmental impacts to the greatest extent feasible.

This EIR addresses the issues determined to be potentially significant based on the Project's IS, input from neighbors in the community, and responses to the NOP and scoping meetings. This EIR addresses these issues and identifies potentially significant environmental impacts of the Project and cumulative development in the City in accordance with provisions set forth in the *California Environmental Quality Act (CEQA) Guidelines*. The EIR also recommends feasible mitigation measures, where possible, that would reduce or eliminate adverse significant environmental effects. Through this process, the District has determined that the EIR analysis should focus on the following resource areas:

- Air Quality
- Geology
- Hazards and Hazardous Materials
- Noise
- Pedestrian Safety
- Transportation
- Energy

Discussion of Energy impacts were not addressed in the Initial Study, but are included in the EIR in accordance with recent case law *Ukiah Citizens for Safety First v. City of Ukiah* (1st Dist., Div. 3, 2016) 248 Cal.App.4th 256. In the Ukiah case, the court found the EIR for a Costco did not sufficiently analyze the project's energy use. For these reasons, this EIR includes analysis of the Project's potential energy use in accordance with the guidance provided in Appendix F of the CEQA Guidelines.

This section of the EIR addresses the potentially significant environmental impacts of the proposed Project for the resources listed above. Each environmental resource area is discussed under the following



headings: Existing Conditions, Regulatory Framework, Methodology, Thresholds of Significance, Impacts and Mitigation Measures, and Cumulative Impacts.

## CUMULATIVE IMPACT ANALYSIS

The technical analysis contained in **Section 3.0, Environmental Impact Analysis**, examines both the Project-specific impacts and the potential environmental effects associated with cumulative development of other projects. CEQA requires that EIRs discuss cumulative impacts, in addition to the Project-specific impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the proposed Project alone. According to Section 15355 of the *State CEQA Guidelines*:

*Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

Section 15130(a)(l) of the *State CEQA Guidelines* further states, “a cumulative impact consists of an impact which is created as a result of the combination of the proposed project evaluated in the EIR together with other projects causing related impacts.”

Section 15130(a) of the *State CEQA Guidelines* also requires that EIRs discuss the cumulative impacts of a project when the proposed project's incremental effect is “cumulatively considerable.”<sup>1</sup> Where a lead agency is examining a proposed project with an incremental effect that is not cumulatively considerable, it need not consider the effect significant but must briefly describe the basis for its conclusion. If the combined cumulative impact associated with the proposed project's incremental effect and the effects of other projects is not significant, Section 15130(a)(2) of the *State CEQA Guidelines* requires a brief discussion in the EIR of why a cumulative impact is not significant and why it is not discussed in further detail. Section 15130(a)(3) of the *State CEQA Guidelines* requires supporting analysis in the EIR if a determination is made that a project's contribution to a significant cumulative impact is rendered less

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<sup>1</sup> Under Section 15065(a)(3) of the *State CEQA Guidelines*, “cumulatively considerable” means that “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

than cumulatively considerable and, therefore, is not significant. CEQA recognizes that the analysis of cumulative impacts need not be as detailed as the analysis of project-related impacts, but instead should “be guided by the standards of practicality and reasonableness” (*State CEQA Guidelines* Section 15130(b)). The discussion of cumulative impacts in this Draft EIR focuses on whether the impacts of the proposed Project are cumulatively considerable.

The fact that a cumulative impact is significant does not necessarily mean that the project-related contribution to the cumulative impact analysis is significant as well. Instead, under CEQA, a project-related contribution to a significant cumulative impact is only significant if the contribution is “cumulatively considerable.” To support each significance conclusion, the Draft EIR provides a cumulative impact analysis; and where project-specific impacts have been identified that, together with the effects of other related projects, could result in cumulatively significant impacts, these potential impacts are documented.

Section 15130(b) of the *State CEQA Guidelines* defines consideration of the following elements as necessary to provide an adequate discussion of cumulative impacts: “(a) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency, or (b) a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions.” In this Draft EIR, a combination of these two methods is used depending upon the specific environmental issue area being analyzed.

Cumulative impact discussions for each issue area are provided in the technical analyses contained within **Chapter 3.0 Environmental Analysis**. As previously stated, and as set forth in the State CEQA Guidelines, Related Projects consist of closely related past, present, and reasonably foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area. The City of South Gate identified two potential projects within the cumulative impact area of the proposed project. These related projects are located within a 2-mile radius from the project site and are listed in **Table 3.0-1, List of Related Projects**, along with their location and a brief description (**Figure 3.0-1, Map of Related Projects**).

It is noted that cumulative impacts analyzed in this EIR would likely represent a “worst-case” scenario for the following reasons:

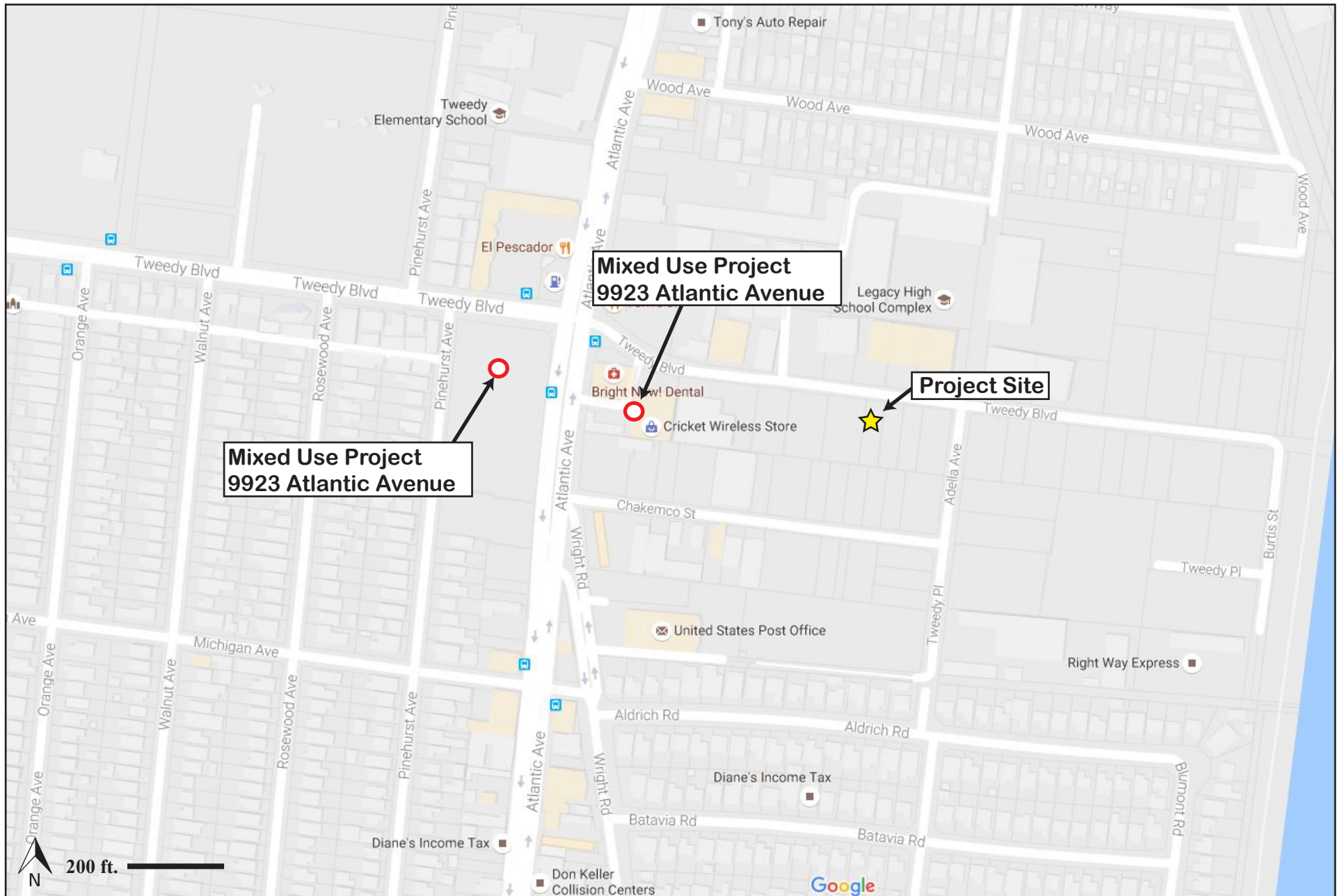
- Not all the related projects will be approved and/or built. Further, it is also likely that several of the related projects will not be constructed at the same time as the proposed project or opened until after the proposed project has been built and occupied.

- Impact projections for related projects would likely be, or have been, subject to unspecified mitigation measures, which would reduce potential impacts.
- Many related projects are expressed in terms of gross square footage or are conceptual plans such as master plans that assume complete development; in reality, such projects may be smaller because of the demolition or removal of existing land uses resulting from the development of the related projects

**Table 3.0-1**  
**List of Related Projects: LADOT Record of Proposed Project**

<b>Map Key</b>	<b>Project Name/Address</b>	<b>Description</b>
1	Mixed Use, 9923 Atlantic Avenue	50,000 square feet of retail/105 apartments
2	Shopping Center, 10000 Atlantic Ave	60,000 square feet of retail

*Source: KOA Corporation, 2016*



SOURCE: Google Maps, 2016

FIGURE 3.0-1

## 3.1 AIR QUALITY

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### 3.1.1 INTRODUCTION

This section presents existing air quality conditions in the Project area (including the Project site, the applicable air district jurisdiction, and the air basin) and analyzes the potential air quality impacts, both temporary (i.e., construction) and long term (i.e., operational), from the implementation of the proposed ISLC Addition project. The section also provides a description of the regulatory framework for air quality management on a federal, state, regional, and local level. The section is based on an Air Quality and Noise Impact Report prepared by DKA Planning, dated August 22, 2016. The report is included in **Appendix 3.1** of this Draft EIR.

### 3.1.2 EXISTING CONDITIONS

#### *Regional Air Quality*

The Project site is located within the Los Angeles County non-desert portion of the South Coast Air Basin (Basin). The Basin is in an area of high air pollution potential due to its climate and topography. The region lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter. The mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region.

The Basin experiences frequent temperature inversions that help to form smog. While temperature typically decreases with height, it actually increases under inversion conditions as altitude increases, thereby preventing air close to the ground from mixing with the air above. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and NO<sub>2</sub> react under strong sunlight, creating smog. Light daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland toward the mountains.

Air quality problems also occur during the fall and winter, when CO and NO<sub>2</sub> emissions tend to be higher. CO concentrations are generally worse in the morning and late evening (around 10:00 PM) when

temperatures are cooler. High CO levels during the late evenings result from stagnant atmospheric conditions trapping CO. Since CO emissions are produced almost entirely from automobiles; the highest CO concentrations in the Basin are associated with heavy traffic. NO<sub>2</sub> concentrations are also generally higher during fall and winter days.

### *Air Pollution and Potential Health Effects*

#### **Criteria Pollutants**

The determination of whether a region's air quality is healthful or unhealthful is made by comparing contaminant levels in ambient air samples to national and state standards. California and the United States Environmental Protection Agency (US EPA) have established health-based air quality standards for the following criteria air pollutants: O<sub>3</sub>, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards, and in the case of PM<sub>10</sub> and SO<sub>2</sub>, much more stringent. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of the monitored pollutants as well as the attainment status the City, and their effects on health are summarized in **Table 3.1-1, State and Federal Ambient Air Quality Standards**.

**Table 3.1-1**  
**State and Federal Ambient Air Quality Standards**

Air Pollutant	Concentration/Averaging Time		Federal Primary Standard (NAAQS) <sup>3</sup>	Federal Attainment Status <sup>4</sup>	Most Relevant Health Effects
	State Standard (CAAQS) <sup>1</sup>	State Attainment Status <sup>2</sup>			
Ozone (O <sub>3</sub> )	0.09 ppm, 1-hour avg.	Non-Attainment	None	None	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage
	0.070 ppm, 8-hour avg.	Non-Attainment	0.075 ppm, 8-hour avg. (three-year average of annual 4 <sup>th</sup> -highest daily maximum)	Non-Attainment	
Nitrogen Dioxide (NO <sub>2</sub> )	0.18 ppm, 1-hour avg.	Attainment	0.100 ppm, 1-hour avg. (three-year avg. of the 98 <sup>th</sup> percentile of the daily maximum 1-hour avg.)	Attainment/ Unclassified	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
	0.030 ppm, annual arithmetic mean	Attainment	0.053 ppm, annual arithmetic mean	Attainment/ Unclassified	
Carbon Monoxide (CO)	20 ppm, 1-hour avg.	Attainment	35 ppm, 1-hour avg. (not to be exceeded more than once per year)	Attainment (Maintenance)	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses
	9.0 ppm, 8-hour avg.	Attainment	9 ppm, 8-hour avg. (not to be exceeded more than once per year)	Attainment (Maintenance)	
Sulfur Dioxide (SO <sub>2</sub> )	0.25 ppm, 1-hour avg.	Attainment	0.075 ppb, 1-hour avg. (three-year avg. of the 99 <sup>th</sup> percentile)	Attainment	Bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma
	0.04 ppm, 24-hour avg.	Attainment	0.5 ppm, 3-hr avg. (not to be exceeded more than once per year)	Attainment	

Air Pollutant	Concentration/Averaging Time			Federal Attainment Status <sup>4</sup>	Most Relevant Health Effects
	State Standard (CAAQS) <sup>1</sup>	State Attainment Status <sup>2</sup>	Federal Primary Standard (NAAQS) <sup>3</sup>		
Respirable Particulate Matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup> , 24-hour avg. 20 µg/m <sup>3</sup> , annual arithmetic mean	Non-Attainment Non-Attainment	150 µg/m <sup>3</sup> , 24-hour avg. (not to be exceeded more than once per year on average over three years)	Attainment	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death
Fine Particulate Matter (PM <sub>2.5</sub> )	12 µg/m <sup>3</sup> , annual arithmetic mean	Non-Attainment	35 µg/m <sup>3</sup> , 24-hour avg. (three-year average of 98 <sup>th</sup> percentile) 15 µg/m <sup>3</sup> , annual arithmetic mean (three-year average)	Non-Attainment Non-Attainment	a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death
Lead(Pb)	1.5 µg/m <sup>3</sup> , 30-day avg.	Attainment	0.15 µg/m <sup>3</sup> , three-month rolling average	Non-Attainment	(a) Learning disabilities, and (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount such that the extinction coefficient is greater than 0.23 inverse kilometers at relative humidity less than 70%, 8-hour avg. (10:00 AM–6:00 PM)	Unclassified	None	N/A	Visibility impairment on days when relative humidity is less than 70 percent.
Sulfates	25 µg/m <sup>3</sup> , 24-hour avg.	Attainment	None	N/A	(a) Decrease in ventilatory function, (b) Aggravation of asthmatic symptoms, (c) Aggravation of cardio-pulmonary disease, (d) Vegetation damage, (e) Degradation of visibility, and (f) Property damage
Hydrogen Sulfide (H <sub>2</sub> S)	0.03 ppm, 1-hour avg.	Unclassified	None	N/A	Odor annoyance
Vinyl Chloride	0.010 ppm, 24-hour avg.	Unclassified	None	N/A	Known carcinogen

µg/m<sup>3</sup> = microgram per cubic meter; ppm = parts per million by volume.

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards.

<sup>1</sup>=CAAQS standards, CARB website, <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>, accessed January 20, 2015

<sup>2</sup>=State attainment status, CARB website, <http://www.arb.ca.gov/desig/adm/adm.htm>, accessed January 20, 2015

<sup>3</sup>=Federal standards, US EPA website, <http://epa.gov/air/criteria.html>, accessed January 20, 2015

<sup>4</sup>=Federal attainment status, CARB website, <http://www.arb.ca.gov/desig/adm/adm.htm>, accessed January 20, 2015

If a Basin satisfies the established regulatory agency criteria the Basin is in "attainment." If the Basin does not meet the established federal or state standard, the Basin is in "non-attainment."



## Toxic Air Contaminants

Toxic air contaminants refer to a diverse group of “non-criteria” air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TACs can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular). The California Air Resources Board (CARB) and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or “listed,” as a TAC in California. CARB has included 21 substances on the TAC identification list.<sup>1</sup>

## Diesel Particulate Matter

Diesel Particulate Matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 µm), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 µm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: aggravated asthma; chronic bronchitis; increased respiratory and cardiovascular hospitalizations; decreased lung function in children; lung cancer; and premature deaths for people with heart or lung disease.<sup>2, 3</sup>

## Criteria Pollutants in the City of South Gate

Generally, the sources for hydrogen sulfide emissions include decomposition of human and animal wastes and industrial activities, such as food processing, coke ovens, kraft paper mills, tanneries, and

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<sup>1</sup> CARB, TAC Identification List, <http://www.arb.ca.gov/toxics/id/taclist.htm>, accessed October 17, 2016.

<sup>2</sup> CARB, Diesel and Health Research, [www.arb.ca.gov/research/diesel/diesel-health.htm](http://www.arb.ca.gov/research/diesel/diesel-health.htm), accessed October 17, 2016.

<sup>3</sup> CARB, Fact Sheet March 2008, Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, <http://www.arb.ca.gov/ch/communities/ra/westoakland/documents/factsheet0308.pdf>, accessed October 17, 2016.

petroleum refineries. The sources for vinyl chloride emissions include manufacturing of plastic products, hazardous waste sites, and landfills. In addition, according to the SCAQMD's 2012 *Air Quality Management Plan*,<sup>4</sup> the sulfate and visibility-reducing particle standards have not been exceeded anywhere in the Basin, thus further evaluation of the hydrogen sulfide, vinyl chloride, sulfate, or visibility-reducing particle emissions for the Project is not necessary. Although the Los Angeles County portion of the Basin is designated as nonattainment for lead, the exceedance is the result of lead emissions from industrial lead-acid battery recycling facilities in the City of Vernon and the City of Industry.<sup>5</sup> The proposed Project site is located outside of the Preliminary Investigation Area (PIA) of the *Remedial Action Cleanup Plan for Offsite Properties* for the Exide Technologies Battery Recycling Facility in the City of Vernon.<sup>6</sup>

In 2013 the US EPA designated a portion of Los Angeles County as nonattainment for the National Ambient Air Quality Standards (NAAQS) lead standard. The higher lead concentrations were recorded downwind from stationary sources. The SCAQMD Source Receptor Areas (SRAs), which monitor lead emissions in more populated areas, show concentrations that do not exceed the revised federal lead standard. Motor vehicles and paints used to be a source of lead; however, unleaded fuel and unleaded paints have virtually eliminated lead emissions from most land use projects. As a result, there is no need for any further evaluation of lead emissions. Accordingly, this air quality analysis will focus primarily on the criteria air pollutants summarized below.

- **Ozone (O<sub>3</sub>).** Ozone is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) undergo photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- **Volatile Organic Compounds (VOCs).** VOCs are compounds comprised primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Several VOCs are classified as TACs, however, VOCs themselves are not criteria pollutants; but they contribute to the formation of criteria pollutants, including O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>2.5</sub>.
- **Nitrogen Dioxide (NO<sub>2</sub>).** NO<sub>2</sub> is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO) and is also a byproduct of fuel combustion. NO<sub>x</sub> is primarily emitted in the form of NO, but quickly reacts to form NO<sub>2</sub>. NO<sub>x</sub> is primarily a mixture of NO and NO<sub>2</sub>. NO<sub>2</sub> acts as an acute irritant and, in equal concentrations, is more injurious than NO. According to the US EPA, NO<sub>2</sub> concentrations on or near major roads can be approximately 30 to 100

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<sup>4</sup> South Coast Air Quality Management District, 2012 Air Quality Management Plan, 2012.

<sup>5</sup> South Coast Air Quality Management District, 2012 Lead State Implementation Plan, 2012.

<sup>6</sup> <http://www.dtsc.ca.gov/HazardousWaste/Projects/Residential-Cleanup.cfm>

percent higher than concentrations in the surrounding community, which could contribute to health effects for at-risk populations, including people with asthma, children, and the elderly.<sup>7</sup>

- **Carbon Monoxide (CO).** CO is a colorless, odorless gas produced by the incomplete combustion of fuels. Motor vehicles operating at slow speeds are the primary source of CO. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- **Sulfur dioxide (SO<sub>2</sub>).** SO<sub>2</sub> is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When sulfur dioxide oxidizes in the atmosphere, it forms sulfates (SO<sub>4</sub>).
- **Respirable Particulate Matter (PM<sub>10</sub>).** PM<sub>10</sub> consists of small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM<sub>10</sub>, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM<sub>10</sub> is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.
- **Fine Particulate Matter (PM<sub>2.5</sub>).** PM<sub>2.5</sub> refers to particulate matter that is 2.5 microns or smaller in diameter. The sources of PM<sub>2.5</sub> include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles.

### *Local Air Quality*

Criteria air pollutants during construction and operation are generated by mobile, stationary, and area-wide sources. Area source emissions during construction would be generated by construction activities including construction vehicle and equipment refueling and architectural coatings of buildings. During operation of the Project, area source emissions would include refueling of landscaping equipment. Mobile emissions during construction and operation would be generated by combustion of fuel and dust particulates blown into the air by trucks and vehicles travelling to and from the project site. Motor vehicles are the primary source of pollutants in the local vicinity.

### **Existing Pollutant Levels at Nearby Monitoring Stations**

The SCAQMD monitors air quality conditions at 45 locations throughout the Basin. The Project site is located in SCAQMD's South Central Los Angeles County receptor area. Historical data from the area was used to characterize existing conditions in the vicinity of the Project area. **Table 3.1-2 2012-2014 Ambient Air Quality Data in Project Vicinity**, shows pollutant levels, State and federal standards, and the number of exceedances recorded in the area from 2012 through 2014. The eight-hour federal standard for O<sub>3</sub> was exceeded two times during this three-year period while the daily State standard for PM<sub>2.5</sub> was exceeded three times. CO and NO<sub>2</sub> levels did not exceed the CAAQS from 2012 to 2014.

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<sup>7</sup> US EPA, Final Revisions to the Primary National Ambient Air Quality Standard for NO<sub>2</sub> General Overview, Office of Air and Radiation Office of Air Quality Planning and Standards, pgs. 11-12, <https://www3.epa.gov/ttn/naaqs/standards/nox/fr/20100209.pdf>, accessed October 17, 2016.

**Table 3.1-2**  
**2012-2014 Ambient Air Quality Data in Project Vicinity**

Pollutant	Pollutant Concentration & Standards	South Central Los Angeles County		
		2012	2013	2014
Ozone	Maximum 1-hour Concentration (ppm)	0.086	0.090	0.094
	Days > 0.09 ppm (State 1-hour standard)	0	0	0
	Days > 0.075 ppm (Federal 8-hour standard)	0	0	2
Carbon Monoxide	Maximum 1-hour Concentration (ppm)	N/A	N/A	6.0
	Days > 20 ppm (State 1-hour standard)	N/A	N/A	0
	Maximum 8-hour Concentration (ppm)	4.0	3.5	3.8
Nitrogen Dioxide	Days > 9.0 ppm (State 8-hour standard)	0	0	0
	Maximum 1-hour Concentration (ppm)	0.0793	0.0698	0.0682
	Days > 0.18 ppm (State 1-hour standard)	0	0	0
PM <sub>10</sub>	Maximum 24-hour Concentration (µg/m <sup>3</sup> )	N/A	N/A	N/A
	Days > 50 µg/m <sup>3</sup> (State 24-hour standard)	N/A	N/A	N/A
PM <sub>2.5</sub>	Maximum 24-hour Concentration (µg/m <sup>3</sup> )	51.2	52.1	35.8
	Days > 35 µg/m <sup>3</sup> (Federal 24-hour standard)	1	1	1
Sulfur Dioxide	Maximum 24-hour Concentration (ppm)	N/A	N/A	N/A
	Days > 0.04 ppm (State 24-hour standard)	N/A	N/A	N/A

Source: SCAQMD annual monitoring data ([www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year](http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year)) accessed August 21, 2016.

N/A: Not available at this monitoring station.

### Sensitive Receptors and Locations

According to the US EPA sensitive receptors include uses in which people are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants.<sup>8</sup> Examples include hospitals, schools, and senior housing facilities. As shown in **Figure 2.0-1, Regional and Project Vicinity Map**, land uses surrounding the Project Site include: The existing LHSC campus directly north of the Project Site across Tweedy Boulevard, a concrete channelized portion of the Los Angeles River approximately 1,200 feet east of the Project Site, a strip mall comprised of general commercial uses to the west along Atlantic Avenue, and a vacant parcel owned by LAUSD that separates the Project Site from existing single-family residences to the south.

<sup>8</sup> US EPA, Urban Environmental Program in New England, What Are Sensitive Receptors, <http://www.epa.gov/region1/eco/uep/sensitivereceptors.html>, accessed October 17, 2016

### 3.1.3 REGULATORY FRAMEWORK

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of other programs. The agencies primarily responsible for improving the air quality within the Basin (Los Angeles County Area) include the United States Environmental Protection Agency (US EPA), California Air Resources Board (CARB), Southern California Association of Governments (SCAG), SCAQMD, and the City of South Gate.

#### **Federal**

##### *US Environmental Protection Agency*

The US EPA is responsible for enforcing the federal Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for seven criteria pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. The prescribed levels are considered to be the maximum levels of ambient (background) air pollutants determined to be safe (with an adequate margin of safety) for the public health and welfare.

The 1990 CAA Amendments were enacted to better protect the public's health and create more efficient methods of lowering pollutant emissions. The major areas of improvement addressed in the amendments include air basin designations, automobile/heavy-duty engine emissions, and toxic air pollutants. The US EPA designates air basins as being in attainment or nonattainment for each of the seven criteria pollutants. Nonattainment air basins are ranked (marginal, moderate, serious, severe, or extreme) according to the degree of nonattainment. An air basin in nonattainment is then required to submit a State Implementation Plan (SIP) that describes how the state will achieve federal standards by specified dates.

The CAA requires U.S. EPA to designate areas as attainment, nonattainment, or maintenance for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in **Table 3.1-1**. The U.S. EPA has classified the Los Angeles County portion of the South Coast Air Basin as nonattainment for O<sub>3</sub> and PM<sub>2.5</sub>, attainment for PM<sub>10</sub>, maintenance for CO, and attainment/unclassified for NO<sub>2</sub>.

## State Regulations

### *California Air Resources Board*

In addition to being subject to the requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for administering the CCAA and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to achieve and maintain the CAAQS, which are generally more stringent than the federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB has broad authority to regulate mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The State standards for the Basin are summarized in **Table 3.1-3 State and National Ambient Air Quality Standards and Attainment Status for the South Coast Air Basin**.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment.

**Table 3.1-3**  
**State and National Ambient Air Quality Standards and**  
**Attainment Status for the South Coast Air Basin**

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	Nonattainment	--	--
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	/a/	0.075 ppm (147 µg/m <sup>3</sup> )	Nonattainment
Respirable Particulate Matter (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Attainment
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	Nonattainment	--	--
Fine Particulate Matter (PM <sub>2.5</sub> )	24-hour	--	--	35 µg/m <sup>3</sup>	Nonattainment
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Nonattainment	12 µg/m <sup>3</sup>	Nonattainment
Carbon Monoxide (CO)	8-hour	9.0 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> )	Maintenance
	1-hour	20 ppm (23 mg/m <sup>3</sup> )	Attainment	35 ppm (40 mg/m <sup>3</sup> )	Maintenance
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	Attainment	53 ppb (100 µg/m <sup>3</sup> )	Unclassified/ Attainment
	1-hour	0.18 ppm (338 µg/m <sup>3</sup> )	Attainment	100 ppb (188 µg/m <sup>3</sup> )	Unclassified/ Attainment
Sulfur Dioxide (SO <sub>2</sub> )	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	Attainment	--	Attainment
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	Attainment	75 ppb (196 µg/m <sup>3</sup> )	Attainment
Lead (Pb)	30-day average	1.5 µg/m <sup>3</sup>	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m <sup>3</sup>	Nonattainment

/a/ CARB has not determined 8-hour O<sub>3</sub> attainment status.

Source: CARB, Ambient Air Quality Standards, and attainment status, accessed August 1, 2016 ([www.arb.ca.gov/design/adm/adm.htm](http://www.arb.ca.gov/design/adm/adm.htm))

## Regional

### *South Coast Air Quality Management District*

The 1977 Lewis Air Quality Management Act merged four air pollution control districts to create the SCAQMD to coordinate air quality planning efforts throughout Southern California. It is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards. Programs include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD monitors air quality over its jurisdiction of 10,743 square miles, including the Basin, which covers 6,745 square miles and is bounded by the Pacific Ocean to the west, the San Gabriel, San Bernardino and San Jacinto mountains to the north and east, and San Diego County to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SCAQMD also regulates the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin.

All areas designated as nonattainment under the CCAA are required to prepare plans showing how they will meet the air quality standards. The SCAQMD regularly prepares an Air Quality Management Plan (AQMP) to address CAA and CCAA requirements by identifying policies and control measures. On December 7, 2012, the SCAQMD adopted its 2012 AQMP, which is now the legally enforceable plan for meeting the 24-hour PM<sub>2.5</sub> strategy standard. The SCAQMD's Draft 2016 AQMP developed strategies to meet the NAAQS for the 8-hour ozone standard by 2032, the annual PM<sub>2.5</sub> standard by 2021-2025, the 1-hour ozone standard by 2023, and the 24-hour PM<sub>2.5</sub> standard by 2019.

In its role as the local air quality regulatory agency, the SCAQMD also provides guidance on how environmental analyses should be prepared. This includes recommended thresholds of significance for evaluating air quality impacts.

### *Southern California Association of Governments*

The Southern California Association of Governments (SCAG) assists in air quality planning efforts by preparing the transportation portion of the AQMP through the adoption of its Regional Transportation Plan (RTP). This includes the preparation of a Sustainable Communities Strategy (SCS) that responds to planning requirements of SB 375 and demonstrates the region's ability to attain greenhouse gas reduction targets set forth in State law.



SCAG is a council of governments for the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As a regional planning agency, SCAG serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews projects to analyze their impacts on SCAG's regional planning efforts.

Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated Metropolitan Planning Organization (MPO) for the Southern California region, it is responsible, pursuant to Section 176(c) of the 1990 CAA Amendments, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts and for determining conformity with the applicable air quality management plan. It is required to quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts. Pursuant to California Health and Safety Code Section 40460(b), SCAG is also responsible for preparing and approving portions of the basin's air quality management plans relating to demographic projections, and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The most recent population, housing, and transportation measures and strategies are contained in the 2012 Regional Transportation Plan.

## **Local Regulations**

Local governments, such as the City of South Gate, have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the Air Quality Management Plan (AQMP). The AQMP assigns local governments certain responsibilities to assist the SCAQMD in meeting air quality goals and policies. In general, a first step toward implementation of a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its general plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with California Environmental Quality Act (CEQA) requirements and the CEQA review process, local governments assess air quality impacts, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

### *City of South Gate*

The City of South Gate General Plan 2035 was adopted in December 2009 and includes several strategies for directly and indirectly improving air quality. Specifically, the Healthy Community Element includes Goal HC7, which calls for “[h]igh levels of air quality and improved respiratory health throughout the City.” This includes four objectives:

HC 7.1 Establish land use patterns that reduce driving, enhance air quality, and improve respiratory health

HC 7.2 Encourage and enable transportation behavior that improves air quality and respiratory health

HC 7.3 Reduce air pollution from stationary sources

HC 7.4 Improve air quality and respiratory health through city programs and operations

HC 7.5 Promote measures that will be effective in reducing emissions during construction activities

In addition, the General Plan’s Green City Element serves as the State-mandated Conservation Element and includes goals to promote a robust green building program (Goal GC6), mitigate against and adapt to climate change (Goal GC7).

#### **3.1.4 METHODOLOGY**

The methodology used to evaluate the air quality impacts associated with construction and operation of the proposed project is based on SCAQMD guidelines and data, the California Emissions Estimator Model (CalEEMod), and information provided in the CalEEMod User’s Guide.<sup>9</sup> Air quality impacts are also estimated based on information and estimated activity levels of the proposed project’s construction and operation. Additionally, some elements of this analysis are based on data provided in other sections of this EIR; for example, trip generation rates are based on the traffic impact analysis prepared for this project (refer to **Section 3.6, Traffic and Transportation**).

#### **3.1.5 THRESHOLDS OF SIGNIFICANCE**

For the purposes of this analysis, air quality impacts of the proposed project would be considered significant if they would exceed the following standards of significance, which are based on Appendix G

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<sup>9</sup> Quality Management District, *California Emissions Estimator Model User’s Guide*, (2013). This document may be downloaded from the following website: <http://www.aqmd.gov/caleemod/user-s-guide>

of the 2016 State CEQA Guidelines. According to these guidelines, a project would normally have a significant impact on air quality if it would:

- AIR-1: Conflict with or obstruct implementation of the applicable air quality plan.
- AIR-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- AIR-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- AIR-4: Expose sensitive receptors to substantial pollution concentrations; or
- AIR-5: Create objectionable odors affecting a substantial number of people

An Initial Study was prepared (Appendix 1.0) that determined the project would have a less than significant impact or no impact related to the following thresholds:

- AIR-5: Create objectionable odors affecting a substantial number of people

Therefore this threshold is not analyzed in this EIR. The Initial Study is provided **Appendix 1.0** of this EIR.

### 3.1.6 IMPACTS AND MITIGATION MEASURES

#### **AIR-1 Conflict with or obstruct implementation of the applicable air quality plan.**

*SCAQMD Air Quality Management Plan.* The proposed school expansion will neither conflict with the SCAQMD's 2012 Air Quality Management Plan (AQMP) nor jeopardize the region's attainment of air quality standards. The AQMP focuses on achieving clean air standards while accommodating population growth forecasts by the Southern California Association of Governments (SCAG). Specifically, SCAG's growth forecasts from the 2016 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) are largely based on local growth forecasts from local governments like the City of South Gate. The 2016 RTP/SCS forecasts and accommodates up to 111,800 persons; 28,300 households; and 24,000 jobs in the City of South Gate by 2040. See Table 3.1-4 below.

The Project would replace and expand educational facilities in the City of South Gate. The proposed Project would not add any residents to the City, but would instead serve existing residents and those who may reside nearby in the future due to reasons unrelated to the Project. As such, the RTP/SCS' assumptions about growth in the City accommodate educational growth on this site. The Project thus

does not conflict with the population-based growth assumptions in the regional air plan and this impact is considered less than significant.

**Table 3.1-4**  
**Project Consistency with AQMP Growth Forecast**

Forecast Year	Population in City of South Gate	Proposed Project	Households in City of South Gate	Proposed Project	Employment in City of South Gate	Proposed Project
2012	94,700		23,200		20,400	
2020	99,300	0	25,200	0	22,100	0
2040	111,800		28,300		24,000	

Source: DKA Planning 2016 based on SCAG 2016 Regional Transportation Plan Growth Forecast.

*City of South Gate General Plan.* The City's General Plan identifies five objectives that identify specific strategies for advancing the City's clean air goals. As illustrated in **Table 3.1-5 Consistency with City of South Gate General Plan**, the proposed Project is consistent with the applicable objectives in the General Plan. As such, the proposed Project's would be consistent with the City's General Plan policies and as such impacts would be less than significant.

**Table 3.1-5**  
**Project Consistency with City of South Gate General Plan**

Strategy	Project Consistency
Objective HC 7.1. Establish land use patterns that reduce driving, enhance air quality, and improve respiratory health	Consistent. The Proposed Project would further centralize school services and educational programs on the existing campus, reducing the need to travel to off-site locations for these functions.
Objective HC 7.2. Encourage and enable transportation behavior that improves air quality and respiratory health	Consistent. The Proposed Project would further centralize school services and educational programs on the existing campus, reducing the need to travel to off-site locations for these functions and reducing air quality impacts.
Objective HC 7.3. Reduce air pollution from stationary sources	Consistent. To the extent the Proposed Project will include stationary and area sources, they will be regulated by the SCAQMD.
Objective HC 7.4. Improve air quality and respiratory health through city programs and operations	Not Applicable. This objective applies to City programs and operations. The proposed project is not a City-sponsored project.
Objective HC 7.5. Promote measures that will be effective in reducing emissions during construction activities	Consistent. The project and its construction activities will be environmentally cleared through the CEQA process. Further, SCAQMD Rule 403 and other regulations will control emissions during the construction process.

Source: DKA Planning, 2016.

### ***Mitigation Measure***

None required

### ***Residual Impacts***

The air quality impacts of residential development on the Project site are accommodated in the region's emissions inventory for the 2016 RTP/SCS and 2012 AQMP. The project is therefore not expected to conflict with or obstruct implementation of the AQMP, and any impact on the Plan would be considered less than significant. Similarly, the proposed Project is consistent with the City's General Plan objectives and would not conflict with its five objectives. Impacts would be less than significant.

**AIR-2                      Violate any air quality standard or contribute substantially to an existing or project air quality violation**

### ***Regional Emissions - Construction***

Construction-related emissions were estimated using the SCAQMD's CalEEMod 2013.2.2 model using assumptions provided by LAUSD. As shown in **Table 3.1-6 Proposed Construction Schedule**, the Project is expected to take approximately 24 months to complete.

**Table 3.1-6  
Proposed Construction Schedule**

Phase	Duration	Notes
Demolition	8/1/17-8/31/17	Debris from parking lot and 17 classrooms hauled away to off-site location
Grading	9/1/17-9/30/17	
Pile Driving	10/1/17-10/31/17	
Building Construction	11/1/17-7/31/19	
Paving	7/1/19-7/31/19	
Architectural Coatings	5/1/19-7/31/19	

*Source: DKA Planning, 2016*

As shown in **Table 3.1-7 Estimated Daily Construction Emissions – Unmitigated**, the construction of the proposed Project will produce VOC, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> emissions that do not exceed the SCAQMD's regional thresholds. As a result, construction of the proposed Project would not contribute substantially to an existing violation of air quality standards for regional pollutants (e.g., ozone). This impact is considered less than significant.

**Table 3.1-7**  
**Estimated Daily Construction Emissions – Unmitigated**

Construction Phase Year	VOC	NO <sub>x</sub>	Pounds Per Day		PM <sub>10</sub>	PM <sub>2.5</sub>
			CO	SO <sub>x</sub>		
2017	10	97	73	<1	10	6
2018	3	31	25	<1	2	2
2019	24	42	40	<1	3	2
<b>Maximum Regional Total</b>	24	97	73	<1	10	6
<b>Regional Significance Threshold</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceed Threshold?	No	No	No	No	No	No
<b>Maximum Localized Total</b>	24	97	71	<1	10	6
<b>Localized Significance Threshold</b>	<b>--</b>	<b>98</b>	<b>630</b>	<b>--</b>	<b>13</b>	<b>7</b>
Exceed Threshold?	No	No	No	No	No	No

*Source: DKA Planning, 2016 based on CalEEMod 2013.2.2 model runs. LST analyses based on 5 acre site with 25 meter distances to receptors in South Central Los Angeles County source receptor area.*

### ***Local Emissions - Construction***

In terms of local air quality, the Project would produce localized air quality emissions, but would not exceed the SCAQMD's recommended localized standards of significance for NO<sub>2</sub> and CO during the construction phase. Construction activities would also produce PM<sub>10</sub> and PM<sub>2.5</sub> emissions, but these emissions would not exceed localized thresholds recommended by the SCAQMD. As a result, construction impacts on localized air quality are considered less than significant.

Nevertheless, given the proximity of the construction site to the main LHSC, Standard Conditions SC-AQ-1 and SC-AQ-2 will be incorporated as part of the project. These conditions require the use of readily-available construction equipment with EPA-certified Tier 4 engines to reduce combustion-related NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> emissions. SC-AQ-4 addresses fugitive dust emissions of PM<sub>10</sub> and PM<sub>2.5</sub> that would be regulated by SCAQMD Rule 403, which calls for Best Available Control Measures (BACM) that include watering portions of the site that are disturbed during grading activities and minimizing tracking of dirt onto local streets. Additionally, SC-AQ-4 would ensure architectural coating used for the Project would comply with all VOC standards set by SCAQMD.

Regulatory Compliance Measures ensure Project design and construction activities comply with applicable regulations such as Building Codes adopted by the City. Additionally, the incorporation of SC-

AQ-1 through -3, would require LAUSD to use construction equipment and BACM that would reduce air pollutant emissions and ensure proper maintenance of construction activities. It should be noted that Table 3.1-7 conservatively does not assume the application of BACMs to control fugitive dust.

### Operation

The Project will also produce long-term air quality emissions to the region primarily as a result of motor vehicles accessing the Project site. Based on estimated traffic trip generation, the Project could add up to 743 net new vehicle trips to and from the Project site on a peak weekday at the start of operations in 2019.<sup>10,11</sup> Even with the increase in operational activities, emissions would not exceed SCAQMD's regional significance thresholds for VOC, NO<sub>x</sub>, CO, PM<sub>10</sub> and PM<sub>2.5</sub> emissions (**Table 3.1-8 Estimated Daily Operations Emissions - Unmitigated**). As a result, the Project's operational impacts on regional air quality are considered less than significant.

With regard to localized air quality impacts, the Proposed Project would emit minimal emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> from area and energy sources on-site. As shown in Table 3.1-8, these localized emissions would not approach the SCAQMD's localized significance thresholds that signal when there could be human health impacts at nearby sensitive receptors during long-term operations. Therefore, the Project's operational impacts on localized air quality are considered less than significant.

**Table 3.1-8**  
**Estimated Daily Operations Emissions – Unmitigated**

Emission Source	VOC	NO <sub>x</sub>	Pounds per Day		PM <sub>10</sub>	PM <sub>2.5</sub>
			CO	SO <sub>x</sub>		
Area Sources	1	<1	<1	<1	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Mobile Sources	2	7	29	<1	6	2
<b>Total Operations</b>	<b>4</b>	<b>7</b>	<b>29</b>	<b>&lt;1</b>	<b>6</b>	<b>2</b>
<b>Regional Significance Threshold</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceed Threshold?	No	No	No	No	No	No
<b>Net Localized Total</b>	<b>1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>
<b>Localized Significance Threshold</b>	<b>--</b>	<b>98</b>	<b>630</b>	<b>--</b>	<b>4</b>	<b>2</b>
Exceed Threshold?	N/A	No	No	N/A	No	No

Source: DKA Planning, 2016 based on CalEEMod 2013.2.2 model runs. LST analyses based on 5 acre site with 25 meter distances to receptors in South Central Los Angeles County source receptor area.

<sup>10</sup> DKA Planning based on CalEEMod 2013.2.2 model runs, 2016

<sup>11</sup> KOA Corporation, *Traffic Study for Los Angeles Unified School District ISLC*, May 16, 2016

**LAUSD Standard Conditions**

- SC-AQ-2** LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications to ensure excessive emissions are not generated by unmaintained equipment.
- SC-AQ-3** LAUSD or its construction contractor shall:
- Maintain slow speeds with all vehicles
  - Load impacted soil directly into transportation trucks to minimize soil handling
  - Water/mist soil as it is being excavated and loaded onto the transportation trucks
  - Water/mist and/or apply surfactants to soil placed transportation trucks prior to exiting the site
  - During dumping, minimize soil drop height into transportation trucks or stockpiles
  - During transport, cover or endorse trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks
  - Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed
  - Place stockpiled soil on polyethylene sheeting and cover with similar material.
  - Place stockpiled soil in areas shielded from prevailing winds.
- SC-AQ-4** LAUSD shall will impose the following standard conditions to reduce construction emissions from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations and ensure that these emissions do not exceed significance thresholds:

**Exhaust Emissions**

- Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM).
- Consolidate truck deliveries and/or limit the number of haul trips per day.
- Route construction trucks off congested streets.
- Employ high pressure fuel injection systems or engine timing retardation.
- Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or lessb(ULSD) in all diesel construction equipment.



- Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower.
- Restrict non-essential diesel engine idle time, to not more than five consecutive minutes.
- Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction.
- Utilize electric or alternatively fueled equipment, if feasible.
- Utilize construction equipment with the minimum practical engine size.
- Utilize low-emission on-road construction fleet vehicles.
- Ensure construction equipment is properly serviced and maintained to the manufacturer's standards.

#### **Fugitive Dust**

- Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more).
- Replace ground cover in disturbed areas as quickly as possible.
- Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles.
- Pave all construction access roads for at least 100 feet from the main road to the project site.
- Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall.
- Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph).

- Apply water at least three times daily, except during periods of rainfall, to all unpaved road surfaces.
- Limit traffic speeds on unpaved road to 15 mph or less.
- Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD.
- Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.
- Limit the amount of daily soil and/or demolition debris loaded and hauled per day.

#### **General Construction**

- Utilize ultra-low VOC or zero-VOC surface coatings.
- Phase construction activities to minimize maximum daily emissions.
- Configure construction parking to minimize traffic interference.
- Provide temporary traffic control during construction activities to improve traffic flow (e.g., flag person).
- Develop a trip reduction plan for construction employees.
- Implement a shuttle service to and from retail services and food establishments during lunch hours.
- Increase distance between emission sources to reduce near-field emission impacts.

Require construction contractors to document compliance with the identified mitigation measures

#### ***Residual Impacts***

Construction of the proposed Project would not produce a local violation of air quality standards or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

The long-term operation of the proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation for regional and localized air quality. Impacts would be less than significant.

**AIR-3                      Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard**

### ***Construction***

A project's construction impacts could be considered cumulative considerable if it substantially contributes to cumulative air quality violations when considering other projects that may undertake concurrent construction activities.

Construction of the proposed Project would not contribute substantially to cumulative emissions of any non-attainment regional pollutants. For regional ozone precursors, the Project would not exceed SCAQMD mass emission thresholds for ozone precursors during construction. Similarly, regional emissions of PM<sub>10</sub> and PM<sub>2.5</sub> would not exceed mass thresholds established by the SCAQMD. Therefore, construction emissions impacts on regional criteria pollutant emissions would be considered less than significant.

When considering local impacts, cumulative construction emissions are considered when projects are within close proximity of each other that could result in larger impacts on local sensitive receptors. Construction of the Project itself would not produce cumulative considerable emissions of localized nonattainment pollutants PM<sub>10</sub> and PM<sub>2.5</sub>, as the anticipated emissions would not exceed LST thresholds set by the SCAQMD. This is considered a less than significant impact.

If any other proposed projects were to undertake construction concurrently with the proposed Project, localized CO, PM<sub>2.5</sub>, PM<sub>10</sub>, and NO<sub>2</sub> concentrations potentially could be further increased. However, the application of LST thresholds to each cumulative project in the local area would help ensure that each project does not produce localized hotspots of CO, PM<sub>2.5</sub>, PM<sub>10</sub>, and NO<sub>2</sub>. Any projects that would exceed LST thresholds (after mitigation) would perform dispersion modeling to confirm whether health-based air quality standards would be violated. The SCAQMD's LST thresholds recognize the influence of a receptor's proximity, setting mass emissions thresholds for PM<sub>10</sub> and PM<sub>2.5</sub> that generally double with every doubling of distance.

### ***Operation***

As for cumulative operational impacts, the proposed land use (i.e., school) will not produce cumulatively considerable emissions of nonattainment pollutants at the regional or local level. Because the Project's air quality impacts would not exceed the SCAQMD's operational thresholds of significance as noted in Table 3.1-8, the Project's impacts on cumulative emissions of non-attainment pollutants is considered less than

significant. The Project is a school expansion project and as such does not include major sources of combustion or fugitive dust. As a result, localized emissions of PM<sub>10</sub> and PM<sub>2.5</sub> would be minimal. As previously mentioned, industrial uses exist in the project vicinity along Tweedy Boulevard. Shown in Table 3.1-2, even including industrial uses in the Project vicinity, the eight-hour federal standard for O<sub>3</sub> was exceeded twice during the period of 2012-2014, PM<sub>2.5</sub> was exceeded three times, and CO and NO<sub>2</sub> never exceeded the CAAQS. Existing uses are thus not expected to emit substantial emissions of nonattainment pollutants in the future.

### ***Mitigation Measures***

None required.

### ***Residual Impacts***

Construction of the Proposed Project would not result in a cumulatively considerable contribution to pollutant concentrations at nearby receptors. Impacts would be less than significant. Long-term operation of the Project would not result in a cumulatively considerable net increase of any non-attainment criteria pollutant. Impacts would be less than significant.

#### **AIR-4 Expose sensitive receptors to substantial pollutant concentrations**

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following typical groups who are most likely to be affected by air pollution: children under 14; the elderly over 65 years of age; athletes; and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

There are several existing or reasonably foreseeable sensitive receptors near the Project site, including:

- LHSC campus; 100 feet north of the Project site across Tweedy Boulevard.
- Single-family residences on Pinehurst Avenue; 855 feet southwest of the Project site.
- Single-family residences on Wood Avenue; 570 feet north of the Project site.
- Single-family residences on Aldrich Road; 390 feet south of the Project site.
- Tweedy Elementary School, 9724 Pinehurst Avenue; 865 feet northwest of the Project Site.

## ***Construction***

Construction of the Proposed Project could produce air emissions at several existing sensitive receptors near the Project Site. LST thresholds represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable ambient air quality standard. As illustrated in Table 3.1-7, these nearby receptors would not be exposed to substantial concentrations of localized pollutants PM10 and PM2.5 from construction of the proposed Project. Specifically, construction activities would not exceed SCAQMD LST thresholds for PM10 and PM2.5 and represent a less than significant impact.

## ***Operation***

The proposed Project would generate long-term emissions on-site from area and energy sources that would generate negligible pollutant concentrations of CO, NO<sub>2</sub>, PM2.5, or PM10 at nearby sensitive receptors. While long-term operation of the Project would generate traffic that produces off-site emissions, these would not result in exceedances of CO air quality standards at roadways in the area due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to area in which the project is located. Second, auto-related CO emissions continue to decline as a result of advances in fuel combustion technology in the vehicle fleet. Finally, the Project would not contribute to the levels of congestion that would be needed to produce the amount of emissions needed to trigger a potential CO hotspot.<sup>12</sup> Specifically, intersection levels of service at the ten intersections analyzed in the traffic report for the project would not be significantly impacted by traffic volumes from the development under existing or 2019 horizon scenarios.<sup>13</sup>

Finally, the Project would not result in any substantial emissions of TACs during the construction or operation phase. During the construction phase, air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions.<sup>14</sup> However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the Project would not create substantial concentrations of TACs. In addition, the SCAQMD recommends that health risk

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<sup>12</sup> Caltrans, Transportation Project-Level Carbon Monoxide Protocol, updated October 13, 2010.

<sup>13</sup> KOA Corporation, Traffic Study for LAUSD ISLC Addition, South Gate; May 2016.

<sup>14</sup> California Office of Environmental Health Hazard Assessment. Health Effects of Diesel Exhaust. [www.  
http://oehha.ca.gov/public\\_info/facts/dieselfacts.html](http://oehha.ca.gov/public_info/facts/dieselfacts.html)

assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.<sup>15</sup> The Project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, Project impacts related to TACs would be less than significant.

### ***Mitigation Measures***

None required.

### ***Residual Impacts***

Construction of the Proposed Project would not have any significant impacts on pollutant concentrations at nearby receptors. Impacts would be less than significant.

Long-term operation of the Proposed Project would not have any significant impacts on pollutant concentrations at nearby receptors. Impacts would be less than significant.

## **3.1.7 CUMULATIVE ANALYSIS**

As noted above in Threshold AIR-3, according to the SCAQMD CEQA Handbook, projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should be considered to result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the Basin. So if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the Basin would not be cumulatively considerable. As presented previously in Tables 3.1-7 and 3.1-8, construction and operation of the Project would not result in daily construction emissions that would exceed the thresholds of significance recommended by the SCAQMD. Applying the SCAQMD criteria, the Project would not result in a cumulatively considerable contribution to regional air pollutant emissions. Therefore, the project would not result in significant project-level air quality impacts.

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<sup>15</sup> SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

## 3.2 GEOLOGY AND SOILS

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### 3.2.1 INTRODUCTION

This section analyzes potential geotechnical (e.g., soils engineering and seismic) and engineering geologic (e.g., fault and landslide) impacts resulting from project implementation. The analysis is based on the Comprehensive Geotechnical Report for the Proposed International Studies Learning Center (Geotechnical Report) prepared for Los Angeles Unified School District by Group Delta, dated October 2, 2015. The study is provided in **Appendix 3.2-1**.

### 3.2.2 EXISTING CONDITIONS

The proposed Project is located in southeastern Los Angeles County in the City of South Gate, in a predominantly developed setting. The surrounding uses are a mixture of commercial, institutional, industrial, and residential buildings. The Project site is located at the eastern end of Tweedy Blvd, approximately 1,200 feet from a concrete channelized portion of the Los Angeles River. The site was formerly in use as a variety of commercial and manufacturing operations, but is currently an undeveloped vacant dirt lot with an existing concrete parking lot occupying the northern boundary of the project along Tweedy Boulevard.

#### *Regional Geologic and Seismic Setting*

The site is located within the seismically active Los Angeles Basin area of Southern California. The basin formed over seven million years ago during transtensional tectonism between northwest and eastwest trending fault systems. Today the basin is undergoing transpressional stress, bound by uplifting trust blocks including the Whittier, Palos Verdes, and Santa Monica-Hollywood-Raymond fault systems. Internally, the basin is filled with sedimentation thousands of feet structurally influenced by thrusting fault blocks and strike slip faults dividing the basin into northwest trending valley and ridges. The location to the site with respect to regional geology is presented in **Figure 3.2-1 Regional Geologic Map**.

#### *Physiography, Topography, and Geologic and Soil Units*

The project site was used for agricultural purposes until the 1930s and was gradually developed for a variety of industrial uses, which continued until the 1990s. The site previously contained a variety of building structures, including warehouses, shop and maintenance buildings and various other structures. Due to environmental contamination from the industrial and agricultural uses, numerous environmental investigations have been performed onsite. The environmental investigations resulted in extensive remediation onsite and surrounding the site including removals and treatments. Actions included the

removal of contaminated soils reaching a depth of 30 feet, the replacement of these soils with engineered fill, and the addition of shoring walls during the remediation. The soil remediation activity occurred pursuant to the LHSC Remedial Action Plan (RAP) 2 prepared in 2009, and is provided in Appendix 3.2. The fill locations and depths are presented in **Figure 3.2-2 Final Excavation Areas Map**.

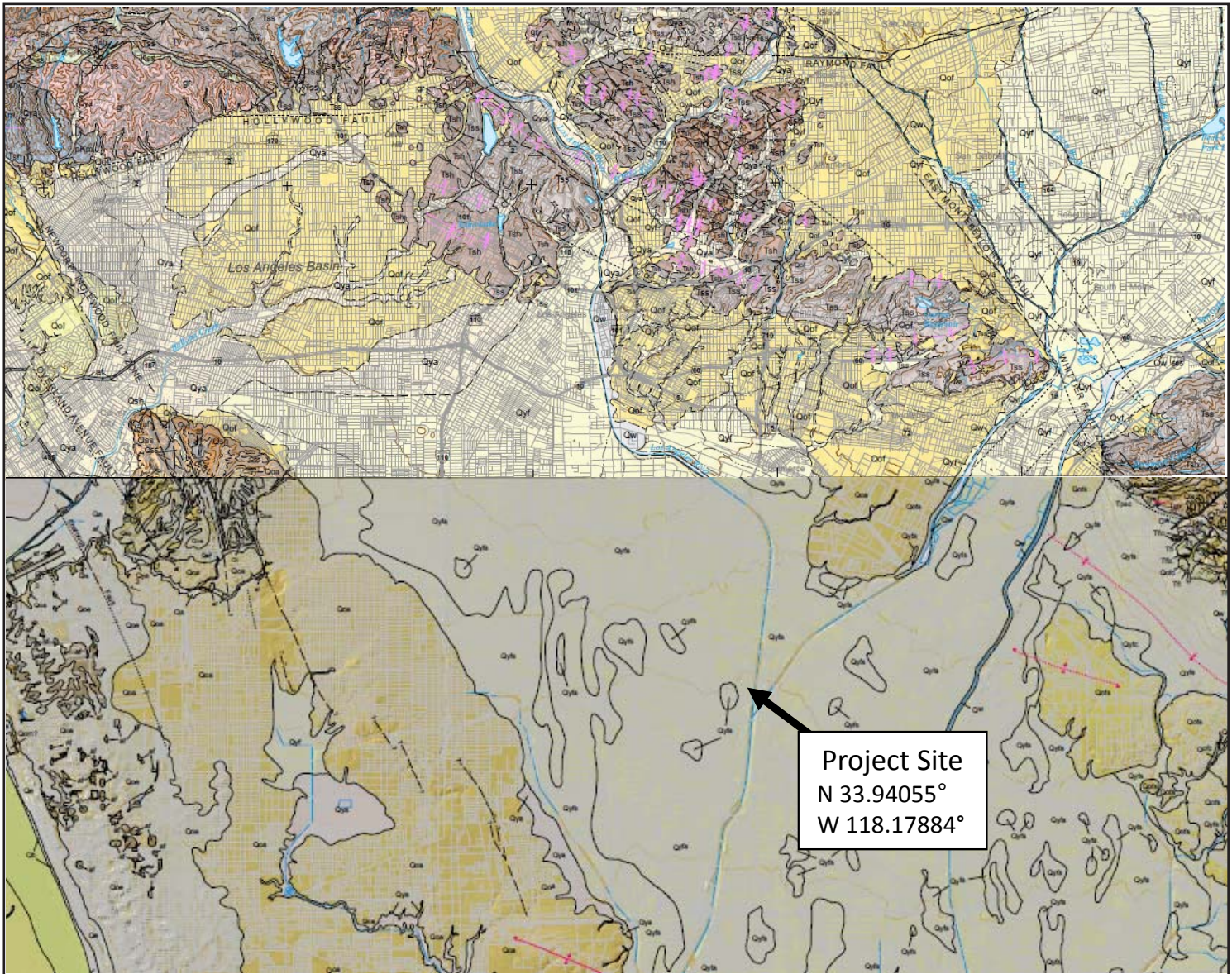
The site is located on a broad alluvial fan gently sloping south and contains uncertified fill overlying native alluvium to varying depths of 10 feet and 13 feet.<sup>1</sup> The alluvial fan deposits derived from erosional debris transported southward from the Santa Monica Mountains. The current trends of the Los Angeles River are located about a quarter mile east of the site. Paleo meandering and flooding of the river contributed to the alluvial deposits underlying the site. Depth of fill encountered generally corresponded with the excavation map in **Figure 3.2-2**. The fill generally consisted of loose silty sand layer in the upper 5 to 10 feet and silty medium dense silty sand and poorly graded sand with silt and some siltier layers. Trace fragments of demolition debris were also encountered in the upper three to five feet of areas at the project site.

The underlying alluvium generally consists of interbedded layers of soft to medium stiff sandy silt and loose to medium dense silty sand. Interbedded silty sands and clay layers of about 10 feet were encountered at depths of about 20 feet and 40 feet in a few of the borings. The soils are generally loose to medium dense in the upper 60-70 feet, and very dense below these depths.

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<sup>1</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015.





Approximate Scale 1" = 6 Miles

#### MAP SYMBOLS

<b>at</b> Artificial fill	<b>Offshore Region</b>
<b>Qw</b> Active channel and wash deposits	<b>Qms</b> Unconsolidated shelf sediment
<b>Qa</b> Alluvial flood plain deposits	<b>Qmf</b> Unconsolidated flank sediment
<b>Qls</b> Landslide deposits	<b>Qmb</b> Unconsolidated basin sediment
<b>Qb</b> Beach deposits	<b>Qmr</b> Unconsolidated ridge sediment
<b>Qe</b> Eolian deposits	<b>Qmc</b> Unconsolidated canyon sediment
<b>Qpe</b> Paralic estuarine deposits	<b>Qct</b> Canyon terrace
<b>Qyf</b> Young alluvial fan and valley deposits, undivided a = sand, s = silt, c = clay	<b>Qcf</b> Canyon fill
<b>Qy12</b> Young alluvial fan deposits, unit 2	<b>Qgf</b> Gully fill
<b>Qy11</b> Young alluvial fan deposits, unit 1	<b>Qf</b> Fan deposits
<b>Qya</b> Young alluvial flood plain deposits, unit 1	<b>Qls</b> Landslide deposits
<b>Qye</b> Young eolian deposits	
<b>Qype</b> Young paralic estuarine deposits	
<b>Qof</b> Old alluvial fan and valley deposits, undivided a = sand, s = silt, c = clay	
<b>Qoa</b> Old alluvial flood plain deposits, undivided	

Contact - accuracy of location ranges from well located to inferred. All offshore contacts are considered approximately located.

Fault - solid where well located; dashed where approximately located or inferred; dotted where concealed; queried where continuation or existence is uncertain. Where age was determined in offshore area, age symbol is shown astride fault and relative offset is shown by U, upthrown side; D, downthrown side (relative or apparent). Age of faults are indicated as follows:

- cuts strata of Holocene age
- cuts strata of Pleistocene age
- ▣ cuts strata of Quaternary age
- △ cuts strata of Pliocene age
- ▲ cuts Miocene or older strata

Anticlinal fold - solid where well located; dashed where approximately located or inferred; dotted where concealed. Plunge direction indicated by arrowhead on fold axis.

Synclinal fold - solid where well located; dashed where approximately located or inferred; dotted where concealed. Plunge direction indicated by arrowhead on fold axis.

Strike and dip of stratified rocks. Number indicates dip angle in degrees when known.

SOURCE: Group Delta Consultants, Inc.

FIGURE 3.2-1





## EXCAVATION DEPTHS

1 FT BELOW GROUND SURFACE (BGS)	5 FT BGS
2 FT	5.5 FT BGS
2.5 FT BGS	6 FT BGS
3 FT BGS	7 FT BGS
3.5 FT BGS	8 FT BGS
4 FT BGS	10 FT BGS
4.5 FT BGS	10.5 FT BGS
11 FT BGS	25 FT BGS
11.5 FT BGS	30 FT BGS
12 FT BGS	DISCOLORED SOIL REMOVAL AREA
13 FT BGS	PINK CONCRETE REMOVAL AREA
14 FT BGS	
15 FT BGS	
22 FT BGS	

## EXPLANATION

15	PARCEL AND PARCEL NUMBER
[Red Outline]	OPERABLE UNIT (OU) BOUNDARIES
[Solid Line]	EXCAVATION BOUNDARY
[Dashed Line]	TOXIC SUBSTANCES CONTROL ACT (TSCA) EXCAVATION AREA

Ref: Pictometry Online  
URS (2012) Final Excavation Areas map

## Legend

- B-15 Approximate Location of Mud Rotary Boring
- ▲ C-13 Approximate Location of CPT

Scale: 1" = 150'



SOURCE: Group Delta Consultants, Inc.

FIGURE 3.2-2

### *Faulting and Seismic Setting*

The site is centrally located within the Los Angeles Basin on a broad alluvial fan gently sloping south. Structurally the fan is bound by the Santa Monica-Hollywood-Raymond fault system in the north, the Newport-Inglewood fault zone to the west and the Elsinore fault zone to the east. The Project site is shown in relation to fault zones in **Figure 3.2-3 Regional Fault Map**. Today the basin is undergoing transpressional stress, bound by uplifting trust blocks including the Whittier, Palos Verdes, and Santa Monica-Hollywood-Raymond fault systems. Internally, the basin is filled with sedimentation thousands of feet structurally influenced by thrusting fault blocks and strike slip faults dividing the basin into northwest trending valley and ridges.

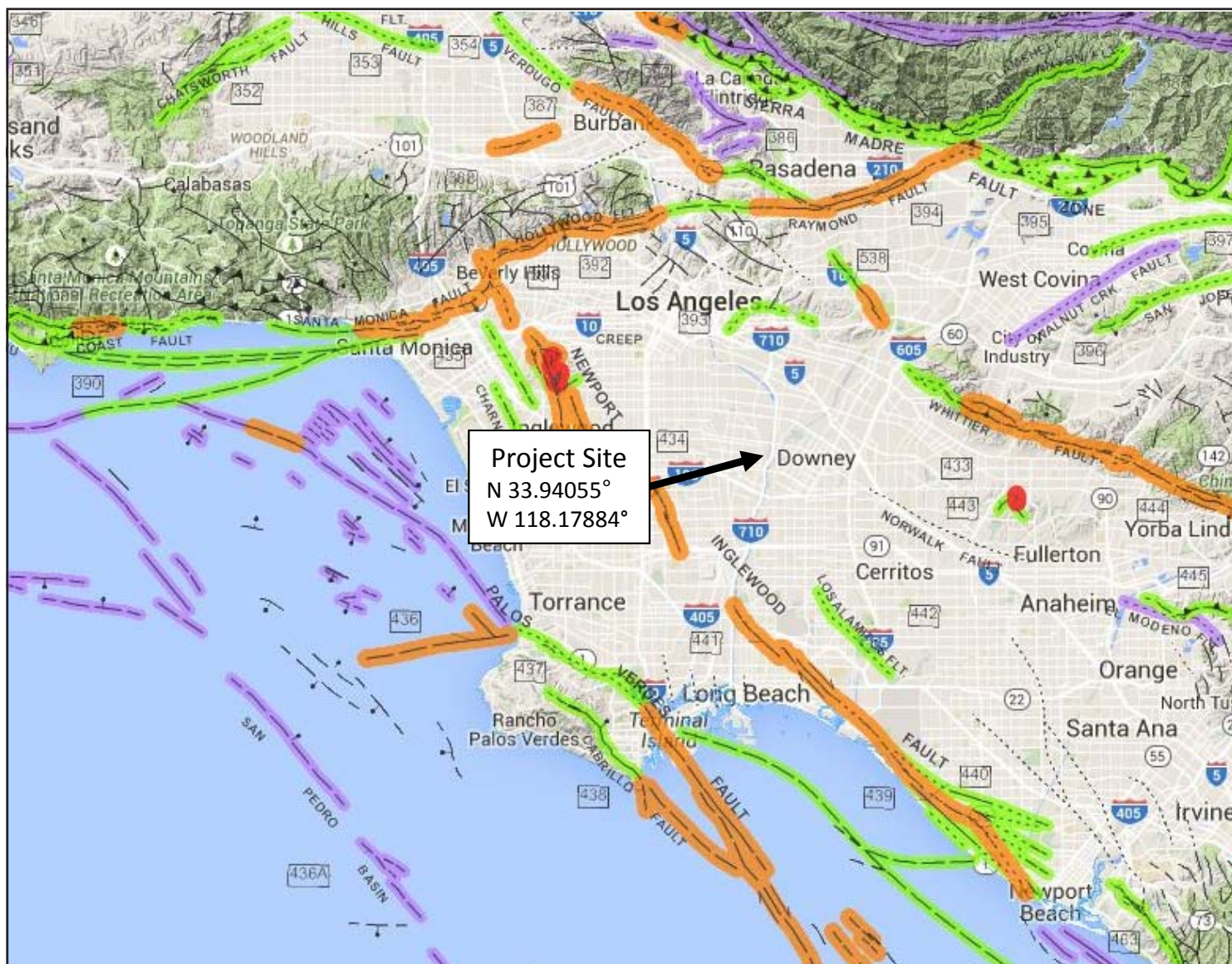
The site is located within the seismically active area of southern California and thus, there is a potential for the site to experience strong ground shaking from local and regional faults. The principal factors determining the level of seismic ground shaking risk at a location are (1) the distance to the active and potentially active faults capable of causing a moderate to large earthquake; (2) the maximum and probable earthquake magnitudes for each fault; (3) the recurrence interval (average time between each) earthquake (slip rate); and (4) the type of geologic or man-made materials (e.g., artificial fill, alluvium, or bedrock) underlying the location.

Seismically active faults nearest to the site include the Newport-Inglewood, Puente Hills, Elsinore, and Raymond faults. **Table 3.2-1 Earthquake Faults near the Project Site** presents faults nearest the Project site and respective characteristics. The Newport-Inglewood fault is closest to the site, located about 5.5 miles west, trending northwest over 45 miles in length. It is an estimated right lateral normal fault with a potential magnitude MW 6.0-7.4.<sup>2</sup> The USGS 2008 fault map indicates the Puente Hills Blind Thrust fault is comprised of a series of stepping thrust belts trending northwest. One of the fault segments is about two miles south of the site dipping to the north and a second fault segment is less than two miles north of the site, also dipping to the north. The Puente Hills fault may project at depth beneath the site. Blind thrust faults have the potential for surface deflection or folding during earthquakes, however they are not considered to produce surface ruptures. A potential magnitude MW 6.7 is estimated for the Puente Hills Blind Thrust. The Elsinore fault zone is located approximately eight miles east of the Project site, trending northwest over 100 miles in length. It is estimated to be a right lateral strike slip fault capable of potential magnitude Mw 6.5-7.5. The Raymond Fault is located about 12.5 miles north of the site, trending east-west over 16 miles in length. It is considered to have a potential magnitude MW 6.0-7.0.

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<sup>2</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015.





Approximate Scale 1" = 10 Miles

### Explanation

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain.

#### ADDITIONAL FAULT SYMBOLS

- Bar and ball on downthrown side (relative or apparent).
- Arrows along fault indicate relative or apparent direction of lateral movement.
- Arrow on fault indicates direction of dip.
- Low angle fault (barbs on upper plate).

Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Holocene	—	—	Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
	200	—	—	Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
	11,700	—	—	Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	700,000	—	—	Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary	1,600,000	—	—	Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
	4.5 billion	—	—		



SOURCE: Group Delta Consultants, Inc.

FIGURE 3.2-3

**Table 3.2-1**  
**Earthquake Faults near the Project Site**

<b>Fault Name</b>	<b>Distance from site (Miles)</b>	<b>Assumed Maximum Magnitude</b>	<b>Type of Faulting</b>	<b>Last Major Rupture</b>
Newport-Inglewood	5.5	7.4	Right Lateral Normal Fault	1933
Puente Hills Blind Thrust	2	6.7	Blind thrust	1987
Elsinore	8	7.5	Right lateral strike slip	1910
Raymond	12.5	7.0	Left lateral	unknown

*Notes: Source: Comprehensive Geotechnical Report for the Proposed International Studies Learning Center, Group Delta, 2015. Southern California Earthquake Data Center, Significant Earthquakes and fault, Accessed August 8, 2016*

### ***Fault Rupture***

Surface rupture represents a primary or direct potential hazard to structures built on an active fault zone. Additionally, the project site is not located in a currently established Alquist-Priolo Earthquake Zone.<sup>3</sup> No known active faults are mapped crossing the site or projecting towards the site. Potentially active faults are faults which show evidence for seismicity in the past 1.6 million years and are not considered to have a high potential for future seismicity.<sup>4</sup> One potentially active fault, the Los Alamitos Fault, is mapped projecting northwest 0.5 miles toward the site. Not much is known about the Los Alamitos Fault - it is indistinct and movement is undetermined.

The closest mapped active fault is the Newport Inglewood Fault, located about 5.5 miles west of the project site, trending northwest. Several Alquist-Priolo Special Study Zones (AP Zones) have been identified for the Newport-Inglewood fault zone and the closest AP Zone to the site is for the Newport-Inglewood fault zone about five miles west of the site.<sup>5</sup> Thus the potential for surface ground rupture at the project site is considered low.

<sup>3</sup> California Geological Survey *Alquist-Priolo Earthquake Fault Zones, Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.*

<sup>4</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center, 2015.*

<sup>5</sup> California Geological Survey *Alquist-Priolo Earthquake Fault Zones, Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.*

### ***Liquefaction and Seismic Settlement***

Soil liquefaction occurs when saturated granular (not clay-rich), low to medium relative density soils are subjected to sufficiently strong long duration earthquake vibrations. The vibration causes an increase in soil pore pressure as the water in pores resists the tendency for the soil to reduce its volume. When the pore water pressure reaches the vertical effective stress (roughly equal to the weight of the overburden), the soil particles become suspended in water causing a complete loss in soil strength as it behaves more like a viscous liquid. Liquefaction can cause excessive structural settlement, ground rupture, lateral spreading (landslide-like movement), or failure of shallow bearing foundations. Liquefaction is typically limited to the upper 50 feet of the subsurface soils.

According to the Department of Conservation South Gate Quadrangle the project site is located within the State Earthquake Induced Liquefaction Seismic Hazard Zone.

### ***Earthquake-Induced Landslides***

Seismically-induced landslides and other types of slope failures, such as lateral spreading, can result in the event of an earthquake. This may be the case where there are steep slopes, weak bedrock or surficial materials, or shallow groundwater. The project site and surrounding lots are relatively flat. Topographic relief slopes gently with approximately 1 foot from the south to the northern boundaries and there are no significant slopes that can present a landslide hazard at or near the site. Furthermore, the site is not located within a State of California Earthquake-Induced Landslide Hazard Zone as indicated by the California Geological Survey.

### ***Earthquake-Induced Dam Failure Flooding, Seiche, and Tsunami***

Earthquake-induced flooding is caused by failure of up gradient dams or other water-retaining structures during an earthquake. There are no dams within city boundaries<sup>6</sup>. The closest dam is the Hansen Dam of the Tujunga Reservoir roughly 33 miles northwest of the site. The Hansen dam has undergone seismic retrofitting since its original construction according to Los Angeles Department of Water and Power. If the reservoir were to breach from an earthquake, it is anticipated that the majority of the flood waters will be contained within the controlled Los Angeles River channel. Therefore, flood and inundation hazard for this site is considered low.<sup>7</sup>

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<sup>6</sup> City of South Gate, *General Plan*, December 2009

<sup>7</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015.

Tsunami and seiches are large seismically generated waves in the ocean or other large enclosed bodies of water, respectively. Such waves would not likely impact the proposed Project because it lies approximately 15 miles inland from the Pacific Ocean at an elevation of 88 feet above mean sea level. Any tsunami and seiche waves that could occur off shore would dissipate and disperse at levels and a velocity that would not likely damage Project improvements or pose health or safety hazards for students, faculty or employees on-site.

#### ***Subsidence***

Generalized ground subsidence can affect broad areas where either groundwater withdrawal or oil extraction is occurring within underlying geologic formations. This is due to the reduction in pore space within the formations due to removal of fluids and formation compression from the weight of overlying geologic materials.

#### ***Landslides***

Landslides result from the lateral displacement, or fall, of a dislodged rock or soil mass that moves down or along a sloped surface. This can include large bedrock block glide or rotational failures, rockfalls in very steep terrain, slumps and rotational failures in massive alluvial formations, and debris flows and mudslides composed of saturated rock and soil material.

#### ***Lateral Spreading***

Lateral spreading is characterized primarily by lateral movement of surficial soil layers of gently to steeply sloping saturated soil deposits as a consequence of liquefaction of a subsurface granular deposit.

#### ***Groundwater***

A review of the Los Angeles County well records indicates there are currently 11 active wells within a 1 mile radius of the Legacy campus, and indicate that groundwater is currently at a depth of over 50 feet below the existing ground surface.<sup>8</sup>

Historically, the highest shallow ground levels at the site ranged from 8 feet to 10 feet below the ground surface (**Figure 3.2-4**). The California Department of Water Resources (DWR) manages the groundwater within the Central Los Angeles Basin (i.e, location of Project Site). The primary responsibility of DWR is to administer the water management plan and issue annual reports to the Court on groundwater related

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<sup>8</sup> Los Angeles County Department of Public Works, *Groundwater Wells*, accessed August 9, 2016

events within the Basin. It is not expected that groundwater will reach these historically high levels again, as demand for groundwater exceeds the natural replenishment of water within the Central Basin.

The DWR management plan used for the past 50 years has resulted in the groundwater level being maintained at a depth of 50 feet below the existing ground surface. Conditions have also been reported that all groundwater level at the Project site measured to be at or below 30 feet deep.<sup>9</sup> The report has indicated that the measured groundwater is linked to the presence of two shallow water bearing zones, with the shallowest zone located at about 30 to 40 feet. Despite this, the design groundwater level for the Project was taken at the historic high of 10 feet below ground surface for the purpose of a conservative analysis and to take into account the possibility of local, temporary perched groundwater variations.

### 3.2.3 REGULATORY FRAMEWORK

#### State

##### *Alquist-Priolo Earthquake Fault Zoning Act*

The 1972 Alquist-Priolo Special Studies Zones Act 1971 resulted from the consequences of the Sylmar-San Fernando earthquake and seeks to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act was renamed in 1994 to the Alquist-Priolo Earthquake Fault Zoning (APEFZ) Act. The Sylmar-San Fernando earthquake produced surface fault rupture damage along a zone that might have been identified in advance of the earthquake had the proper studies been mandated.

The best and most feasible surface rupture mitigation is avoidance of the causative fault. Thus, the APEFZ Act mandates that cities and counties (lead agencies) require that within an Earthquake Fault Zone (EFZ) geologic investigations must be performed to demonstrate that potential development sites are not threatened by surface fault displacements from future earthquakes. To aid the various jurisdictions that function as lead agencies for project approvals in California, the California Geological Survey must delineate Earthquake Fault Zones on standard US Geological Survey topographic maps (1-inch-equals-2000-feet scale) along faults that are "sufficiently active and well defined" as defined in the Act. Quoting from the implementation guide, Special Publication 42<sup>10</sup>:

*Zone boundaries on early maps were positioned about 660 feet (200 meters) away from the fault traces to accommodate imprecise locations of the faults and possible existence of active branches.*

<sup>9</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015.

<sup>10</sup> Details regarding the 2007 Interim Revision of the Alquist-Priolo Earthquake Fault Zone Act can be found at <http://www.consrv.ca.gov/CGS/rghm/ap/index.htm>.



*The policy since 1977 is to position the EFZ boundary about 500 feet (150 meters) away from major active faults and about 200 to 300 feet (60 to 90 meters) away from well-defined, minor faults. Exceptions to this policy exist where faults are locally complex or where faults are not vertical.*

Lead agencies are responsible to regulate most development projects within the Earthquake Fault Zones as described in the APEFZ Act, but may enact more stringent regulations. Certain smaller residential developments can be exempt.

### ***Seismic Hazards Mapping Act***

The 1990 Seismic Hazards Mapping Act (SHMA)<sup>11</sup> addresses the primary earthquake hazard, strong groundshaking, as well as the secondary hazards of liquefaction, earthquake-induced landslides, and in some areas zones of amplified shaking. As with the APEFZ Act, the California Geological Survey is the primary State agency charged with implementing the SHMA, and CGS provides local jurisdictions with the 1-inch-equals-2000-feet scale seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides, and amplified shaking. Site-specific hazard investigations are required by the SHMA when a development project is located within one of the Seismic Hazard Mapping Zones (SHMZ) defined as a zone of required investigation.

Lead agencies with the authority to approve projects shall ensure that

*The geotechnical report shall be prepared by a registered civil engineer or certified engineering geologist, having competence in the field of seismic hazard evaluation and mitigation. The geotechnical report shall contain site-specific evaluations of the seismic hazard affecting the project, and shall identify portions of the project site containing seismic hazards. The report shall also identify any known off-site seismic hazards that could adversely affect the site in the event of an earthquake.*

And

*Prior to approving the project, the lead agency shall independently review the geotechnical report to determine the adequacy of the hazard evaluation and proposed mitigation measures and to determine the requirements of Section 3724(a), above, are satisfied. Such reviews shall be conducted by a certified engineering geologist or registered civil engineer, having competence in the field of seismic hazard evaluation and mitigation.*

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<sup>11</sup> Details regarding the Seismic Hazards Mapping Act can be found at <http://gmw.consrv.ca.gov/shmp/SHMPpgminfo.htm>.

CGS Special Publication (SP) 117<sup>12</sup> and companion volumes for implementation of the SP 117 process (one volume for liquefaction and one volume for earthquake-induced landslides)<sup>13</sup> provide detailed guidance for lead agencies to review SHMA reports. The overall goal is to protect the public by minimizing property damage and the loss of life.

### ***California Environmental Quality Act***

The 1970 California Environmental Quality Act (CEQA) ensures that local agencies consider and review the environmental impacts of development projects within their jurisdictions. CEQA requires that an environmental document (e.g., Environmental Impact Report [EIR], Mitigated Negative Declaration [MND]) be prepared for projects that are judged in an Initial Study (IS) to have potentially significant effects on the environment. Environmental documents (IS, MND, EIR) must consider, and analyze as deemed appropriate, geologic, soils, and seismic hazards. If impacts are considered potentially significant, recommendation of mitigation measures to reduce geologic and seismic hazards to less than significant are made. This allows early public review of proposed development projects and provides lead agencies the authority to regulate development projects in the early stages of planning.

### ***California Building Code***

The State of California provides a minimum standard for building design through the California Building Code (CBC). The 2016 edition of the CBC is based on the 2015 International Building Code (IBC) as published by the International Code Council, together with other amendments provided in local/municipal codes, and is adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in the California Occupational Safety and Health Administration (Cal-OSHA) regulations and in Section A33 of the CBC.

Standard residential, commercial, and light industrial construction is governed by the CBC, to which cities and counties add amendments. The CBC, which is included in Title 24 of the California Administrative Code, is a compilation of three types of building standards from three different origins:

- Those adopted by state agencies without change from building standards contained in national model codes (e.g., the IBC)

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<sup>12</sup> California Geological Survey, Special Publication (SP)117: Guidelines for Evaluating and Mitigating Seismic Hazards in California; <http://gmw.consrv.ca.gov/shmp/webdocs/sp117.pdf>.

<sup>13</sup> Recommended Procedures for Implementation of SP117; <http://www.scec.org/resources/catalog/LiquefactionproceduresJun99.pdf> and <http://www.scec.org/resources/catalog/LandslideProceduresJune02.pdf>.

- Those adopted and adapted from the national model code standards to meet California conditions (e.g., most of California is in Seismic Design Categories D and E)
- Those authorized by the California legislature that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns (e.g., the specification of Certified Engineering Geologist rather than engineering geologist)

In addition, the CBC regulates excavation, foundations, and retaining walls; contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials; and regulates grading activities, including drainage and erosion control.

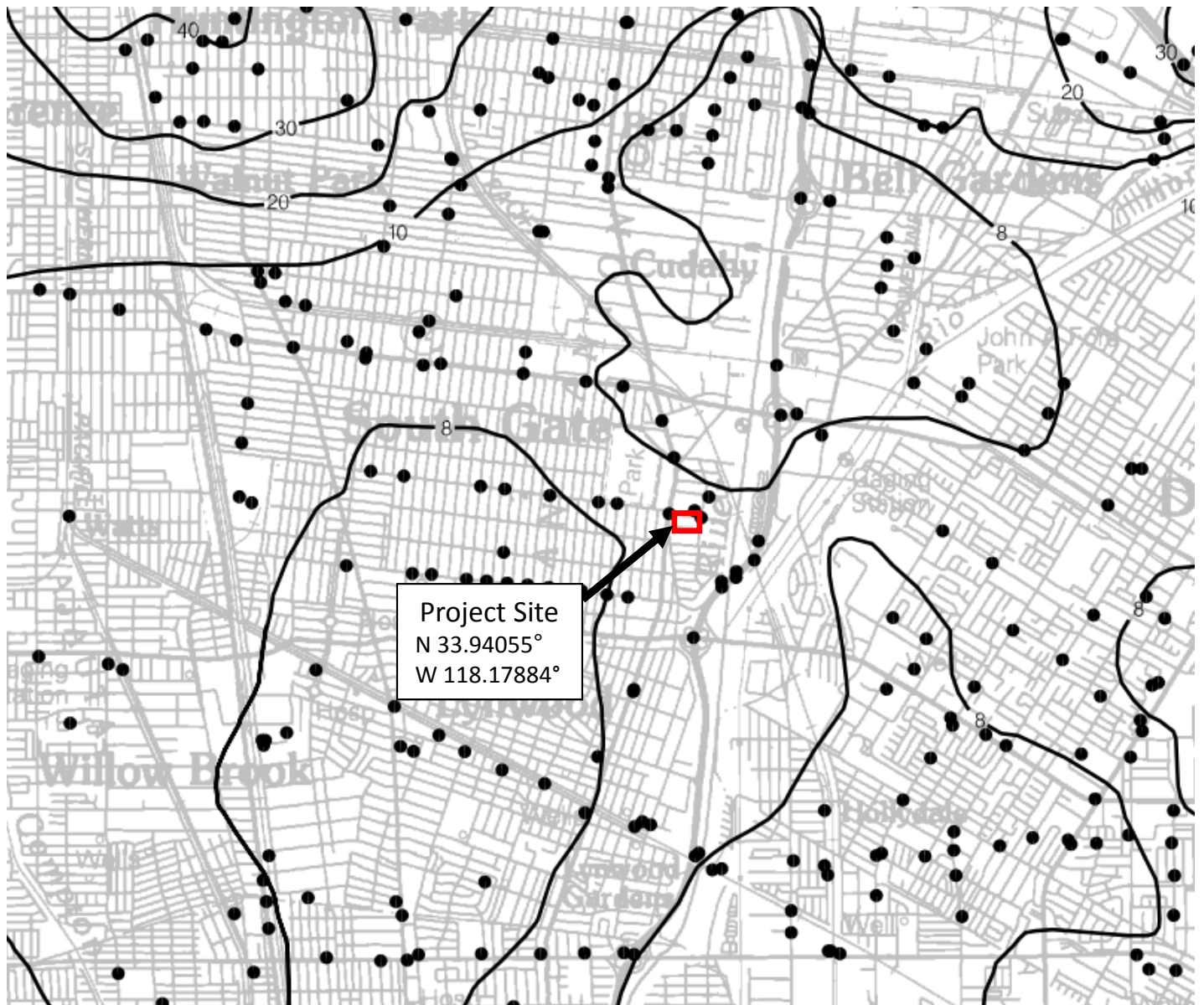
#### ***California Education Code***

Sections 17212 and 17212.5 of the California Education Code require analysis of impacts relating to geology and soils prior to the construction of school buildings. Section 17212 states that if the prospective school site is located within the boundaries of any special studies zone or within an area designated as geologically hazardous in the safety element of the local general plan, a geological and soil engineering study completed by competent personnel is needed to provide an assessment of the nature of the site and potential for earthquake or other geologic hazard damage. Section 17212.5 states that no school building shall be constructed, reconstructed, or relocated on the trace of a geological fault along which surface rupture can reasonably be expected to occur within the life of the school building. Additionally, Section 17212.5 requires a geological and soil engineering study be prepared for the construction of any school building, or if the estimated cost exceeds \$25,000 for the reconstruction, alteration or addition to any school building that alters structural elements.

#### **3.2.3.2 Local Regulations**

##### ***City of South Gate***

The City of South Gate Department of Community Development, which oversees the Building and Safety Department, has the responsibility for: a) land development review and engineering approvals of all private development within the City to ensure compliance with City codes, ordinances and policies, and b) the preparation of conditions of approval for development projects. The City has adopted the 2016 CBC.



● Borehole Site

— 30 —

Depth to ground water in feet

X Site of historical earthquake-generated liquefaction.

Reference: Seismic Hazard Zone Report, 1998, South Gate 7.5 Minute Quadrangle, Department of Conservation, Division of Mines and Geology

Approximate Scale 1" = 1 Mile



SOURCE: Group Delta Consultants, Inc.

FIGURE 3.2-4

### 3.2.4 METHODOLOGY

Project-specific technical reports and other technical data sources (maps and reports noted above in footnotes) were reviewed to establish the existing geology and soils conditions affecting the proposed project site. Consideration was given to the potential impacts due to the implementation of the proposed Project considering the local and regional geology and soils setting.

### 3.2.5 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to geology and soils are contained in the environmental checklist form contained in Appendix G of the CEQA Statutes and Guidelines. Impacts related to geology and soils are considered significant if the proposed project would:

- GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Pub. 42
  - Strong seismic groundshaking,
  - Seismic-related ground failure, including liquefaction, and
  - Landslides.
- GEO-2: Result in substantial soil erosion, or the loss of topsoil,
- GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- GEO-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

An Initial Study was prepared that determined the project would have a less than significant impact or no impact related to the following thresholds:

- GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Pub. 42
- Seismic-related ground failure, including liquefaction, and
- Landslides.

GEO-2: Result in substantial soil erosion, or the loss of topsoil,

GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Therefore these thresholds are not analyzed in this EIR. The Initial Study is provided **Appendix 1.0** of this EIR.

### 3.2.6 IMPACTS AND MITIGATION MEASURES

**GEO-1                      Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- **Strong seismic groundshaking**

The proposed school could be subject to strong groundshaking in the event of an earthquake originating along one of the faults listed in **Table 3.2-1** (or another active or potentially active in the Southern California area; **Figure 3.2-3**). Such hazards exist throughout Southern California and could pose a risk to public safety and property by exposing people, property, or infrastructure to potentially adverse effects (e.g., severe structural damage and building collapse). The closest known fault line to the Project site, the Newport-Inglewood fault, is located approximately five and a half miles west of the site with a potential magnitude Mw 6.0 – 7.4. It should be noted that the Project would result in the removal of 17 portable classrooms, which although lighter and smaller may not be as safe as a newly constructed building in the event of a seismic event. Nonetheless, it is likely that strong seismic ground shaking will occur over the course of the Project's lifetime and impacts could be potentially significant. The proposed Project will be constructed in compliance with provisions of the CBC, California Administrative Code, California Educational Code, and with adhere to applicable LAUSD Standard Conditions. All activities and development on the Project site would be subject to uniform site development and construction standards that are designed to protect public safety. In addition recommended stabilization measures set forth in the Final Geotechnical Report, if applicable will be included in the Project. Compliance with these documents and regulations would reduce potential impacts related to strong seismic groundshaking to a less than significant level.

## ***Mitigation Measures***

*None are required. Residual Impacts*

Compliance with CBC would ensure impacts would be less than significant.

**GEO-2                      Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; and be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial risks to life or property.**

As previously discussed, historic highs of groundwater level for the project site reached 10 feet below ground surface. Currently, field measurements of 11 wells within a one mile radius of the Project site indicated that all groundwater levels measured to be at or below 30 feet deep.<sup>14</sup> Approximately 30 feet of topsoil was removed from the majority of the Project site during remediation activities, and replaced with clean imported soils compacted to at least 90 percent relative compaction. Furthermore, laboratory testing on the surface soils found on the Project site were determined to have a very low expansion profile.<sup>15</sup> However, as documentation is not available for the imported fills, these soils are assumed to be undocumented fill soil. The Geotechnical Report includes several earthwork measures that will be incorporated into the Project. These include:

1. The grading contractor is responsible for notifying the project geotechnical engineer of a pre-grading meeting prior to the start of grading operations and anytime that the operations are resumed after an interruption.
2. The geotechnical engineer shall determine the need to remove and recompact any existing fill. The limits for all removals should be determined by the project geotechnical engineer during grading, based on the actual conditions encountered.
3. Temporary excavations up to 4 feet deep should stand with vertical sides, but sandy soils will tend to slough as they dry and forming may be required. Deeper excavations should be sloped at 1H:1V or flatter, or shoring should be used.

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<sup>14</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015

<sup>15</sup> Group Delta, *Comprehensive Geotechnical Report for the Proposed International Studies Learning Center*, 2015

4. The bottom of the excavation for removals should be observed and approved by the project geotechnical engineer. Any loose or yielding soils should be overexcavated and recompacted to the limits determined by the project geotechnical engineer.
5. All structural fill should consist of generally sandy soils, and should be free of expansive clay, rock greater than 3 inches in maximum size, debris and other deleterious materials. All structural fill should be compacted to at least 95 percent of the maximum dry density determined by ASTM D 1557. Fill placed in non-structural and landscape areas should be compacted to at least 90 percent. Bedding and backfill of utility trenches are discussed in Section 5.8.
6. All earthwork and grading should be performed under the observation of the project geotechnical engineer. Compaction testing of the fill soils shall be performed at the discretion of the project geotechnical engineer. Testing should be performed for approximately every 2 feet in fill thickness or 500 cubic yards of fill placed, whichever is more restrictive. If specified compaction is not achieved, additional compactive effort, moisture conditioning, and/or removal and recompaction of the fill soils will be required.
7. All materials used for asphalt, concrete and base shall conform to the current "Green Book," and shall be compacted to at least 95 percent relative compaction.
8. If, in the opinion of the geotechnical engineer, contractor, or owner, an unsafe condition is created or encountered during grading, all work in the area shall be stopped until measures can be taken to mitigate the unsafe condition. An unsafe condition shall be considered any condition that creates a danger to workers, on-site structures, on-site construction, or any off-site properties or persons.

As determined in the Geotechnical Report, The maximum predicted settlement of is generally about three inches, but could be locally up to six inches. The three to six inches of settlement has approximately one inch of the settlement occurring below a depth of 60 feet. Therefore, the dynamic settlement that could be traced at the ground surface could range between two to five inches, which may exceed the typical tolerance for structures supported on conventional shallow foundations. Due to the predicted settlement of soil layers, the Project may not be suitable for conventional shallow foundations. The Geotechnical Report for the Project includes recommendations for construction of the Project on pilings. Both driven pile and/or Auger Cast Displacement (ACD) pile may be used for support of the proposed Project. With incorporation of the earthwork recommendations included in the Geotechnical Report and the use of piling for construction of the Project, impacts related to the unstable soils would be less than significant.



### ***Mitigation Measures***

Impacts would be less than significant, no mitigation is required.

### ***Residual Impacts***

With compliance with the recommendation in the Geotechnical Report and compliance with CBC standards impacts would be less than significant.

## **3.2.7 CUMULATIVE ANALYSIS**

The potential for cumulative impacts associated with geology and soils was assessed, based upon consideration of the proposed project and related projects in the City of South Gate. These related projects are identified in **Section 3.0, Environmental Impact Analysis**.

Geotechnical impacts tend to be site-specific rather than cumulative in nature and any development occurring within the City of South Gate would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. As Project development and each related project would have to be consistent with recommendations contained in each project's future preliminary geotechnical investigation report and be designed in accordance with the applicable CBC, the project would not result in a cumulatively considerable impact related to geology and soils. Impacts would be less than significant.

### ***Mitigation Measures***

No mitigation is required.

### ***Residual Impacts***

Impacts would be less than significant.

## 3.3 HAZARDS AND HAZARDOUS MATERIALS

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### 3.3.1 INTRODUCTION

This section evaluates potential environmental impacts on human health and the environment due to exposure to hazards and hazardous materials present or potentially present on the Project site. This section also evaluates the potential effects on the surrounding area as a result of the implementation of the proposed Project. For the purpose of this analysis, the terms hazards and hazardous materials include substances that, because of their quantity, concentration, or characteristics, may present moderate danger to public health, welfare, or the environment upon being released.

Information used to prepare this section was taken from the following sources:

Parsons, Operable Unit 2 Remedial Action Plan for the Proposed South Region High School #9 South Gate, California, October 2009

URS, Remedial Action Plan Operable Unit 3 for Legacy High School (AKA South Region High School #9), October 19, 2015

URS, Remedial Investigation and Feasibility Study Operable Unit 3 for Legacy High School (AKA South Region High School #9), October 5, 2015

California Envirostor South Region High School #9, January 6, 2004

The Planning Center, RF Survey Tech Memo, July 30, 2009.

### 3.3.2 EXISTING CONDITIONS

#### **Hazardous Material**

A number of properties may cause a substance to be considered hazardous, including toxicity, ignitability, corrosivity, or reactivity. Hazardous materials are defined as any solid, liquid, or gas that can harm people, other living organisms, property, or the environment. A hazardous material may be radioactive, flammable, explosive, toxic, corrosive, biohazards, an oxidizer, an asphyxiant, a pathogen, an allergen, or may have other characteristics that render it hazardous in specific circumstances. Issues associated with hazardous materials develop when such materials are improperly stored, transported, used, or released into the environment.<sup>1</sup>

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<sup>1</sup> California Code of Regulations, Title 22, Section 66084.

## Hazardous Waste

Once a hazardous material is ready for discard, it becomes a hazardous waste. For the purposes of this EIR, hazardous waste is any hazardous material that is abandoned, discarded, or recycled.<sup>2</sup> In addition, hazardous wastes occasionally may be generated by actions that change the composition of previously non-hazardous materials. The same characteristics that define a hazardous material are also applied to hazardous waste, toxicity, ignitability, corrosivity, or reactivity.

### *Past Uses and Operations on the Project Site*

The proposed project is located on a portion of 35 acres of land owned by LAUSD at Tweedy Boulevard and Adella Avenue in South Gate. Prior to the 1930s, land use was primarily agricultural. The site has been used for a variety of commercial and manufacturing operations since the 1930s including, but not limited to, foundries, machine shops, pesticide production facilities, a paper mill, a trucking terminal, metal plating, and manufacturing plants for various goods. These businesses continued until the 1990s when LAUSD began acquiring the land. Currently, the site is vacant. Previous uses have released chemicals of concern into underlying groundwater and soil layers.

### *Site Investigations and Remedial Activities*

Based on historical releases of hazardous materials, soil and groundwater at the site were contaminated by a variety of hazardous materials formerly used in industrial operations. Prior to the construction of the Legacy Campus on the site north of Tweedy, previous site investigations were conducted on several parcels to prepare a remedial action plan concerning soil and groundwater contaminants. For proposed clean-up activities, LAUSD and the Department of Toxic Substances Control (DTSC) divided the 35 acre site into five Operating Units (OUs). The soil portion of the site north of Tweedy Boulevard was designated OU1, the soil portion south of Tweedy Boulevard (i.e., the Project Site) was designated OU2, and groundwater throughout the site was designated OU3. As shown on **Figure 3.3-1 Designated Operating Units**, the Project site is located within the eastern half of OU2 and consists of parcels 5-16.

A summary of the previous investigations and remedial activities is provided below:

- An environmental assessment was performed by ICF in 1989 to determine whether chemicals from current and past activities had affected onsite soil and groundwater. Trichloroethene (TCE) and trace metals were detected in one of their monitoring wells

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<sup>2</sup> California Health and Safety Code, Section 25124

- A Phase II Characterization and Site Assessment Update reevaluated site conditions, remediation needs, and costs due to changes in site conditions, regulatory guidelines, or technologies that had occurred.
- Five steel underground storage tanks (USTs) were removed from OU 1 by the State Environmental Management (State) in 1994. RWQCB issued a closure letter indicating no further action was required regarding releases from the USTs.
- A Phase II ESA was performed to assess the environmental conditions south of Tweedy Boulevard and west of Adella Avenue (Project Site).
- On March 2, 2001, Parsons (2002) performed a limited groundwater sampling effort in the vicinity of Parcel 14. The shallow water-bearing zone was encountered at approximately 30 feet bgs. Elevated concentrations of total chromium were found in a number of samples, although only one sample (location PA14-3) had a detectable concentration of hexavalent chromium (CrVI).
- In 2002, Parsons (2002) completed soil, soil gas, and groundwater investigations at Parcels 14 and 20 to ascertain the nature and extent of releases from the two properties. 1,1-DCE, 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), 1,1,1-trichloroethane (1,1,1-TCA), and vinyl chloride (VC) were detected in the upper A zone groundwater beneath Parcel 20 at concentrations exceeding respective MCLs.
- In 2004, Parsons prepared a Site-Wide Data Compilation Report to assemble available environmental data in one document. This included performing a reconnaissance of each parcel to confirm any existing environmental features or concerns, to ascertain the current status of the property, and to potentially locate any additional environmental features not previously identified. No new sampling data were collected as part of this effort.
- In 2005, Parsons completed a PEA for the Site which included site reconnaissance and background research, including a review of city directories, aerial photos, building permits, and files at the Los Angeles Departments of Public Health and Sanitation (Parsons, 2005a). No new sampling data were collected to prepare the Final PEA. Site reconnaissance work was performed between February and May 2004. The results of previous investigations were tabulated and reviewed for usability. This was performed to support the development of a comprehensive Geographic Information System (GIS) for the Site, including integration of historical analytical data, development of a comprehensive Base Map and associated geospatial data, and a framework for incorporating future analytical data.
- Parsons (2008a) completed an RI/FS for OU 1 in 2008. The RI/FS Report was approved by the DTSC on December 2, 2008. Based on the results of the OU 1 RI/FS, a Remedial Action Plan (RAP) was prepared to address the removal of impacted soil gas and soil from OU 1 (Parsons, 2008b).
- The RAP was approved by DTSC on December 11, 2008, and implemented in 2009. The soil removal activities included the excavation and offsite disposal of soils impacted with metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), VOCs, and total petroleum hydrocarbons (TPH) to depths ranging from the ground surface to approximately 35 feet bgs. A total of 69,831.48 tons of soil was excavated from OU 1 of the Site and lawfully disposed of offsite.

In December 2005, LAUSD initiated an environmental investigation called a Remedial Investigation/Feasibility Study (RI/FS) to identify and define the environmental impacts to soil and groundwater from past industrial uses, prior to the construction of the existing LHSC.

The RI/FS identified the presence of the following chemicals at the site

- Petroleum hydrocarbons, including benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs);
- Metals, including arsenic, hexavalent chromium, and lead;
- Pesticides, including chlordane, 4,4-DDE, and 4,4-DDT;
- VOCs including chlorinated solvents: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,4-dioxane, tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1-TCA), trichloroethene (TCE), chloroform, and vinyl chloride.

Construction of LHSC was completed within OU 1 and the school opened in August 2012

### ***Project Site***

A Remedial Action Plan (RAP) was prepared for OU2 at the project site and for OU 3 (groundwater under all properties owned in LAUSD in Project vicinity) in 2009 and 2015 respectively.<sup>34</sup>

As part of the RAP, several chemical of concern were identified on the project site. These include: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), pesticides, and metals. Cleanup activities for the project site were initiated in early 2012 and completed in September 2012. The site received a No Further Action Letter from DTSC indicating that the cleanup was complete for all activities except groundwater. In 2015, a Remedial Investigation/Feasibility Study and a Remedial Action Plan for OU 3 were drafted for groundwater investigations and cleanup. Groundwater continues to be monitored throughout the site for contamination.

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<sup>3</sup> Operable Unit 2 Remedial Action Plan, prepared by Parsons, [http://www.laschools.org/project-status/attach/56.40059/OU2\\_RAP\\_102009.pdf](http://www.laschools.org/project-status/attach/56.40059/OU2_RAP_102009.pdf), October 2009

<sup>4</sup> Remedial Action Plan Operable Unit 3 prepared by URS Corporation, [http://achieve.lausd.net/cms/lib08/CA01000043/Centricity/domain/135/pdf%20files/Legacy\\_HS\\_RAP\\_Main\\_Report\\_Draft101915.pdf](http://achieve.lausd.net/cms/lib08/CA01000043/Centricity/domain/135/pdf%20files/Legacy_HS_RAP_Main_Report_Draft101915.pdf), October 2015

### 3.3.3 REGULATORY FRAMEWORK

#### Federal Regulations

##### *Environmental Protection Agency (EPA)*

The Environmental Protection Agency (EPA) is the main federal agency responsible for enforcing regulations relating to hazardous materials and wastes, including evaluation and remediation of contamination and hazardous wastes. The EPA works collaboratively with other agencies to enforce materials handling and storage regulations and site cleanup requirements. The Occupational Safety and Health Administration (OSHA) and the Department of Transportation (DOT) are authorized to regulate safe transport of hazardous materials.

##### *Asbestos Hazard Emergency Response Act*

The Asbestos Hazard Emergency Response Act (AHERA) provides guidance for the management of asbestos-containing materials (ACM) in schools. The Asbestos School Hazard Abatement Reauthorization Act (ASHARA) extended AHERA regulations to cover public and commercial buildings. AHERA established regulatory standards for inspections, abatement, and transport and disposal of ACM.<sup>5</sup>

##### *The Occupational Safety and Health Administration (OSHA)*

OSHA is authorized to regulate safe transport of hazardous materials. Specifically, OSHA implements regulation related to materials handling. OSHA requirements are intended to promote worker safety, worker training, and a worker's right-to-know.

##### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA) of 1976 was the first major federal act regulating the potential health and environmental problems associated with hazardous and nonhazardous solid waste. RCRA and the implementation regulations developed by the EPA provide the general framework of national hazardous waste management systems. This framework includes the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities. RCRA allows individual states to develop their own program for the regulation of hazardous wastes as long as state regulations are at least as stringent as the RCRA.

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<sup>5</sup> US Code, Title 15, Section 2641 et seq. "Asbestos Hazard Emergency Response," contains the codified requirements of both AHERA and ASHARA.

### ***The Comprehensive Environmental Response, Compensation, and Liability Act***

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as the Superfund Act, outlines the potential liability related to the cleanup of hazardous substances, available defenses to such liability, appropriate inquiry into site status under Superfund, which is the federal government's program to clean up the nation's uncontrolled hazardous waste sites, statutory definitions of hazardous substances and petroleum products, and the petroleum product exclusion under CERCLA

### **State Regulations**

#### ***Department of Toxic Substances Control***

The Department of Toxic Substances Control (DTSC) is authorized by EPA to administer the hazardous waste laws and oversee remediation of hazardous wastes sites. Regulations require that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: (1) [a]ll hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code (HSC)."<sup>6</sup>

The hazardous waste facilities identified in HSC Section 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under the HSC, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.<sup>7</sup>

#### ***California Department of Conservation, Division of Oil, Gas, and Geothermal Resources***

The California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) is mandated by Section 3106 of the Public Resources Code to supervise the drilling, operation, maintenance, and abandonment of oil and gas wells for the purpose of preventing (1) damage to life, health, property, and natural resources; (2) damage to underground and surface waters suitable for irrigation or domestic use; (3) loss of oil, gas, or reservoir energy; and (4) damage to oil and gas deposits by infiltrating water and other causes. The regulations can be found in the California Code of Regulations (CCR) Title 14.

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<sup>6</sup> California Government Code, Title 22, Section 65962.5.

<sup>7</sup> California Health and Safety Code, Section 25187.5.

DOGGR's Well Review Program assists developers in addressing issues associated with development near oil and gas wells.<sup>8</sup>

### ***Emergency Response Plan***

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government, and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies, including the Cal EPA, CHP, the RWQCB, and the local fire department. The Los Angeles County Fire Department provides first response capabilities, if needed, for hazardous materials emergencies within the project area.

### ***California EPA***

The California EPA oversees the DTSC whose mission it is to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation, and pollution prevention. The DTSC regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff ensure that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.

### ***California Occupational Safety and Health Administration***

The California Occupational Safety and Health Administration (Cal OSHA) has set forth work requirements for disturbance of Asbestos Containing Construction Materials (ACCMs) including removal operations for all types of ACCMs. In addition, the agency has developed standards for general industry and the construction industry hazardous waste operations and emergency response. Cal OSHA ensures that employers must have controls to reduce and monitor exposure levels of hazardous materials, an informational program describing any exposure during operations and the inspection of drums and containers prior to removal or opening. Decontamination procedures and emergency response plans must be in place before employees begin working in hazardous waste operations.

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<sup>8</sup> California Division of Oil, Gas, and Geothermal Resources, *Well Review Program Introduction and Application*, 2007 [ftp://ftp.consrv.ca.gov/pub/oil/Well\\_Review\\_Program.pdf](http://ftp.consrv.ca.gov/pub/oil/Well_Review_Program.pdf).



### ***California Office of Emergency Services***

The California Office of Emergency Services (CAL OES) Hazardous Materials (HazMat) Section under the Fire and Rescue Division coordinates statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats. In response to any hazardous materials emergency, the section staff is called upon to provide state and local emergency managers with emergency coordination and technical assistance.

### ***California Code of Regulations Title 8***

This section of the California Code of Regulations (CCR) regulates asbestos exposure in all work defined in the Code's Section 1502 including demolition or salvage of structures where asbestos is present, removal or encapsulation of materials containing asbestos, construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos, installation of products containing asbestos, asbestos spill/emergency cleanup, transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed, and excavation which may involve exposure to asbestos as a natural constituent which is not related to asbestos mining and milling activities.

### ***Hazardous Waste Control Act***

The Hazardous Waste Control Act created the state hazardous waste management program, which is similar to but more stringent than the federal Resource Conservation and Recovery Act program. The Act is implemented by regulations contained in Title 26 of the CCR, which describes the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling, treatment, storage, and disposal facilities; treatment standards; operation of facilities and staff training; and closure of facilities and liability requirements. These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with DTSC.

### ***Unified Hazardous Waste and Hazardous Materials Management Regulatory Program***

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program

Elements consolidated under the Unified Program are: Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (a.k.a. Tiered Permitting); Aboveground Petroleum Storage Tank Spill Prevention Control and Countermeasure Plan (SPCC); Hazardous Materials Release Response Plans and Inventory Program (a.k.a. “Hazardous Materials Disclosure” or “Community Right To Know”); California Accidental Release Prevention Program (Cal ARP); Underground Storage Tank (UST) Program; and Uniform Fire Code Plans and Inventory Requirements. The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA.

### ***Hazardous Materials Release Response Plans and Inventory Act of 1985***

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

### ***Hazardous Waste Source Reduction and Management Review Act of 1989***

This Act requires generators of 12,000 kilograms/year of typical/operational hazardous waste to conduct an evaluation of their waste streams every four years and to select and implement viable source reduction alternatives. This Act does not apply to non-typical hazardous waste (such as asbestos and polychlorinated biphenyls).

### ***California Vehicle Code***

The California Vehicle Code (Title 13 of the CCR) establishes regulations for motor carrier transport of hazardous materials. For example, all motor carrier transporters of hazardous materials are required to have a Hazardous Materials Transportation license issued by the California Highway Patrol. In addition, placards identifying that hazardous materials are being transported must be displayed on the vehicle.

### ***California Health and Safety Code***

The transport of hazardous waste materials is further governed by the California Health and Safety Code Section 25163 and Title 22, Chapter 13, of the CCR. Specifically, Section 25163 of the California Health and Safety Code requires transporters of hazardous waste to hold a valid registration issued by the DTSC in his/her possession while transporting hazardous waste. Additionally, Title 22, Chapter 13 of the CCR includes a number of requirements, which include, but are not limited to, the following:

- Transporters shall not transport hazardous waste without first receiving an identification number and a registration certificate from DTSC.
- Registration as a hazardous waste transporter expires annually, on the last day of the month in which the registration was issued.
- To be registered as a hazardous waste transporter, an application must be submitted.
- Hazardous waste shall not be accepted for transport without a Uniform Hazardous Waste Manifest that has been properly completed and signed by generator and transporter.
- Hazardous waste shall be delivered to authorized facilities only.

### ***South Coast Air Quality Management District***

The South Coast Air Quality Management District (SCAQMD) maintains rules and regulations pertaining to asbestos abatement. Air Quality Management District (AQMD) Rule 1403, adopted by the SCAQMD on October 6, 1989, establishes survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities.

Asbestos is a carcinogen and is categorized as a hazardous air pollutant by the EPA. As such, AQMD Rule 1403 incorporates the requirements of the federal asbestos requirements found in National Emission Standards for Hazardous Air Pollutants (NESHAP) found in the Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M.

The EPA delegated to SCAQMD the authority to enforce the federal asbestos NESHAP and the SCAQMD is the local enforcement authority for asbestos.

### ***CEQA Statute, PRC§21151.8; 14 CCR §15186[c], [d]***

CEQA contains special requirements that apply to school site acquisition and construction projects in PRC§21151.8; 14 CCR §15186[c], [d]. These sections require school districts to carefully evaluate potential risks to students, faculty, and other school district employees that may be posed by on-site and off-site sources of hazardous materials. In addition, a new school acquisition and construction projects that

receive funds from the State must undergo specific hazardous materials review process. For school projects that do not involve state funds, LAUSD OEHS oversees the environmental review process.

## Local Regulations

### *Los Angeles Unified School District Standards*

The LAUSD OEHS has developed various practices, procedures and standard conditions related to hazards and hazardous materials, including the following:

- **Site Hazards:** Procedures are in place for OEHS to evaluate the presence of potentially toxic or hazardous conditions on or in the vicinity of a proposed or existing LAUSD facility. If necessary, a site screening is conducted to determine the proximity of the project site to any rail lines, pipelines, oil fields, methane zones, methane buffer zones, freeways, landfills, industrial facilities, and high voltage power lines. The findings are documented in the OEHS Site Environmental Review and may involve preparation of supporting technical studies such as an air quality health risk assessment, pipeline safety hazard assessment, rail safety study, electromagnetic field exposure management plan, geohazard report, tank safety study, or methane assessment. OEHS also has procedures in place to identify and evaluate existing high risk facilities and new offsite projects that may impact a school within one-quarter mile.

LAUSD also maintains distance criteria for potential hazards related to school siting as shown in **Table 3.3-1 Distance for School Siting**.

**Table 3.3-1**  
**Distance Criteria for School Siting**

Feature	Description	Screening Perimeter	Exclusion Zone	
Rail Line	Active rail lines, easements, spurs	1,500 ft	128 ft	
Cellular Phone Antennas	Cellular Phone Antennas	200 ft	Within or adjacent to site	
High Voltage Power Lines			<u>Above Ground</u>	<u>Below Ground</u>
	50 – 200 kv	500 ft	100 ft	25 ft
	220- - 230 kv	500 ft	150 ft	37.5 ft
	500 – 550 kv	500 ft	350 ft	87.5 ft
Freeway/Major Transportation Corridor	Freeways, State highways or designated roadways with more than 100,000 automobile trips per day. Rail lines with high volumes of traffic.	1500 ft	500 ft	
Reservoirs, Water, or Fuel Storage Tanks	Reservoirs or water or fuel storage tank facilities	1,500 ft	500 ft	
Hazardous Material Pipelines	Transmission pipelines or industrial distribution pipelines, including those for conveying crude oil, natural gas, or other chemicals characterized as hazardous	1,500 ft	50 ft	
Oil Production Facilities	Facilities including existing and former oil wells, oil borings or oil processing equipment	1,500 ft	50 ft	
Oil Fields/Methane Zones or Methane buffer Zones	City or State mapped oil fields, methane and methane buffer zones	1,500 ft	NA	
Industrial Site/Superfund	Facilities with a potential to emit hazardous air contaminants or otherwise present a significant risk to school occupants	1,400 ft	500 ft	
Landfill	Landfills authorized for the disposal of hazardous or non-hazardous wastes	2,000 ft	500 ft	
Earthquake Faults	Mapped or well-defined active earthquake faults	1,500 ft	50 ft	

Source: LAUSD Distance Criteria for School Siting

Ft = Feet

### ***City of South Gate General Plan Healthy Community Element***

The City of South Gate General Plan includes chapter on land use, circulation, housing, conservation, open space, noise, safety, community design, educational and cultural resources, and utility infrastructure. The Health Community element addresses protecting the health and welfare of the city's residents. It also includes policies related to overall well-being, physical activity, nutrition, access to

health care, and a safe transportation system. This element specifies the following goals and policies regarding hazards and hazardous wastes:

**Goal HC 8:** Reduced risks to the community from earthquakes and other natural and manmade hazards

**Objective HC 8.2:** Establish an effective emergency response program to respond to disasters and maintain continuity of life-support functions during an emergency

**Goal HC 9:** To protect the community from the harmful effects of hazardous materials and waste

**Objective HC 9.1:** Minimize South Gate residents' and employees' exposure to hazardous materials and waste.

**Policy 1:** The City will regularly update Hazardous Waste Management procedures and actively implement appropriate Hazardous Waste Management policies recommended by the Los Angeles County Emergency Survival Program.

**Policy 2:** The City will enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.

**Policy 3:** The City should monitor the use and release of hazardous materials in the City

**Policy 4:** The City should ensure on a case by case basis that new development near known locations of hazardous waste or materials is suitable for human habitation and does not pose higher than average health risks from exposure to hazardous material.

### 3.3.4 METHODOLOGY

To evaluate potential impacts, existing and proposed on-site hazards were identified and compared against the established safety standards and regulations to determine if the Project would result in impacts related to hazardous materials. The analysis of the potential impacts regarding hazardous materials management was based on site evaluations, plans and operational information provided by the LAUSD.

### 3.3.5 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to hazards and hazardous materials are contained in the environmental checklist form contained in Appendix G of the CEQA Statutes and Guidelines. Impacts related to hazards and hazardous materials are considered significant if the proposed project would.

- HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- HAZ-6: For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- HAZ-8: 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.
- HAZ-9: Be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood
- HAZ-10: Be located on a site where the property line is less than the following distance from the edge of respective power line easement:
  - 100 feet of a 50-133 kV line

- 150 feet of a 220-230 kV line, or
- 350 feet of a 500-550 kV line

HAZ – 11: be located on a site that is within 1,500 feet of a railroad track easement

HAZ – 12: be located on a site that is adjacent or near to a major arterial roadway or freeway that may pose a safety hazard

HAZ – 13: be located on a site that is near a reservoir, water storage tanks or high-pressure water lines

HAZ – 14: be located within 1,500 feet of a pipeline that may pose a safety hazard

HAZ – 15: be located on a site that does not have a proportionate length to width ratio to accommodate the building layout, parking and play fields that can be safely supervised

HAZ – 16: be located on a site where the existing or proposed zoning of the surrounding properties is incompatible with schools and may pose a health or safety risk to students

HAZ – 17: be located on a site that contains, or is near, propane tanks that can pose a safety hazard

HAZ – 18: be located on a site with traffic pattern for school buses that can pose a safety hazard

HAZ – 19: be located on a site that is within 2,000 feet of a significant disposal of hazardous waste

An Initial Study was prepared that determined the Project would have a less than significant impact or no impact related to the following thresholds:

HAZ-1: create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;

HAZ-2: create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

HAZ-3: emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;

HAZ-4: be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

HAZ-5: for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;

HAZ-6: for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;



- HAZ – 7: impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- HAZ – 8: 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;
- HAZ- 11: be located on a site that is within 1,500 feet of a railroad truck easement
- HAZ – 13: be located on a site that is near a reservoir, water storage tanks or high-pressure water lines
- HAZ – 15: be located on a site that does not have a proportionate length to width ratio to accommodate the building layout, parking and play fields that can be safely supervised
- HAZ – 16: be located on a site where the existing or proposed zoning of the surrounding properties is incompatible with schools and may pose a health or safety risk to students; or
- HAZ – 17: be located on a site that contains, or is near, propane tanks that can pose a safety hazard.

Therefore these thresholds are not analyzed in this EIR. The Initial Study is provided in Appendix 1.0 of this EIR.

### 3.3.6 IMPACTS AND MITIGATION MEASURES

**HAZ-9                      Be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood**

The State Department of Health Services has not identified the Project site as a hazardous substance site, nor does the site contain one or more pipelines which transport hazardous waste.<sup>9</sup> Therefore subparts (b) and (c) do not apply. Analysis of subpart (a) is provided below.

Historical evidence shows that hazardous waste was improperly disposed of or released on the Project site. As mentioned above, the Project site has been used for various commercial and industrial uses that has been impacted by releases of variety of chemicals, including petroleum hydrocarbons, metals,

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<sup>9</sup> National Pipeline Mapping System, NPMS Public Map Viewer, <https://www.npms.phmsa.dot.gov/PublicViewer/composite.jsf>, accessed August 31, 2016

pesticides, and VOCs. Extensive soil and groundwater investigation under the DTSC have been performed at the site to evaluate the nature and extent of contamination. The Project site was cleaned up under DTSC oversight as part of prior remedial actions. No further action has been issued for the site. To date, LAUSD has adopted two Remedial Action Plans for the Project site: (1) Operable Unit 2 Remedial Action Plan; and (2) Remedial Action Plan Operable Unit 3. These action plans address soil and groundwater contamination within the Project site, respectively, and contain objectives and goals that to reduce concentrations of site-related COCs that would ensure future unrestricted land use.

All remediation efforts of the proposed Project site are completed. Clean-up for Operable Unit 2, north of the Project site, was initiated in early 2012 and completed in September 2012.<sup>10</sup> Removals were completed in accordance with procedures described in the DTSC approved Remedial Action Plan (RAP) and in consultation with DTSC. Approximately 57,582 cubic yards of soils impacted with metals OCPs, PCBs, VOCs, SVOC and TPH were excavated and disposed of at off-site facilities. All excavated areas were backfilled with on-site soils and imported fill in consultation with DTSC. Additionally, approximately 11,800 cubic yards of soils with VOC impacted soil gas were treated on-site with ex-situ Soil Vapor Extraction and re-used as backfill. Implementation of the DTSC-approved remedial action for OU 3 (i.e., groundwater underneath Project Site) was completed at the end of 2016, although groundwater monitoring will continue on the site.

Therefore, although hazardous materials were previously found on the Project site, hazardous materials were removed in accordance with DTSC requirements and DTSC provided a “No Further-Action” determination with regards to those materials. Further, ongoing groundwater monitoring will continue on the Project site as groundwater data indicates VOC detections are within 10 times the state approved MCLs. Groundwater monitoring is expected to last approximately five years. Therefore, although the Project site was in use as hazardous disposal the site has been cleaned up in accordance with DTSC requirements. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Residual Impacts***

Impacts would be less than significant.

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<sup>10</sup> DTSC Removal Action Completion Determination South Region High School #9, Operable Unit 2, South Gate (Site Code 304440), January 8, 2013

**HAZ-10**                      **Be located on a site where the property line is less than the following distance from the edge of respective power line easement:**

- 100 feet of a 50-133 kV line,
- 150 feet of a 220,230 kV line, or
- 350 feet of a 500-550 kV line

The Project Site is bound by the existing LHSC complex on Tweedy Boulevard to the north, Chakemco Street on the south, Adella Avenue on the east, and commercial/industrial businesses along Atlantic Avenue on the west. The edge of a 66 kV transmission line easement is located immediately south of LAUSD-owned property. The easement and related powerlines are owned/operated by the Southern California Edison Company (SCE). The California Department of Education (CDE) requires a 100 foot setback from existing easements of 50 – 133kV to a school property. Thus, the setback requirement for the proposed Project is 100 feet from the southern border. As shown in Figure 2.0-3 Surrounding Uses in Chapter 2.0 Project Description, the area between the boundary of the ISLC Addition Project site and the easement for the transmission line is currently undeveloped but is anticipated for use as a future landscaped area. The landscaped area would be fenced off and no students would be permitted to enter the area. The use of this parcel as a landscaped area would serve as a buffer between the proposed Project and the easement and would eliminate opportunities for exposure to students and staff. Further, as the distance between the easement and the edge of the ISLC Addition Project is greater than 100 feet, no additional buffer would be necessary.

In addition, a cell tower is located in the southwest corner on campus, a little more than 200 feet from the Project site. The facility has been identified as a radio frequency transmission facility. The Distance Criteria for School Siting (Table 3.3-1) sets a screening perimeter limit of 200 feet for cellular phone antennas. The proposed Project would be located slightly farther than 200 feet therefore, falling below the threshold of LAUSD criteria. Additionally, a survey was conducted as part of the original SRHS #9 EIR and in the adjacent neighborhood to determine the radiofrequency (RF) EMF levels from this tower.<sup>11</sup> RF levels detected onsite, near the tower, were measured at equal to or slightly higher than background levels found in the neighborhood and were below FTC requirements.<sup>12</sup> Therefore, impacts related to being located near a power line easement would be less than significant.

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<sup>11</sup> Survey measurements were taken within the southwestern-most portion of the SRHS #9 site, immediately below the cell-tower, and outward at 25 intervals to 200 feet, from north to east; within the Site, along Chakemco Street and Adella Avenue, at 100 foot intervals; at locations south of the Site, including Aldrich Road and Batavia Road.

<sup>12</sup> The Planning Center, RF Survey Tech Memo, July 30, 2009.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Residual Impacts***

Impacts would be less than significant.

**HAZ-12                      Be located on a site that is adjacent or near to a major arterial roadway or freeway that may pose a safety hazard?**

This topic is addressed in **Section 3.5 Pedestrian Safety**. As analyzed in Section 3.5, impacts related to pedestrian safety would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Residual Impacts***

Impacts would be less than significant.

**HAZ-14                      Be located within 1,500 feet of a pipeline that may pose a safety hazard**

A 26 inch diameter high-pressure pipeline is located along Atlantic Avenue less than 500 feet to the west of the Project site. The natural gas pipeline is owned and operated by the Southern California Gas Company. In addition two 8-inch petroleum pipelines and a 9-inch natural gas pipeline owned and operated by Chevron are located approximately five to ten feet from the eastern property boundary.<sup>13</sup>

In 2008, prior to the construction of LHSC, a pipeline safety hazard assessment was conducted according to CDE's *Pipeline Safety Hazard Assessment User Manual* to evaluate the potential safety hazard from these pipelines.<sup>14</sup> These pipelines are operational and no new pipelines have been added to the vicinity. Two potential accident scenarios involving a pipeline release were considered: 1) a rupture or large volume release equal to the pipeline's diameter or 2) a leak or small volume release from a 1-inch diameter hole. The potential consequences for each accident scenario included jet flame, radiant heat, flammable vapor cloud flash fire, unconfined vapor cloud explosion, and product pool width. Because one or more of these

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<sup>13</sup> National Pipeline Mapping System, NPMS Public Map Viewer, <https://www.npms.phmsa.dot.gov/PublicViewer/composite.jsf>, accessed August 31, 2016

<sup>14</sup> CDE, *Pipeline Safety Hazard Assessment User Manual*, 2005.

hazards would reach the Project site and cause fatalities in the event of a pipeline rupture and, in some cases, a pipeline leak, quantitative risk analysis modeling was performed.

The quantitative risk analysis considered meteorological data; pipeline accident rates; the pipeline length near the school; school attendance time; and the probability of fatality from exposure to jet flame, radiant heat, flammable or unconfined vapor clouds to estimate the calculated risk for each accident scenario. Individual fatality risk is compared to the significance threshold level of one in one million ( $1.0 \times 10^{-6}$ ). If the estimated risk is less than one in one million, then no significant safety hazard is predicted for the school site. If the estimated risk is greater than one in one million, mitigation measures are required to reduce risk to within acceptable limits or a more detailed risk analysis can be conducted.<sup>15</sup> The estimated fatality risk for each pipeline was calculated as follows:

- 26-inch natural gas pipeline  $1.2\text{E-}07$
- 8-inch Chevron petroleum product pipeline  $9.9\text{E-}07$
- 6-inch Chevron natural gas pipeline  $1.5\text{E-}07$

This risk analysis was undertaken during the development of Legacy High School. Because the total combined fatality risk for all three pipelines is  $1.3\text{E-}06$ , it would exceed the one in one million ( $1.0\text{E-}06$ ) threshold, and design features were required. The design of LHSC included the installation of a standard 6-inch curb along the eastern boundary of the site. This curb (located adjacent to the pipeline right-of-way) was determined to prevent released petroleum product from flowing onto the site and would reduce the time for formation of a flammable vapor cloud, because the petroleum product would discharge to a storm drain located at Tweedy Boulevard. Installation of curbing was calculated to reduce the estimated fatality risk for the 8-inch Chevron petroleum pipeline to  $5.1\text{E-}07$ , and the total combined fatality risk to  $7.8\text{E-}07$ , which is below the significance threshold of one in one million. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Residual Impacts***

Impacts would be less than significant.

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<sup>15</sup> Pipeline Safety Hazard Assessment, South Region High School No. 9.

**HAZ-18**                      **Be located on a site with a traffic pattern for school buses that can pose a safety hazard?**

Impacts would be less than significant. See discussion in **Section 3.6 Traffic**.

### ***Mitigation Measures***

No mitigation is required.

### ***Residual Impacts***

Impacts would be less than significant.

**HAZ-19**                      **Be located on a site that is within 2,000 feet of a significant disposal of hazardous waste.**

The USEPA, in conjunction with applicable Local and State Agencies, is managing the environmental investigation and remediation of four sites on the National Priorities List. These sites include:

Atlantic Avenue South Gate Plume Site (USEPA ID No. CAN000908953)

Cooper Drum Superfund Site (USEPA ID No. CAD055753370)

South Avenue Industrial Area (USEPA ID No. CAN00905902)

Jervis B. Webb Company (USEPA ID No. CAD008339467).

Impacted groundwater at the project site appears to be localized and limited in extent. Site characterization concluded that extensive investigations within the deeper aquifers (Gaspur Aquifer) were not warranted.

The Cooper Drum site is the largest of the four active NPL sites. The Cooper Drum Superfund Site is a 3.8-acre facility located at 9316 South Atlantic Avenue in South Gate, California. The Cooper Drum site is located at 9316 South Atlantic Avenue in South Gate and is approximately 1,500 feet north of the Project site (**Figure 3.3-1 Location of the Cooper Drum Site**). In the past, the site was used to recondition and wash close-topped steel drums that had previously held industrial chemicals.

The Cooper Drum site was placed on the Superfund list in 2001, and the EPA subsequently completed its Remedial Investigation of the Site in 2002.<sup>16</sup> The investigation concluded that substantial portions of soil and groundwater beneath the site have been contaminated by VOCs – namely solvents such as TCE, DCE, and DCA.

In 2007, EPA completed the Soil and Groundwater Remedial Design reports. Extraction and treatment were chosen to complete the groundwater remedy, and the soil remedy included use of dual phase extraction (DPE) in the two source areas of the site.

EPA has approved work plans for remediation efforts. The Soil Vapor Extraction (SVE) treatment system has been completed and the system began operating in February 2011. The DPE began operating in 2012, and the extraction and treatment of contaminated groundwater from the aquifer beneath the Cooper Drum site began in August 2012.

Currently, EPA continues to oversee the potentially responsible parties at the site as they perform the remedial action. In a 2016 settlement, forty companies agreed to collectively pay \$22 million to finish cleaning up the site and to reimburse EPA for public funds used for site cleanup between 2001 and 2009. The expected completion of remediation is still unknown.<sup>17</sup>

The Cooper Drum Site has been closed since 2003 and remediation efforts have been ongoing since the site's listing on the National Priorities list in 2001. Additionally, the EPA has identified the approximate area of contamination from the Cooper Drum Site operations, as shown below in **Figure 3.3-1 Location of Cooper Drum Site** and **Figure 3.3-2 Contamination from Cooper Drum Site**. Contamination of groundwater does not extend to the boundaries of the Project site, nor does it encroach onto the Project site. Nonetheless, as described above, active groundwater monitoring continues to occur on the Project site. Because the Cooper Drum site is undergoing remediation and active monitoring and because contamination is limited only to the local vicinity of the Copper Drum Site, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation is required.

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<sup>16</sup> US EPA, 2013, <https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetical/Cooper+Drum+Co.?OpenDocument>, accessed September 1, 2016

<sup>17</sup> The City of South Gate, 2016, <http://www.cityofsouthgate.org/DocumentCenter/View/1051>, accessed September 1, 2016

***Residual Impacts***

Impacts would be less than significant.

**3.3.7 CUMULATIVE ANALYSIS**

With the recommended design, the proposed Project would have a less-than-significant hazardous materials impact to the public or the environment within the vicinity of the Project site. Hazard impacts associated with a proposed project usually occur on a project-by-project basis rather than cumulatively. Other foreseeable development within the area, although likely increasing the potential to disturb existing contamination and the handling of hazardous materials, would be required to comply with the same regulations as the proposed Project, as was the case with the Cooper Drum contamination and cleanup. This includes federal and state regulatory requirements for transporting (Cal EPA and Caltrans) hazardous materials or cargo (including fuel and other materials used in all motor vehicles) on public roads or disposing of hazardous materials (Cal EPA, DTSC,). Therefore, the Project would not contribute to a cumulatively considerable hazardous materials impact and cumulative impacts associated with the proposed Project are, therefore, considered less than significant.

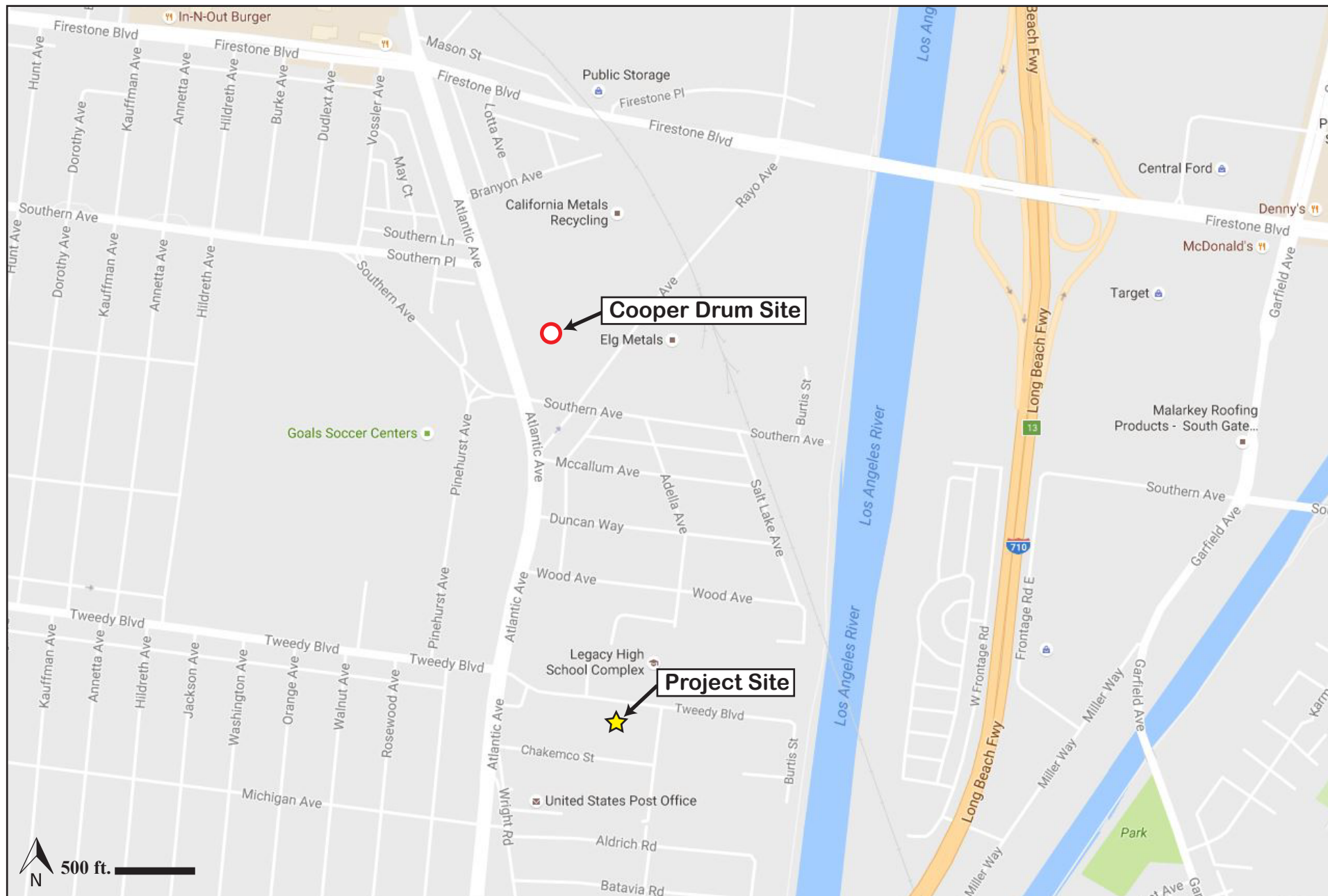
**Mitigation Measures**

No mitigation is required.

**Residual Impacts**

Impacts would be less than significant.



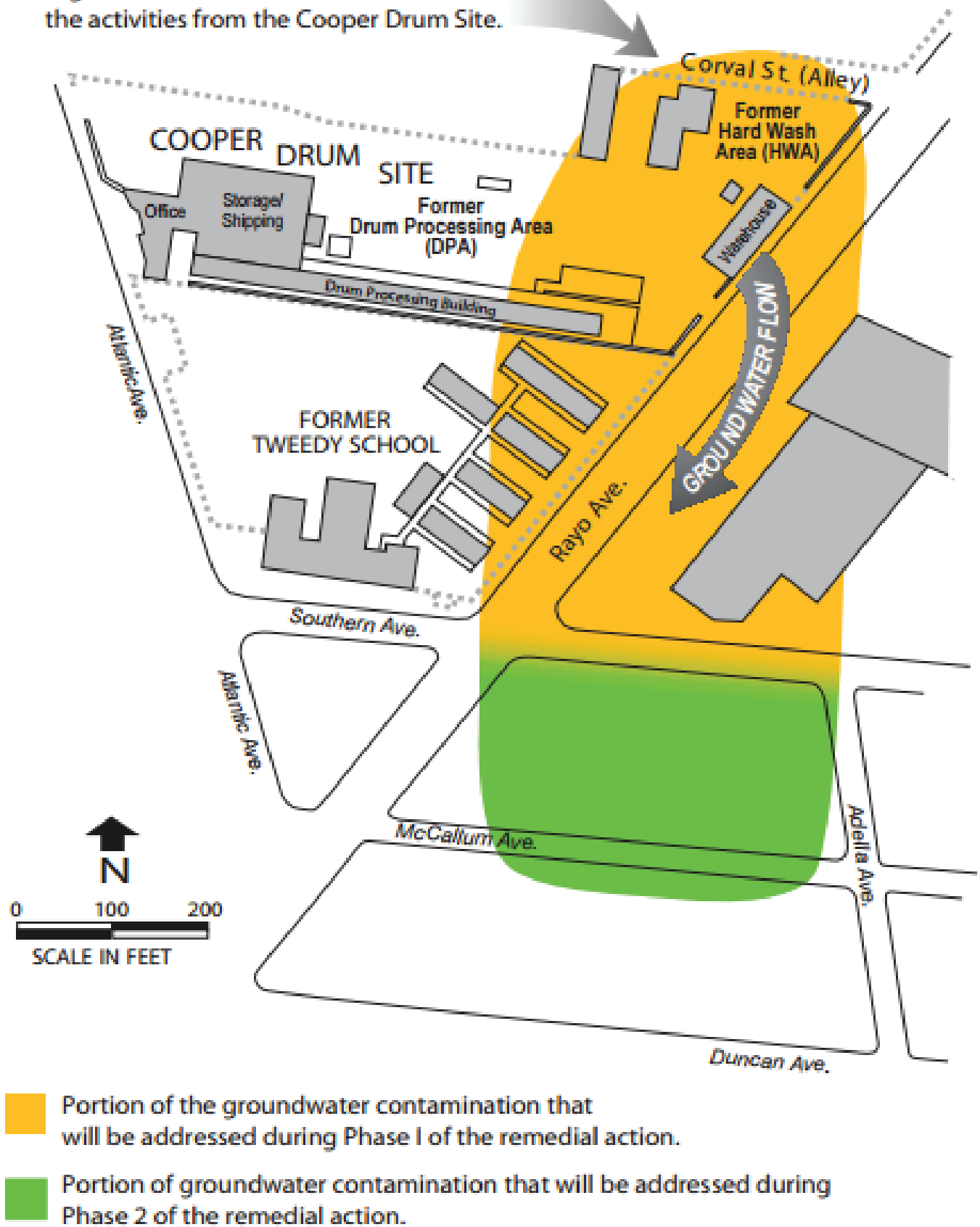


SOURCE: Google Maps, 2016

FIGURE 3.3-1

Location of Cooper Drum Site

Shaded portion shows approximate area of groundwater contamination related to the activities from the Cooper Drum Site.



SOURCE: United States Environmental Protection Agency, Cooper Drum Superfund Site, 2011

FIGURE 3.3-2

Contamination from Cooper Drum Site

### 3.4.1 INTRODUCTION

#### Introduction to Noise

Noise is usually defined as unwanted sound that is an undesirable byproduct of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, and/or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies; for example, it is less sensitive to low and high frequencies than medium frequencies, which more closely correspond with human speech. In response to the sensitivity of the human ear to different frequencies, the A-weighted noise level (or scale), which corresponds better with people's subjective judgment of sound levels, has been developed. This A-weighted sound level, referenced in units of dB(A), is measured on a logarithmic scale such that a doubling of sound energy results in a 3 dB(A) increase in noise level. In general, changes in a community noise level of less than 3 dB(A) are not typically noticed by the human ear.<sup>1</sup> Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. A greater than 5 dB(A) increase is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dB(A) at acoustically "soft" sites.<sup>2</sup> For example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source and 48 dB(A) at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dB(A) and 4.9 dB(A) per doubling of distance from the source to the receptor for hard and soft sites, respectively.<sup>3</sup>

Sound levels also can be attenuated by man-made or natural barriers (e.g., sound walls, berms, ridges), as well as elevational differences.

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<sup>1</sup> Federal Highway Administration, *Highway Noise Fundamentals*, (1980) 81.

<sup>2</sup> Federal Highway Administration, *Highway Noise Fundamentals*, (1980) 97. Examples of "hard" or reflective sites include asphalt, concrete, and hard and sparsely vegetated soils. Examples of acoustically "soft" or absorptive sites include soft, sand, plowed farmland, grass, crops, heavy ground cover, etc.

<sup>3</sup> Federal Highway Administration, *Highway Noise Fundamentals*, (1980) 97.

Solid walls and berms may reduce noise levels by 5 to 10 dB(A) depending on their height and distance relative to the noise source and the noise receptor.<sup>4</sup> Sound levels may also be attenuated 3 to 5 dB(A) by a first row of houses and 1.5 dB(A) for each additional row of houses.<sup>5</sup> The minimum noise attenuation provided by typical structures in California is provided in **Table 3.4-1, Outside-to-Inside Noise Attenuation**.

**Table 3.4-1**  
**Outside-to-Inside Noise Attenuation (dB(A))**

Building Type	Open Windows	Closed Windows
Hotels/Motels	17	25
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30

Source: Gordon, C.G., W.J. Galloway, B.A. Kugler, and D.L. Nelson. NCHRP Report 117: *Highway Noise: A Design Guide for Highway Engineers*. Washington, D.C.: Transportation Research Board, National Research Council, 1971.

### ***Sound Rating Scales***

Various rating scales approximate the human subjective assessment to the “loudness” or “noisiness” of a sound. Noise metrics have been developed to account for additional parameters, such as duration and cumulative effect of multiple events. Noise metrics are categorized as single event metrics and cumulative metrics, as summarized below.

In order to simplify the measurement and computation of sound loudness levels, frequency weighted networks have obtained wide acceptance. The A-weighted (dB(A)) scale has become the most prominent of these scales and is widely used in community noise analysis. Its advantages are that it has shown good correlation with community response and is easily measured. The metrics used in this analysis are all based upon the dB(A) scale.

<sup>4</sup> Federal Highway Administration, *Highway Noise Mitigation*, (1980) 18.

<sup>5</sup> T. M. Barry and J. A. Reagan, *FHWA Highway Traffic Noise Prediction Model*, (1978) 33.

### **Equivalent Noise Level**

Equivalent Noise Level (Leq) is the sound level corresponding to a steady-state A-weighted sound level containing the same total energy as several single event noise exposure level events during a given sample period. Leq is the “energy” average noise level during the period of the sample. It is based on the observation that the potential for noise annoyance is dependent on the total acoustical energy content of the noise. Leq can be measured for any period, but is typically measured for 15 minutes, 1 hour, or 24-hours. Leq for a 1-hour period is used by the Federal Highway Administration (FHWA) for assessing highway noise impacts. Leq for 1-hour is referred to as the Hourly Noise Level (HNL) in the California Airport Noise Regulations and is used to develop Community Noise Equivalent Level values for aircraft operations. Construction noise levels and ambient noise measurements in this section use the Leq scale.

### **Community Noise Equivalent Level**

Community Noise Equivalent Level (CNEL) is a 24-hour, time-weighted energy average noise level based on the A-weighted decibel. It is a measure of the overall noise experienced during an entire day. The term “time-weighted” refers to the penalties attached to noise events occurring during certain sensitive periods. In the CNEL scale, 5 dB are added to measured noise levels occurring between the hours of 7:00 PM and 10:00 PM. For measured noise levels occurring between the hours of 10:00 PM to 7:00 AM, 10 dB are added. These decibel adjustments are an attempt to account for the higher sensitivity to noise in the evening and nighttime hours, and the expected lower ambient noise levels during these periods. Existing and projected future traffic noise levels in this section use the CNEL scale.

### **Day-Night Average Noise Level**

The day-night average sound level (Ldn) is another average noise level over a 24-hour period. Noise levels occurring between the hours of 10:00 PM and 7:00 AM are increased by 10 decibels (dB). This noise is weighted to take into account the decrease in community background noise of 10 dB(A) during this period. Noise levels measured using the Ldn scale are typically similar to CNEL measurements.

### **Adverse Effects of Noise Exposure**

Noise is known to have several adverse effects on humans, which has led to laws and standards being set to protect public health and safety, and to ensure compatibility between land uses and activities. Adverse effects of noise on people include hearing loss, communication interference, sleep interference, physiological responses, and annoyance. Each of these potential noise impacts on people is briefly discussed in the following narrative.

### *Hearing Loss*

Hearing loss is generally not a community noise concern, even near a major airport or a major freeway. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry, very noisy work environments with long term exposure, or certain very loud recreational activities, such as target shooting, motorcycle or car racing, etc. The Occupational Safety and Health Administration (OSHA) identifies a noise exposure limit of 90 dB(A) for 8 hours per day to protect from hearing loss (higher limits are allowed for shorter duration exposures). Noise levels in neighborhoods, even in very noisy neighborhoods, are not sufficiently loud to cause hearing loss.

### *Communication Interference*

Communication interference is one of the primary concerns in environmental noise problems. Communication interference includes speech interference and interference with activities such as watching television. Noise can also interfere with communications within school classrooms, as well as classroom activities. Normal conversational speech is in the range of 60 to 65 dB(A) and any noise in this range or louder may interfere with speech.

### *Sleep Interference*

Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and cause awakening. Noise may even cause awakening that a person may or may not be able to recall.

### *Physiological Responses*

Physiological responses are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. Studies to determine whether exposure to high noise levels can adversely affect human health have concluded that, while a relationship between noise and health effects seems plausible, there is no empirical evidence of the relationship.

### *Annoyance*

Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. Noise that one person considers tolerable can be unbearable to another of equal hearing capability. The level of annoyance depends both on the characteristics of the noise (including loudness, frequency, time, and duration), and how much activity interference (such as speech interference and sleep interference) results from the noise. However, the level of annoyance is also a function of the attitude of the receiver. Personal sensitivity to noise varies

widely. It has been estimated that 2 to 10 percent of the population is highly susceptible to annoyance from any noise not of their own making, while approximately 20 percent are unaffected by noise.<sup>6</sup> Attitudes may also be affected by the relationship between the person affected and the source of noise, and whether attempts have been made to abate the noise.

## Introduction to Vibration and Adverse Effects of Exposure

Vibration consists of waves transmitted through solid material. Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may be comprised of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hertz (Hz). Most environmental vibrations consist of a composite, or “spectrum” of many frequencies, and are generally classified as broadband or random vibrations. The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than one Hz to a high of about 200 Hz. Vibration is often measured in terms of the peak particle velocity (PPV) in inches per second (in/sec) when considering impacts on buildings or other structures, as PPV represents the maximum instantaneous peak of vibration that can stress buildings. Because it is a representation of acute vibration, PPV is often used to measure the temporary impacts of short-term construction activities that could instantaneously damage built structures. Vibration is often also measured by the Root Mean Squared (RMS) because it best correlates with human perception and response. Specifically, RMS represents “smoothed” vibration levels over an extended period of time and is often used to gauge the long-term chronic impacts of a project’s operation on the adjacent environment. RMS amplitude is the average of a signal’s squared amplitude. It is most commonly measured in decibel notation (VdB).

Vibration energy attenuates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High frequency vibrations reduce much more rapidly than low frequencies, so that in the far-field from a source, the low frequencies tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, there is usually a ground-to-foundation coupling loss (i.e., the foundation of the structure does not move in sync with the ground vibration), but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows or of items on shelves, or the motion of building surfaces. At high levels, vibration can result in damage to structures.

Manmade groundborne vibration is generally limited to areas within a few hundred feet of certain types of construction activities, especially pile driving. Road vehicles rarely create enough groundborne

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<sup>6</sup> Wayne County Airport Authority. *Background information on noise & its measurement*, 2009

vibration to be perceptible to humans unless the road surface is poorly maintained and there are potholes or bumps. If traffic, typically heavy trucks, induces perceptible vibration in buildings, such as window rattling or shaking of small loose items, then it is most likely an effect of low-frequency airborne noise or ground characteristics. Human annoyance by vibration is related to the number and duration of events. The more events or the greater the duration, the more annoying it will be to humans.

### 3.4.2 REGULATORY FRAMEWORK

#### Federal

Federal noise standards do not regulate environmental noise associated with short-term construction or long-term operation of development projects. As such, temporary and long-term noise and vibration impacts produced by the Project will largely be evaluated and regulated by City of South Gate and LAUSD standards designed to protect public health. In the evaluation of construction-related vibration impacts, City standards are used.

#### *Federal Transit Administration*

The Federal Transit Administration has established guidelines that provide significance thresholds for ground-borne vibration disrupting various land uses. **Table 3.4-2 Land Use Disruption Vibration Thresholds**, summarizes these thresholds, which are measured in VdB. Project construction activity would be considered a frequent event.

**Table 3.4-2**  
**Land Use Disruption Vibration Thresholds (VdB)**

Land Use	Significance Thresholds (VdB)		
	Frequent Events	Occasional Events	Infrequent Events
Buildings where vibration would interfere with interior operations.	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime uses	75	78	83
Concert halls, TV studios, and recording studios	65	65	65
Auditoriums and theaters	72	80	80

*Source: Federal Transit Administration, 2006*



The FTA has also set standard that address the effect of long-term vibration on human annoyance. Ground-borne vibration levels rarely affect human health. Instead, most people consider ground-borne vibration to be an annoyance that may affect concentration or disturb sleep. The RMS amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration. For residential land uses which experience occasional events of ground-borne vibration or noise, the FTA has established a threshold of 75 VdB.<sup>7</sup> Some commercial buildings, such as auditoriums and theaters have additional vibration and noise annoyance criteria.

## State

### *California 2003 General Plan Guidelines*

The State of California's 2003 General Plan Guidelines establish guidelines for acceptable exterior noise levels for each county and city. These standards and criteria are incorporated into the land use planning process to reduce future noise and land use incompatibilities. **Table 3.4-3** illustrates State guidelines that allow the City to consider the compatibility between land uses and outdoor noise.


State interior noise standards were established in 1974, when the California Commission on Housing and Community Development adopted noise insulation standards for residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise attributable to outside noise sources. Title 24 also specifies that acoustical studies should be prepared whenever a residential building or structure is proposed to be located in areas with exterior noise levels of 60 dB Day-Night Average Noise Level (Ldn) or greater. The acoustical analysis must show that the building has been designed to limit intruding noise to an interior level not exceeding 45 dB Ldn for any habitable room.


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<sup>7</sup> Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.


**Table 3.4-3**  
**Land Use Compatibility for Community Noise Environments**

Land Use Category	Community Noise Exposure (dB, L <sub>dn</sub> or CNEL)					
	55	60	65	70	75	80
Residential - Low Density Single-Family, Duplex, Mobile Homes						
Residential - Multi-Family						
Transient Lodging - Motels Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						

 Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

 Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.

 Normally Unacceptable - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

 Clearly Unacceptable - New construction or development should generally not be undertaken.

Source: California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines (Appendix C)", 2003.

### *California Department of Transportation Vibration Standard*

In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Guidance Manual to aid in the estimation and analysis of vibration impacts. Typically, potential building and structural damages are the foremost concern when considering the impacts construction-related vibrations. **Table 3.4-4 Building Damage Vibration Guidelines** summarizes Caltrans' vibration guidelines for building and structural damage.

**Table 3.4-4  
Building Damage Vibration Guidelines (PPV)**

Structure and Condition	Significance Thresholds (in/sec PPV)	
	Transient Sources	Continuous/Frequent/Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New Residential Structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation, 2013

This same manual also contains vibration guidelines for human annoyance potential, summarized in **Table 3.4-5 Human Annoyance Vibration Guidelines (PPV)**.

**Table 3.4-5  
Human Annoyance Vibration Guidelines (PPV)**

Human Response	Significance Thresholds (in/sec PPV)	
	Transient Sources	Continuous/Frequent/Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation, 2013

### ***California Code of Regulations, Title 5, Section 14040(q0***

Under Title 5, the California Department of Education (CDE) regulations require the school district to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

## **Local**

### ***City of South Gate General Plan***

The General Plan serves as a foundation for making land use decisions based on goals and policies related to land use, transportation, population growth and distribution, development, open space, resource preservation and utilization, air and water quality, noise impacts, public safety, infrastructure, and other related physical, social, and economic factors. The City's Noise Element regulates noise sources. Below are the Element's goals, objectives, and policies related to noise:

**Goal N 1:** A reduction in noise levels created by construction and maintenance activities

**Objective N1.1:** Minimize noise levels from construction and maintenance equipment, vehicles, and activities.

*P.1* Construction activities will be prohibited between the hours of 7:00 PM to 8:00 AM Monday through Saturday and on Sundays and Federal holidays.

*P.2* Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment.

*P.3* Prior to approval of project plans and specifications by the City, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.

*P.4* The City will require municipal vehicles and noise-generating mechanical equipment purchased or used by the City to comply with noise standards specified in the City's Municipal Code, or other applicable codes.

*P.5* The City may exceed the noise standards on a case-by-case basis for special circumstances including emergency situations, special events and expedited development projects

**Goal N 2:** An effective land use planning and development review process to ensure noise impacts are addressed

**Objective N 2.1:** Ensure noise impacts are considered in land use planning decisions.

- P.1* The City will adhere to the noise standards
- P.2* The City will incorporate noise considerations into land use planning decisions and future City land use plans by establishing acceptable limits of noise for various land uses throughout the community.
- P.3* The City should fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts.
- P.4* The City will require that acoustical analysis be incorporated into the environmental review process for the purposes of identifying potential noise impacts and noise abatement procedures.
- P.5* The City will require that all new residential construction in areas with an exterior noise level greater than 55 dBA CNEL will include sound attenuation measures, as well as to incorporate design measures to reduce interior noise levels to 45 dBA CNEL.
- P.6* The City will require that all new non-residential development will demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA CNEL.
- P.7* New development projects will provide buffers and/or appropriate mitigation measures to reduce potential noise sources on noise-sensitive land uses.
- P.8* The City should avoid locating noise-sensitive land uses in existing and future noise-impacted areas.
- P.9* The City will work to ensure acceptable noise levels are maintained near residential areas, schools, hospitals, convalescent homes, churches, and other noise sensitive areas.
- P.10* The City will consider land use compatibility issues when developing and/or amending land use plans.
- P.11* The City should work with adjacent jurisdictions to minimize noise impacts to South Gate from projects that occur outside the City

**Objective N 2.2:** Incorporate a review of noise impacts into the development review process.

- P.1* The City Community Development Department and/or City Council will consider noise impacts of proposed developments.
- P.2* The City should establish a Development Review process, which considers noise impacts and applies to, but is not limited to, the following: Specific Plans , Tentative Tract Maps, Parcel Maps, Precise Plans, Conceptual Development Plans, Design Review, non-residential development, Significant remodels and redevelopment

- P.3 The City will require that project applicants for the above actions submit relevant plans and analysis that facilitate the review of the proposal for conformance with the General Plan and applicable codes and regulations related to noise impacts.
- P.4 All new development, significant remodels, and redevelopment adjacent to noise sensitive land uses will be required to prepare an acoustical analysis that evaluates potential noise impacts and recommends noise abatement mitigation to ensure compliance with the City's General Plan and Noise Ordinance.
- P.5 The City will require findings of consistency with the City of South Gate's General Plan's goals, objectives, policies, and implementation actions; Zoning Ordinance; Municipal Code; and Building Code, and other local, Federal, State, and regional regulations applicable to noise impacts as a condition of project approval and entitlement.
- P.6 The City will require noise mitigation as conditions of approval (COA) on major development projects, including a clear description of mitigation on subdivision maps, site plans, and building plans for inspection purposes.
- P.7 The City will review development plans for the identification of sound attenuation measures, including but not limited to, double-glazed windows, sound insulation, sound walls, landscaping, use of low walls and landscaped slopes, enclose courtyards, rubberized asphalt, or relocation of driveways

**Goal N 3:** A reduction of noise spillover or encroachment from commercial/ office/retail, research and development, manufacturing and distribution, and industrial uses on adjoining residential areas and other noise sensitive land uses

**Objective N 3.1:** Improve ambient noise conditions in sensitive land use areas.

- P.1 The City will identify and work with property owners to reduce or eliminate excessive or loud noise near noise sensitive areas to meet the noise standards in the City's Municipal Code.
- P.2 The City should encourage the retrofitting of existing homes to reduce interior noise impacts.
- P.3 The City should encourage the use of noise absorbing materials in existing and future development to reduce interior noise impacts to sensitive land uses.

**Objective N 3.2:** Minimize noise impacts to residential dwelling units located above ground floor commercial/office/retail or civic/institutional uses in mixed-use development projects.

- P.1 New mixed-use structures with commercial/office/retail or civic/institutional and residential uses will incorporate techniques that prevent the transfer of noise and vibration through design and construction technology.

- P.2 The City should encourage commercial uses in mixed-use developments that are not noise intrusive to on-site or surrounding noise sensitive land uses.
- P.3 The City will prohibit the development of new nightclubs and other high noise-generating entertainment uses directly adjacent to existing and/or planned residential uses, schools, health care facilities, or other noise-sensitive land uses. Such uses may be permitted, at the direction of the City Council, if a noise analysis prepared by an acoustical expert recommends effective mitigation that can ensure compliance with the City's Municipal Code and that the project will incorporate all identified recommendations.
- P.4 New mixed-use development projects should locate residential units be away from significant noise generating sources, such as mechanical equipment, entertainment uses, restaurant patios, gathering places, loading and delivery areas, parking lots, and trash enclosures.
- P.5 New mixed-use developments with residential components will be required to install signs requesting patrons to be mindful of noise levels in outdoor commercial areas during nighttime hours.

**Objective N 3.3:** Minimize noise impacts on residential or other noise-sensitive land uses located adjacent to non-residential uses.

- P.1 Truck deliveries to non-residential uses abutting residential or noise sensitive uses will be limited to the hours between 7:00 AM and 10:00 PM.
- P.2 New non-residential projects adjacent to residential uses will be required to incorporate noise reducing features into the project design to minimize impacts to nearby residential uses and other noise sensitive land uses.
- P.3 The City will prohibit the location of uses characterized by excessive noise, such as industrial uses and fast food restaurants with drive-through speakers, directly adjacent or in close proximity to existing or planned residential uses.
- P.4 The City will prohibit the siting of loading and shipping facilities for commercial and industrial operations adjacent to existing or planned residential uses.
- P.5 New buildings being developed adjacent to existing and/or planned residential uses or other noise-sensitive land uses will be required to site and operate heating, ventilating, and air conditioning generators in a manner that limits adverse noise impacts to the greatest extent feasible.
- P.6 Wherever feasible, parking areas for new or redeveloped non-residential uses should be buffered and shielded by, but not limited to, walls, fences, and/or adequate landscaping.
- P.7 The City should encourage existing noise sensitive uses, including schools, libraries, health care facilities, and residential uses in areas where existing or future noise levels exceed 65

dba CNEL to incorporate fences, walls, landscaping, and/or other noise buffers and barriers, where appropriate and feasible.

*P.8* The City should encourage school districts or other educational facilities to locate outdoor activity areas, such as play grounds and sport fields, away from residential areas.

### ***City of South Gate Municipal Code (SGMC)***

The City of South Gate maintains a comprehensive Noise Ordinance within the SGMC that establishes interior and exterior noise level standards. The City has adopted a number of policies that are directed at controlling or mitigating environmental noise effects. The City's Noise Ordinance (SGMC Chapter 11.34, Noise Emissions) establishes the Noise Zone standards shown in **Table 3.4-6**. The Ordinance is designed to control unnecessary, excessive, and annoying sounds generated from a stationary source impacting an adjacent property.

**Table 3.4-6**  
**Noise Zone Standards**

<b>Region</b>	<b>Time</b>	<b>Sound Level (dB(A))</b>
Noise-Sensitive Area	Anytime	45
Residential Properties (in any zone)	7 AM to 10 PM	50
	10 PM to 7 AM	40
Commercial Properties	Anytime	55
Industrial Properties	Anytime	65

*Source: South Gate Municipal Code, Section 11.34*

From these standards, subdivision C of the same section goes on to establish maximum permitted temporary noise level increases for these zones (**Table 3.4-7**). In short, they represent the greatest permitted deviations from the standards outlined in subdivision A. As further explained in the City's Noise Element, "The ordinance is designed to control unnecessary, excessive and annoying sounds generated from a stationary source impacting an adjacent property. It differentiates between environmental and nuisance noise. Environmental noise is measured under a time average period while nuisance noise cannot exceed the established Noise Ordinance levels at any time." Construction noises from the Project would be categorized as nuisance noise.



**Table 3.4-7**  
**Permitted Temporary Noise Level Increase**

Permitted Maximum Increase	Noise Duration Per Hour
Noise-Sensitive Area	Anytime 45
Residential Properties (in any zone)	7 AM to 10 PM 50
	10 PM to 7 AM 40
	Anytime 55
Commercial Properties	Anytime 65

Source: South Gate Municipal Code, Section 11.34

Subdivision C's 5 dBA increase permitted for up to 30 minutes per hour is largely in line with widely accepted noise standards, including those often used for CEQA determinations of significance. Noise increases of 5 dBA typically represent the point at which noise impacts become readily perceptible to communities and can potentially provoke community responses and reactions.<sup>8</sup>

Section 11.34.090 of the SGM Code regulates specific activities considered to be a violation of the City's Noise Ordinance. Subdivision B of the section regulates vibration:

*B. Vibration                      Vibration produced from the operation of any device or equipment shall not exceed a motion velocity of 0.01 inches per second over a range of 1 to 100 Hertz.*

It is important to note that this City standard is far more restrictive than the 0.1 inches per second Caltrans threshold adopted by LAUSD in its School Upgrade Program EIR (SUP).<sup>9</sup> Vibration levels of 0.1 inches per second are considered to be "strongly perceptible," the intensity at which continuous vibration begins to annoy people. Vibrations of 0.01 inches per second, the City standard, are considered by Caltrans to be "barely perceptible" with only a "possibility of intrusion." Nevertheless, this local standard would supersede the LAUSD standard.

<sup>8</sup> Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

<sup>9</sup> Los Angeles Unified School District, *School Upgrade Program Final EIR*, (page 5.12-28) September 2015

### *Los Angeles Unified School District*

LAUSD has established an exterior noise standard of 67 dBA Leq and an interior standard of 45 dBA Leq for its campuses to protect both students and staff from adverse noise impacts. For existing schools, the District considers noise level increases of 3 dBA or more over ambient noise levels to be significant.

#### **3.4.3 EXISTING CONDITIONS**

Land uses on properties surrounding the Project site include multi-family residences, single-family residences, commercial land uses, industrial land uses, and educational land uses. Nearby sensitive receptors include:

- Aldrich Road Residences: residential properties located along Aldrich Road, approximately 245 feet south of the Project site.
- Legacy High School Complex: an educational complex belonging to the District with distinct interior and exterior sensitivities to noise.

#### **3.4.4 METHODOLOGY**

The methodology for the noise analysis includes a comparison of existing ambient noise levels to those with the Project for both construction and operation. The thresholds for determining impacts are described below.

#### **3.4.5 THRESHOLDS OF SIGNIFICANCE**

For the purposes of this analysis, noise impacts of the proposed project would be considered significant if they would exceed the following standards of significance, which are based on Appendix G of the State CEQA Guidelines. According to these guidelines, a project would normally have a significant impact related to noise if it would:

- |        |   |
|--------|---|
| NOI-1: | Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies |
| NOI-2  | Expose persons to or generate excessive groundborne vibration or groundborne noise levels   |
| NOI-3: | Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project                                  |
| NOI-5  | Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project                      |

- NOI-6: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels
- NOI-7: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels

The proposed Project is not located within an airport land use plan or within two miles of a public airport or public use airport, nor is it within the vicinity of a private airstrip. Therefore, no noise impacts could occur associated with airports. Therefore the following thresholds are not required to be analyzed:

- NOI – 6: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels
- NOI – 7: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels

For further discussion of these impacts, refer to the Initial Study (**Appendix 1.0**). The remaining thresholds are evaluated below.

### 3.4.6 IMPACTS AND MITIGATION MEASURES

- NOI-1**                      **Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

#### **Construction**

During demolition, grading, construction, and other Project phases, noise-generating activities could occur at the Project site between the hours of 8:00 AM and 7:00 PM Monday through Friday, in accordance with the South Gate General Plan Noise Element. On August 23, 2016, DKA Planning took short-term, 15-minute noise readings at Aldrich Road Residences and Legacy High School to ascertain current ambient noise levels. At both of these receptors, ambient noise levels were primarily a product of parking and drop-off/pick-up noises along Tweedy Boulevard for Legacy High School. As shown in **Table 3.4-8 Construction Noise Levels – Unmitigated: Grading**, ambient noise levels ranged from 50.8 dBA Leq at Aldrich Road Residences to 57.3 dBA Leq at Legacy High School. It should be noted that the recorded 50.8 dBA existing ambient noise level at Aldrich Road Residences exceeds the 50 dBA standard for residential properties provided in the SGMC. Further, the noise measurements were taken outside of the peak hours for the school and therefore, represent a conservative baseline for the area.

### Grading and Site Preparation

Construction activities for the Project would generate noise from a variety of on- and off-site activities and would include the use of on-site heavy equipment such as excavators and loaders, as well as smaller equipment such as hand-held pneumatic tools. Secondary noise could also be generated by construction worker vehicles and vendor deliveries. For this analysis, construction noise impacts were first modeled using the noise reference levels of equipment to be operated during the Project's grading phase, specifically excavators and front-end loaders, as these vehicles typically operate in tandem. Excavators can produce average peak noise levels of 81 dBA at a reference distance of 50 feet; front-end loaders, 79 dBA.<sup>10</sup> **Table 3.4-8** shows the unmitigated noise impacts that excavators and front-end loaders could have on Aldrich Road residences and Legacy High School.

**Table 3.4-8**  
**Construction Noise Levels – Unmitigated: Grading**

Sensitive Receptor	Distance from Site (feet)	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Increase
Aldrich Road Residences	245	65.3	50.8	65.5	14.7
Legacy High School	100	73.1	57.3	73.2	15.9

Source: DKA Planning 2016

### Demolition

The noise impacts of hydraulic breakers and mounted impact hammers, both of which can produce peak noise levels of 90 dBA at a reference distance of 50 feet were also analyzed. These pieces of equipment would primarily be used to demolish the existing parking lot and other concrete and asphalt-paved surfaces located on the Project site. Though this work would not require extensive, long-term hydraulic breaker and mounted impact hammer usage, the close proximity of the existing parking lot and other paved surfaces to Legacy High School and the high levels of noise emitted by these pieces of equipment would still create acute noise impacts greater than those caused by more long-term grading activities (i.e., the excavator and front-end loader activities described above). **Table 3.4-9 Construction Noise Levels – Unmitigated: Demolition** shows the unmitigated specific noise impacts that hydraulic breakers and mounted impact hammers could have on Legacy High School, which is located 15 feet from concrete and asphalt-paved surfaces slated for demolition.

<sup>10</sup> Federal Highway Administration. *Construction Noise Handbook*, 2006.

**Table 3.4-9**  
**Construction Noise Levels – Unmitigated: Demolition**

Sensitive Receptor	Distance from Site (feet)	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Increase
Legacy High School	15	83.0	57.3	83.0	25.7

Source: DKA Planning 2016

Based on the noise generated by construction equipment and the proximity of receptors, significant noise impacts could occur at both Project receptors (Aldrich Road and Legacy High School) during construction of the proposed Project:

- Aldrich Road Residences are projected to experience noise levels of up to 65.5 dBA as a result of Project grading activities, an increase of 14.7 dBA over existing ambient noise levels. These elevated noise levels would exceed the SGMCA's 50 dBA daytime standard for noise levels on residential properties between the hours of 8:00 AM and 7:00 PM, as well as any permitted maximum noise level increases.
- Legacy High School is projected to experience noise levels of up to 73.2 dBA as a result of Project grading activities, an increase of 15.9 dBA over existing ambient noise levels. These elevated noise levels would exceed LAUSD's exterior noise standard of 67 dBA, as well as its 3 dBA increase threshold for existing schools. However, interior noise levels would likely not exceed 45 dBA at Project site-facing classrooms and offices given the school's modern construction and its distance from grading activities. Short-term demolition activities for the Project could produce noise levels of up to 83.0 dBA, an increase of 25.7 dBA over existing ambient noise levels. Hydraulic breaking and impact hammering activities would exceed the District's exterior noise standard of 67 dBA and could also exceed the District's 45 dBA interior noise standard, as well, given the close proximity of school facilities to features proposed to be demolished.

Therefore, impacts due to construction activity would be significant. The District includes Standard Conditions to mitigate noise impacts. These Standard Conditions are described in **Chapter 2.0 Project Description** and are provided below. In addition to Standard Conditions, Regulatory Measures (i.e., measures required by the local air district) would also be applied to the Project to further reduce potential impacts. Finally, **Mitigation Measures MM-NOI-1 through MM-NOI-4** are required in order to reduce all increases in noise levels at receptors to the maximum feasible degree.

The Project would generate approximately 50-60 truck trips per day during demolition, excavation, and concrete pouring phases. Assuming an 8 hour workday as proposed, an average of 7.5 trucks would

access or exit the Project site per hour. According to the City of South Gate Noise Element and other publications, a 3 dBA increase in roadway noise levels requires an approximate doubling of roadway traffic volume, assuming that travel speed and fleet mix remain constant. Though the Project's addition of haul trucks, concrete-mixing trucks, delivery trucks, and other vehicles would alter the fleet mix of any truck routes, their minimal addition to local roadways would not nearly double those roads' traffic volumes, let alone augment their traffic to levels capable of producing sustained, perceptible increases in roadside ambient noise levels. As a result, the Project's off-site construction noise impacts would be considered less than significant.

### ***LAUSD Standard Conditions***

The following Standard Conditions would be included as part of the Project:

- SC-AQ-2** LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive noise is not generated by unmaintained equipment.
- SC-NOI-1** LAUSD shall include features such as sound walls, building configuration, and other design features in order to attenuate exterior noise levels on a school campus to less than 70 dBA L10 or 67 dBA L<sub>eq</sub>.
- SC-NOI-9** LAUSD shall prepare a noise assessment. If site-specific review of a school construction project identifies potentially significant adverse construction noise impacts, then LAUSD shall implement all feasible measures to reduce below applicable noise ordinances. Exterior construction noise levels exceed local noise standards, policies, or ordinances at noise sensitive receptors. LAUSD shall mandate that construction bid contracts include the measures identified in the noise assessment. Specific noise reduction measures include, but are not limited to, the following:

#### **Source Controls:**

- Time Constraints – prohibiting work during sensitive nighttime hours
- Scheduling – performing noisy work during less sensitive time periods (on operating campus: delay the loudest noise generation until class instruction at the nearest classrooms has ended; residential: only between 7:00 AM and 7:00 PM)
- Equipment Restrictions – restricting the type of equipment used
- Noise Restrictions – specifying stringent noise limits

- Substitute Methods – using quieter methods and/or equipment
- Exhaust Mufflers – ensuring equipment have quality mufflers installed
- Lubrication & Maintenance – well maintained equipment is quieter
- Reduced Power Operation – use only necessary size and power
- Limit Equipment On-Site – only have necessary equipment onsite
- Noise Compliance Monitoring – technician on site to ensure compliance
- Quieter Backup Alarms – manually-adjustable or ambient sensitive types Path Controls
- Noise Barriers – semi-permanent or portable wooden or concrete barriers
- Noise Curtains – flexible intervening curtain systems hung from supports
- Enclosures – encasing localized and stationary noise sources
- Increased Distance – perform noisy activities farther away from receptors, including operation of portable equipment, storage and maintenance of equipment

#### **Receptor Controls**

- Window Treatments – reinforcing the building’s noise reduction ability
- Community Participation – open dialog to involve affected residents
- Noise Complaint Process – ability to log and respond to noise complaints. Advance notice of the start of construction shall be delivered to all noise sensitive receptors adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the District. In the event of noise complaints the District shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance.
- Temporary Relocation – in extreme otherwise unmitigatable cases. Temporarily move residents or students to facilities away from the construction activity.

### ***Regulatory Compliance Measures***

**RCM-NOI-1** Project construction shall be restricted to the hours of 8:00 A.M. through 7:00 P.M. in accordance with the City of South Gate Noise Element.

## *Mitigation Measures*

### **Construction Noise**

- MM-NOI-1** The construction contractor, or its designee shall ensure all construction areas for staging and warming-up equipment shall be located as far as feasible from noise-sensitive land uses. This condition shall be included as a note on construction plans.
- MM-NOI-2** The construction contractor or its designee shall ensure portable noise sheds for smaller, noisy equipment, such as air compressors, dewatering pumps, and generators are provided as feasible. This condition shall be included as a note on construction plans.
- MM-NOI-3** The construction contractor or its designee shall ensure that operation of hydraulic breakers and mounted impact hammers shall be restricted from occurring during Legacy High School's regularly scheduled hours of operation. Furthermore, these pieces of equipment shall not be operated concurrently with any other pieces of heavy machinery in order to prevent elevated cumulative noise impacts. This condition shall be included as a note on construction plans.
- MM-NOI-4** Prior to issuance of a grading permit, the construction contractor or its designees shall install temporary noise barriers at least 10 feet in height and with a transmission loss value of at least 25 dBA (e.g., 1" plywood with acoustical blankets or aluminum sheets with a thickness of at least 0.125 inches) capable of attenuating on-site construction noises by 15 dBA.

### *Residual Impacts*

As shown in **Table 3.4-10** the implementation of LAUSD Standard Conditions, Regulatory Compliance Measures and Mitigation Measures **MM-NOI-1** through **MM-NOI-4** would minimize ambient noise increases at all receptors.

Temporary noise barriers, such as those required in Mitigation Measure **MM-NOI-4**, at least 10 feet in height and with a transmission loss value of at least 25 dBA (e.g., 1" plywood with acoustical blankets or aluminum sheets with a thickness of at least 0.125 inches) would be capable of attenuating on-site construction noises by 15 dBA over the course of Project buildout. These barriers, in conjunction with appropriate mufflers for construction equipment, would reduce construction-related noise increases at Aldrich Road Residences and Legacy High School to 3.3 dBA and 2.1 dBA, respectively.



At Legacy High School, this would limit the long-term noise impacts of most Project construction phases to below LAUSD's 3 dBA noise increase threshold for existing schools. As discussed earlier, demolition activities involving hydraulic breakers and mounted impact hammers occurring as near as 15 feet from Legacy High School buildings would still be capable of exceeding LAUSD standards for exterior, and possibly interior, noise levels. It is specifically for this reason that Mitigated Measure **MM-NOI-3** is required or recommended. By eliminating any overlap of scheduled school functions and demolition activities occurring directly outside Legacy High School, any exceedance of LAUSD noise standards would occur without the presence of school members or staff to be affected. With the incorporation of LAUSD Standard Conditions and Mitigation Measures **MM-NOI-1** through **MM-NOI-4** the Project's construction noise impacts affecting the Legacy High School Complex would be less than significant.

At the Aldrich Road residences, construction-related noise increases would be reduced below commonly accepted CEQA noise thresholds and even thresholds of ready human perceptibility, the Project would still contribute to noise levels in excess of the City's noise standards for residential properties. As codified in the SGMC and further explained in the City's Noise Element, nuisance noises cannot exceed the standards shown in **Table 3.4-6** and **Table 3.4-7**. The Project's construction noise impact inclusive of the existing ambient noise level would be 54.1 dBA which would exceed the 50 dBA threshold. However, it is important to consider that daytime ambient noise levels at Aldrich Road Residences (currently at 50.8 dBA), exceed the City's daytime residential noise standard.

The Project is consistent with LAUSD's exterior noise standard of 67 dBA Leq and would not exceed commonly accepted thresholds of significance for construction noise. Given that the SGMC only permits temporary exceedances of this noise standard of no more than 30 minutes and that the ambient noise level is already in exceedance of the 50 dBA standard, it would be a technical impossibility for any noise-making activity not to contribute to ambient noise levels in excess of City standards, no matter how mitigated or controlled. Nevertheless, even though the Project's construction noise impacts would not exceed commonly accepted thresholds of significance for construction noise, Project construction would still elevate ambient noise levels further beyond the City's 50 dBA standard for duration of greater than 30 minutes per hour during construction work hours, and would therefore be considered significant and unavoidable.

**Table 3.4-10**  
**Construction Noise Levels – Mitigated: Grading**

Sensitive Receptor	Distance from Site (feet)	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Increase
Aldrich Road Residences	245	51.3	50.8	54.1	3.3
Legacy High School	100	55.1	57.3	59.4	2.1

Source: DKA Planning 2016

## Operation

During Project operation, the project would produce direct noise on the site from school activities, as well as indirect noise impacts from vehicles traveling on local roads to and from the site. Direct impacts include:

### Auto-Related Activities

The proposed 40-spot faculty and staff parking lot would introduce recurrent, intermittent noise events, such as door slamming and vehicle engine start-ups. However, it is unlikely that Aldrich Road Residences would experience an appreciable increase in ambient noise levels as a result of this parking. First, these residences are currently exposed to existing auto-related noises from the much larger United States Post Office parking lot located at 10120 Wright Road, as well as auto-related noises from the neighborhood itself. Second, the majority of vehicular activity at the proposed parking lot would occur at the beginning and end of school days given its use as a faculty and staff lot; it would not be expected to contribute to sustained daily increases in ambient noise levels. According to the FTA, a parking facility with a peak hourly activity of 1,000 vehicles can produce a noise level of 56.4 dBA Leq at a reference distance of 50 feet.<sup>11</sup> Assuming a conservative peak hourly activity level of 40 vehicles, the capacity of the proposed parking lot, it would be expected to generate a maximum noise level of 42.4 dBA Leq at a reference distance of 50 feet. Given the 245 feet distance between the proposed parking lot and Aldrich Road Residences, auto-related noises at the proposed parking lot would not contribute to meaningful temporary or sustained increases in ambient noise levels at Aldrich Road Residences, even during peak times of operational activity.

<sup>11</sup> Federal Transit Administration, *Transit Noise and Vibration, Impact Assessment*, May 2006.

## School Land Uses

There are a variety of recurrent activities (e.g., outdoor playing, bells, conversation) that would elevate ambient noise levels at Aldrich Road Residences to differing degrees. Given the minimum 245 feet distance between the Project and Aldrich Road Residences, it is unlikely that these types of noises would be capable of raising ambient noise levels by significant amounts. The majority of school noises would also occur during daytime hours, not early morning or evening hours when people are more sensitive to noise. In regards to the regulatory compliancy of these noises, the City's noise ordinance exempts public school ground activities from its standards.

These direct sources of on-site noise would not individually or collectively elevate ambient noise levels substantially at nearby sensitive receptors, and school-related activities would be exempt from City noise regulations. The potential noise impact from these on-site operational sources would be considered less than significant.

The majority of the Project's operational noise impacts would be from indirect noise impacts associated with its 188 net new weekday AM peak hour vehicle trips and 138 net new weekday PM peak hour trips.<sup>12</sup> The mobile noise impacts of these vehicle trips were modeled using FHWA TNM 2.5 software. **Table 3.4-11** and **Table 3.4-12** show the Project's estimated contributions to ambient noise level increases along modeled roadway segments.

Finally, a consistency analysis between the Project and the City of South Gate General Plan Noise Element is provided below. As shown below, the Project would be consistent with the noise Element of the General Plan.

### **Objective N1.1: Minimize noise levels from construction and maintenance equipment, vehicles, and activities.**

**Policy P.1** Construction activities will be prohibited between the hours of 7:00 PM to 8:00 AM Monday through Saturday and Sundays and Federal Holidays.

**Analysis:** During demolition, grading, construction, and other Project phases, noise-generating activities would occur at the Project site between the hours of 8:00 AM and 7:00 PM Monday through Friday, in accordance with the South Gate General Plan Noise Element. The project would be consistent with this policy.

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<sup>12</sup> KOA Corporation, Traffic Study for LAUSD International Learning Center Addition, May 2016.

**Policy P.2** Construction noise reduction methods will be employed to the maximum extent feasible. These measures may include, but not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric compressors and similar power tools, rather than diesel equipment.

**Analysis:** Construction activities would be subject to LAUSD Standard Conditions SC-AQ-2, SC-NOI-1, SC-NOI-7, and SC-NOI-9 and NOI-1 through NOI-5. The project would be consistent with this policy.

**Policy P.3** Prior to approval of project plans and specifications by the City, project applicants and/or construction contractors will identify construction equipment and noise reducing measures, and the anticipated noise reduction.

**Analysis:** Prior to the commencement of construction, the LAUSD would submit construction plans to the City of South Gate Community Development Department that identify off-site staging areas, noise reducing barriers, and construction equipment. The project would be consistent with this policy.

**Objective N 2.1 Ensure noise impacts are considered in land use planning decisions.**

**Policy P.4** The City will require that acoustical analysis be incorporated into the environmental review process for the purpose of identifying potential noise impacts and noise abatement procedures.

**Analysis:** As part of the CEQA process, the LAUSD conducted noise monitoring and modeling for surrounding land uses and sensitive receptors in the project vicinity. The above analysis identifies potential noise impacts and noise abatement procedures. The project is consistent with this policy.

**Policy P.6** The City will require that all new non-residential development will demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA.

**Analysis:** As shown in **Tables 3.4-11 Existing AM Peak Hour Mobile Source Noise Levels** and **3.4-12 Existing PM Peak Hour Mobile Source Noise Levels**, existing ambient noise levels on Tweedy Boulevard are in excess of 65 dBA. Project traffic would not raise exterior noise levels by 3.0 dBA at this school which would be the level of human

perceptibility. Further, LAUSD's Standard Conditions will ensure interior noise levels remain below 45 dBA. Therefore, the Project would be consistent with this policy.

**Policy P.7** New development projects will provide buffers and/or appropriate mitigation measures to reduce potential noise sources on noise-sensitive land uses.

**Analysis:** The Project includes Mitigation Measure **MM-NOI-4** which includes installation of temporary noise barriers at least 10 feet in height and with a transmission loss value of at least 25 dBA (e.g., 1" plywood with acoustical blankets or aluminum sheets with a thickness of at least 0.125 inches) capable of attenuating on-site construction noises by 15 dBA. Therefore, the proposed Project would be consistent with this policy.

**Table 3.4-11**  
**Existing AM Peak Hour Mobile Source Noise Levels**

Roadway Segment	Estimated dBA, Leq 1hr			Significant Impact?
	No Project (2016)	With Project (2016)	Project Change	
1. N/B Atlantic Ave., S of Firestone Blvd.	70.1	70.2	0.1	No
2. S/B Atlantic Ave., S of Firestone Blvd.	69.9	70.0	0.1	No
3. S/B Atlantic Ave., S of Southern Ave.	67.9	68.1	0.2	No
4. W/B Tweedy Blvd., W of Atlantic Ave.	66.0	66.4	0.4	No
5. E/B Tweedy Blvd., W of Atlantic Ave.	65.0	65.4	0.4	No

Source: DKA Planning 2016

**Table 3.4-12**  
**Existing PM Peak Hour Mobile Source Noise Levels**

Roadway Segment	Estimated dBA, Leq 1hr			Significant Impact?
	No Project (2016)	With Project (2016)	Project Change	
1. N/B Atlantic Ave., S of Firestone Blvd.	69.8	69.8	0.0	No
2. S/B Atlantic Ave., S of Firestone Blvd.	70.2	70.2	0.0	No
3. S/B Atlantic Ave., S of Southern Ave.	67.9	68.0	0.1	No
4. W/B Tweedy Blvd., W of Atlantic Ave.	66.7	67.0	0.3	No
5. E/B Tweedy Blvd., W of Atlantic Ave.	65.2	65.5	0.3	No

Source: DKA Planning 2016

Roadway Segments 1 and 2 include roadside residential land uses along Atlantic Avenue, south of Firestone Boulevard. The existing ambient noise level at these segments is in excess of the SGMC's 50 dBA standard for residential properties, Project traffic is projected to result in a 0.1 dBA increase during the AM peak hour. This noise increase would be below levels of human perceptibility.

Roadway Segment 3 includes Tweedy Elementary School, a LAUSD public school. Project traffic would not raise exterior noise levels by 3.0 dBA at this school, and would therefore be less than significant.

Roadway Segments 4 and 5 include roadside residential land uses along Tweedy Blvd, west of Atlantic Ave. The existing ambient noise levels at these segments are in excess of the SGMC's 50 dBA standard for residential properties, Project traffic is projected to elevate these existing levels by approximately 0.4 dBA during the AM peak hour. This noise increase would be below levels of human perceptibility.

As increases in roadway traffic noise would be below the level of human perceptibility, operational impacts due to increases in roadway noise would be less than significant.

### ***Mitigation Measures***

The Project would have less than significant off-site operational noise impacts. No operational noise mitigation measures are required.

## Residual Impacts

Impacts would be less than significant.

**NOI-2**                      **Expose persons to or generate excessive groundborne vibration or groundborne noise levels**

## Construction

Ground-borne vibration would be generated by a number of on-site construction activities. Of these, auger drilling, mounted impact hammer (hoe ram)/hydraulic breaking, and impact pile driving would have the greatest impacts at off-site receptors. **Table 3.4-13 PPV Vibration Levels at Off-Site Structures (Unmitigated)** shows projected PPV vibration levels at receptors as a result of these specific construction activities.

**Table 3.4-13**  
**PPV Vibration Levels at Off-Site Structures (Unmitigated)**

Off-Site Structures	Auger Drilling PPV (in/sec)	Hoe Ram/Hydraulic Breaker PPV (in/sec)	Impact Pile Driver PPV (in/sec)
Legacy High School	0.007	0.156	0.049
Aldrich Road Residences	0.003	0.005	0.021
Commercial/Industrial Land Uses	0.048	0.053	0.350

*Source: DKA Planning 2016.*

At all receptors, Project-related construction would have a significant and unavoidable impact:

- Legacy High School would experience vibration levels of up to 0.156 inches per second as a result of mounted impact hammer (hoe ram) and hydraulic breaker activities. Impact pile driving could generate vibration levels of up to 0.049 inches per second at the school. While these levels would not exceed damage thresholds for modern buildings, they would exceed the City's 0.01 inches per second limit on vibration as well as LAUSD's accepted threshold of 0.1. According to Caltrans guidelines, hoe ram and hydraulic breaker activities could produce vibrations that are "barely perceptible" to people at Legacy High School, while impact pile driver activities could be "distinctly perceptible."
- Aldrich Road Residences would experience vibration levels of up to 0.021 inches per second as a result of impact pile driving. While these levels would not exceed damage thresholds for new or older residential structures, they would exceed the City's 0.01 inches per second limit on vibration,

but would not exceed LAUSD's threshold of 0.1. According to Caltrans guidelines, this 0.021 inches per second vibration level generated by impact pile driving would be "barely perceptible" to occupants at Aldrich Road Residents.

- Commercial/Industrial Land Uses neighboring the Project site to the west would experience vibration levels of up to 0.350 inches per second as a result of impact pile driving activities. Auger drilling and mounted impact hammer (hoe ram)/hydraulic breaker activities would generate vibration levels of 0.048 inches per second and 0.053 inches per second, respectively. These vibration levels would not exceed damage thresholds for commercial/industrial type buildings but would exceed the City's 0.01 inches per second limit on vibration. Vibrations from impact pile driving would be "strongly perceptible" at these receptors, and those from auger drilling and hoe ram/hydraulic breaker activities would be "distinctly perceptible."

In terms of land use disruption, Project construction would also have significant vibration impacts at Legacy High School and the Commercial/Industrial Land Uses west of the Project Site. These impacts are shown in **Table 3.4-14 VdB Vibration Levels at Off-site Structures (Unmitigated)** and are discussed below.

**Table 3.4-14**  
**VdB Vibration Levels at Off-site Structures (Unmitigated)**

Off-Site Structures	Auger Drilling VdB	Hoe Ram/Hydraulic Breaker VdB (in/sec)	Impact Pile Driver VdB (in/sec)
Legacy High School	61.3	93.7	78.3
Aldrich Road Residences	52.6	52.6	69.6
Commercial/Industrial Land Uses	80.9	80.9	97.9

*Source: DKA Planning 2016.*

- Legacy High School would experience vibration levels of up to 93.7 VdB as a result of mounted impact hammer (hoe ram)/hydraulic breaker activities. Impact pile driving would generate vibration levels of up to 78.3 VdB at this receptor. These vibration levels would exceed the FTA's 75 VdB guideline for institutional land uses with primarily day time uses, a category including schools.
- Commercial/Industrial Land Uses west of the Project site would experience VdB vibration levels in excess of FTA standards for institutional land uses with primarily daytime uses, as well. This impact would be considered significant at any commercial and office-type land uses; the FTA does not consider industrial land uses to be sensitive to groundborne vibration unless they involve vibration-sensitive process.

The Project could also generate vibration from loaded trucks accessing and exiting the Project site. According to the FTA, loaded trucks can produce peak vibration levels of up to 0.076 inches per second at



a reference distance of 25 feet.<sup>13</sup> While transient and infrequent vibration events such as loaded truck pass-bys are generally considered to be less than significant, vibration caused by loaded trucks would still exceed the SGMCMC's 0.01 inches per second limit on vibration. As a result, the Project's construction vibration impacts would be significant and unavoidable.

### *Operation*

During operation of the Proposed Project, there would be no significant stationary sources of ground-borne vibration, such as heavy equipment or industrial operations. Operational ground-borne vibration in the Project vicinity would be generated by vehicular travel on local roadways. However, road vehicles rarely create enough ground-borne vibration to be perceptible to humans unless road surfaces are poorly maintained and have potholes or bumps. Project-related traffic would expose nearby land uses and other sensitive receptors to vibration levels far below those associated with land use disruption, and would as a result be considered less than significant.

LAUSD includes Standard Conditions to reduce potential noise impacts for each project. These Standard Conditions are generally described in **Section 2.0 Project Description** and are provided below. Further, Mitigation Measure NOI-5 is recommended to reduce all increases in construction vibration impacts to the maximum feasible degree.

### *LAUSD Standard Conditions*

**SC-NOI-7** For projects where pile driving activities are required within 150 feet of a structure, a detailed vibration assessment shall be provided by an acoustical engineer to analyze potential impacts related to vibration to nearby structures and to determine feasible mitigation measures to eliminate potential risk of architectural damage

### *Mitigation Measures*

**NOI-5** The construction contractor or its designee shall ensure that hoe ram and hydraulic breaker activities shall be conducted outside of Legacy High School hours of operation so as to limit any disruption of learning activities. Similarly, any impact pile driving activities within 250 feet of Legacy High School facilities shall also be conducted outside of regular school hours. This condition shall be included on all construction plans for the project.

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<sup>13</sup> Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

### *Residual Impacts*

Implementation of **SC-NOI-7** and Mitigation Measure **MM-NOI-5** would ensure that the Project's construction activities do not interfere with the operations of Legacy High School. However, the Project would still exceed the vibration standards set by the FTA and the SGMC at Aldrich Road Residences and the commercial/industrial land uses west of the Project site. As a result, the Project's construction vibration impacts would be significant and unavoidable.

#### **NOI-3                      Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project**

The majority of any long-term noise impacts would come from traffic traveling to and from the Project site. This, the addition of future traffic from any new developments in the vicinity of the Project, and overall ambient traffic growth would elevate ambient noise levels surrounding local roadways. As discussed earlier, the Project's off-site operational noise would be minimal and below thresholds of audibility. When cumulatively considered, the Project would not contribute to significant ambient noise level increases, as shown in **Table 3.4-15** and **Table 3.4-16**.

**Table 3.4-15**  
**Existing AM Peak Hour Mobile Source Noise Levels**

Roadway Segment	Estimated dBA, Leq 1hr			Significant Impact?
	No Project (2019)	With Project (2019)	Project Change	
1. N/B Atlantic Ave., S of Firestone Blvd.	70.3	70.4	0.1	No
2. S/B Atlantic Ave., S of Firestone Blvd.	70.1	70.2	0.1	No
3. S/B Atlantic Ave., S of Southern Ave.	68.2	68.3	0.1	No
4. W/B Tweedy Blvd., W of Atlantic Ave.	66.2	66.5	0.3	No
5. E/B Tweedy Blvd., W of Atlantic Ave.	65.2	65.5	0.3	No

Source: DKA Planning 2016

**Table 3.4-16**  
**Existing P.M. Peak Hour Mobile Source Noise Levels**

Roadway Segment	Estimated dBA, Leq 1hr			Significant Impact?
	No Project (2016)	With Project (2016)	Project Change	
1. N/B Atlantic Ave., S of Firestone Blvd.	70.1	70.1	0.1	No
2. S/B Atlantic Ave., S of Firestone Blvd.	70.5	70.5	0.0	No
3. S/B Atlantic Ave., S of Southern Ave.	68.2	68.3	0.1	No
4. W/B Tweedy Blvd., W of Atlantic Ave.	67.0	67.2	0.2	No
5. E/B Tweedy Blvd., W of Atlantic Ave.	65.5	65.7	0.2	No

Source: DKA Planning 2016

Project traffic would have a less than significant cumulative impact at Roadway Segments 1, 2, 4, and 5.

- Roadway Segments 1 and 2 include roadside residential land uses along Atlantic Avenue, south of Firestone Boulevard. Existing ambient noise levels at these segments exceed the SGMC's 50 dBA standard for residential properties. Future ambient noise levels, with or without the inclusion of Project traffic, would continue to exceed this standard. Project traffic would elevate future ambient noise levels by 0.1 dBA. This noise increase would be considered below levels of human perceptibility.
- Roadway Segment 3 includes Tweedy Elementary School, a LAUSD public school. Project traffic would not cumulatively contribute to future ambient noise level increases of 3.0 dBA at this school, and would therefore be considered less than significant.
- Roadway Segments 4 and 5 include roadside residential land uses along Tweedy Blvd, west of Atlantic Ave. Existing ambient noise levels at these segments already exceed the SGMC's 50 dBA standard for residential properties. Future ambient noise levels, with or without the inclusion of Project traffic, would continue to exceed this standard, as well. However, Project traffic would only elevate future ambient noise levels by up to 0.3 dBA. This noise increase would be below levels of human perceptibility.

It is also important to note that the operational noise standards presented in the SGMC and the City's Noise Element are far more restrictive than typical CEQA thresholds, including those adopted by LAUSD's School Upgrade Program PEIR. According to the PEIR, a significant permanent increase in noise levels due to traffic can occur when noise-sensitive receptors along roadway segments are exposed to ambient noise levels of 60 dBA CNEL or greater and exposed to project-related noise increases over 3

dBA. The Project's long-term, permanent traffic impacts would not create such an impact. Therefore, operational impacts due to roadway noise would be less than significant.

### ***Mitigation Measures***

Impact would be less than significant, no mitigation measures are required.

### ***Residual Impacts***

Impacts would be less than significant.

#### **NOI-4                      Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project**

As discussed earlier, construction activities would temporarily increase ambient noise levels at nearby receptors, particularly at residences near the Project site. Moreover, any other future developments that are built concurrently with the Proposed Project could further contribute to these temporary increases in ambient noise levels. Two such developments were identified in the Related Projects table provided in **Section 3.0 Environmental Impact Analysis** and are shown in Figure 3.0-1. Both Related Projects are located west of the project site on Atlantic Avenue at the intersection of Tweedy Boulevard; one is located on the east side of the intersection, approximately 370 feet from the Project site the second is located on the west side of the intersection approximately 750 feet from the Project site. Based on the location of the Related Projects, vehicles accessing these sites would not be expected to travel through the residential neighborhoods where cumulative noise impacts could occur. It is most likely that vehicles accessing the Related Projects would most likely be traveling along Atlantic Avenue where the additional vehicle noise associated with these trips would not be noticeable due to the high volume of traffic currently on these roadways. Therefore, given the distance of the Related Projects from Project receptors, their respective scales of development, and their location along Atlantic Avenue, it is unlikely that their construction noises would be capable of contributing to cumulatively considerable noise increases at Project receptors. Nevertheless, as described under Threshold NOI-1 above, the Project would result in temporary construction noise impacts. As such, impacts related to a substantial increase in ambient noise would be significant and unavoidable.

### ***Mitigation Measures***

**SC-AQ-2, SC-NOI-1, SC-NOI-7, and SC-NOI-9** and **MM-NOI-1** through **MM-NOI-5** would be required to reduce Project level noise and vibration impacts.

### ***Residual Impacts***

As previously explained, implementation of **SC-AQ-2**, **SC-NOI-1**, **SC-NOI-7** and **SC-NOI-9** and mitigation measures **MM-NOI-1** through **MM-NOI-5** would incrementally reduce the Project's contribution to temporary increases in ambient noise levels; however even with these measures in place, the Project's construction noise and vibration impacts would remain significant and unavoidable.

#### **3.4.7 CUMULATIVE ANALYSIS**

As discussed, two future developments may be built concurrently with the proposed Project that could further contribute to noise increases in the vicinity of the Project site. These Related Projects are listed in **Section 3.0, Environmental Impact Analysis**. However, given the distance of the two potential developments from Project receptors, their respective scales of development, and their location along Atlantic Avenue, it is unlikely that their construction and operational noises would be capable of contributing to cumulatively considerable noise increases at Project receptors. Therefore, the project would not contribute to a cumulatively considerable noise impact. Impacts would be less than significant.

## 3.5 PEDESTRIAN SAFETY

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### 3.5.1 INTRODUCTION

This EIR section analyzes the potential for adverse impacts on pedestrian safety resulting from implementation of the proposed Project. Data used to prepare this section were taken from the pedestrian safety study conducted as part of the traffic impact analysis, *Traffic Study for Los Angeles Unified School District International Learning Center Addition* prepared by KOA Corporation, dated May 16, 2016 (**Appendix 3.5-1**). The analysis includes an estimate of the number of pedestrians who would be walking to and from the proposed school, an inventory of the existing pedestrian-oriented traffic controls and sidewalks within 0.25 mile of the proposed project location, a map of the recommended pedestrian routes to the proposed project site, and a review of the potential safety concerns for pedestrians.

### 3.5.2 EXISTING CONDITIONS

#### *Pedestrian Access*

Pedestrian access to the Project site is similar to the existing roadway access described in Section 3.6 Transportation; – pedestrians walk along Tweedy Boulevard to reach the main entrance of the existing high school. The proposed Project would allow similar pedestrian access along Tweedy Boulevard for ISLC students.

The north side of Tweedy Boulevard maintains pedestrian sidewalk that borders the existing LHSC and leads to Atlantic Boulevard. Chakemco Street which runs parallel to Tweedy Boulevard to the south does not contain pedestrian sidewalks. An existing crosswalk runs provides access to LHSC from the existing surface parking lot on the south side of Tweedy Boulevard. Crosswalks and traffic signals are available at the intersection of Tweedy Boulevard and Atlantic Avenue, immediately west to the Project site. Existing pedestrian facilities are illustrated in **Figure 3.5-1 Pedestrian Safety Existing Conditions**. The roadway network in the Project vicinity and existing levels of service are provided in Section 3.6 Transportation and Traffic.

As part of the original LHSC development plan, portions of Tweedy Boulevard, Chakemco Street and Adella Avenue will be vacated. Tweedy Boulevard will be widened to include a sidewalk on the south side of the street and will be turned into a cul-de-sac where it currently intersects with Adella Avenue. A new perimeter roadway (to be called Legacy Lane), will be constructed between Tweedy Boulevard and Burtis Avenue.

### 3.5.3 REGULATORY FRAMEWORK

#### Federal

##### *Americans with Disabilities Act of 1990 (ADA)*

Titles I, II, III, and V of the United States Codes are codified in Title 42, Chapter 126 (Equal Opportunity for Individuals with Disabilities) beginning at Section 12101. Chapter 126, Subchapter III (formerly Title III) prohibits discrimination on the basis of disability in “places of public accommodation” (businesses and non-profit agencies that serve the public) and “commercial facilities” (other businesses). The regulation includes standards for accessible design establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

##### *SAFETEA-LU Section 1404*

Enacted in 2005, the Safe, Accountable, Flexible, Efficient Transportation equity Act: A Legacy for Users represents the largest surface transportation investment in the nation. This federal funding program delegates each State Department of Transportation to implement the objectives in SAFETEA-LU. Section 1404 of SAFETEA-LU encourages primary and secondary school children to walk and bicycle to school. Both infrastructure-related and behavioral projects will be geared towards providing a safe, appealing environment for walking and biking that will improve the quality of children’s lives.

#### State

##### *Streets and Highways Code Section 2331, 2333, and 2333.5*

Safe Routes to School (SRTS) is a California Department of Transportation (Caltrans) program resulting from the 1999 passage and signing of Assembly Bill 1475 (Soto). AB1475 called for Caltrans “to establish and administer a ‘Safe Routes to School’ construction program... and to use federal transportation funds for construction of bicycle and pedestrian safety and traffic calming projects.” School districts are responsible for establishing and enforcing school route plans and for siting and developing school facilities that foster a good walking environment. These responsibilities include choosing school locations that balance vehicle access with pedestrian safety needs, constructing adequate pedestrian facilities along the perimeter of the school site, and working with the local public works agency to fund and install adequate crossing protection at key points. School districts are responsible for distributing walk-route

maps to parents and students prior to school opening and a pedestrian safety plan for the safe arrival and departure of students in accordance with the California Manual of Uniform Traffic Control Devices.

### ***Complete Streets Act (Assembly Bill 1358)***

Assembly Bill (AB) 1358, the Complete Streets Act, was signed into law in September 2008. AB 1358 requires cities and counties, when updating the part of a local general plan that address traffic and roadways, to ensure that those plans account for the needs of all roadway users. The goal of the legislation is to improve safety, access, and mobility for all travelers in California; and recognize that active transportation modes (i.e., bicycle and pedestrian) and transit modes as integral elements of the transportation system. The legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of all users as well as motorists.

### **Local**

The California legislature granted school districts the power to exempt school property from local zoning requirements, so long as the school district complies with Government Code Section 53094. This section States:<sup>1</sup>

*(a) Notwithstanding any other provision of this article, this article does not require a school district to comply with the zoning ordinances of a county or city unless the zoning ordinance makes provision for the location of public schools and unless the city or county has adopted a general plan.*

*(b) Notwithstanding subdivision (a), the governing board of a school district, that has complied with the requirements of Section 65352.2 of this code and Section 21151.2 of the Public Resources Code, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for nonclassroom facilities, including, but not limited to, warehouses, administrative buildings, and automotive storage and repair buildings.*

*(c) The governing board of the school district shall, within 10 days, notify the city or county concerned of any action taken pursuant to subdivision (b). If the governing board has taken such an action, the city or county may commence an action in the superior court of the county whose zoning ordinance is involved or in which is situated the city whose zoning ordinance is involved, seeking a review of the action of the governing board of the school district to determine whether it was arbitrary and capricious. The city or county shall cause a copy of the complaint to be served*

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<sup>1</sup> California Legislative Information, Article 5 Section 53094, Website: [http://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=GOV&sectionNum=53094](http://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=53094), accessed 08/05/2016



*on the board. If the court determines that the action was arbitrary and capricious, it shall declare it to be of no force and effect, and the zoning ordinance in question shall be applicable to the use of the property by the school district.*

Nonetheless, the District has considered local plans and policies for the communities surrounding its facilities.

### ***LAUSD Traffic and Pedestrian Safety Requirements for New Schools***

LAUSD developed the *Traffic and Pedestrian Safety Requirements* for new schools to guide site planning and identify performance requirements to minimize potential pedestrian safety risks to students, staff, and visitors at LAUSD schools. The performance guidelines include requirements for student drop-off areas, vehicle access, and pedestrian routes to school.

#### ***LAUSD OEHS CEQA Specification Manual, Appendix C<sup>2</sup>***

The LAUSD Office of Environmental Health & safety (OEHS) has identified thresholds of significance to minimize potential pedestrian safety risk to students, staff, and visitors to LAUSD schools. These thresholds are defined below as found in Appendix C of the CEQA specification manual.

**PS-1 Vehicle Access:** Substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses.

**PS-2 Pedestrian Routes to School:** Create unsafe routes to schools for students walking from local neighborhoods.

**PS-3 Roadways in the Project Vicinity:** Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard.

### ***City of South Gate General Plan***

The Mobility Element of the City of South Gate General Plan sets forth the plan for transportation within the City of South Gate. The element recognizes that the impacts of traffic should be minimized in residential neighborhoods and in commercial and recreational areas. Traffic should flow smoothly, but at appropriate, low, and safe speeds.

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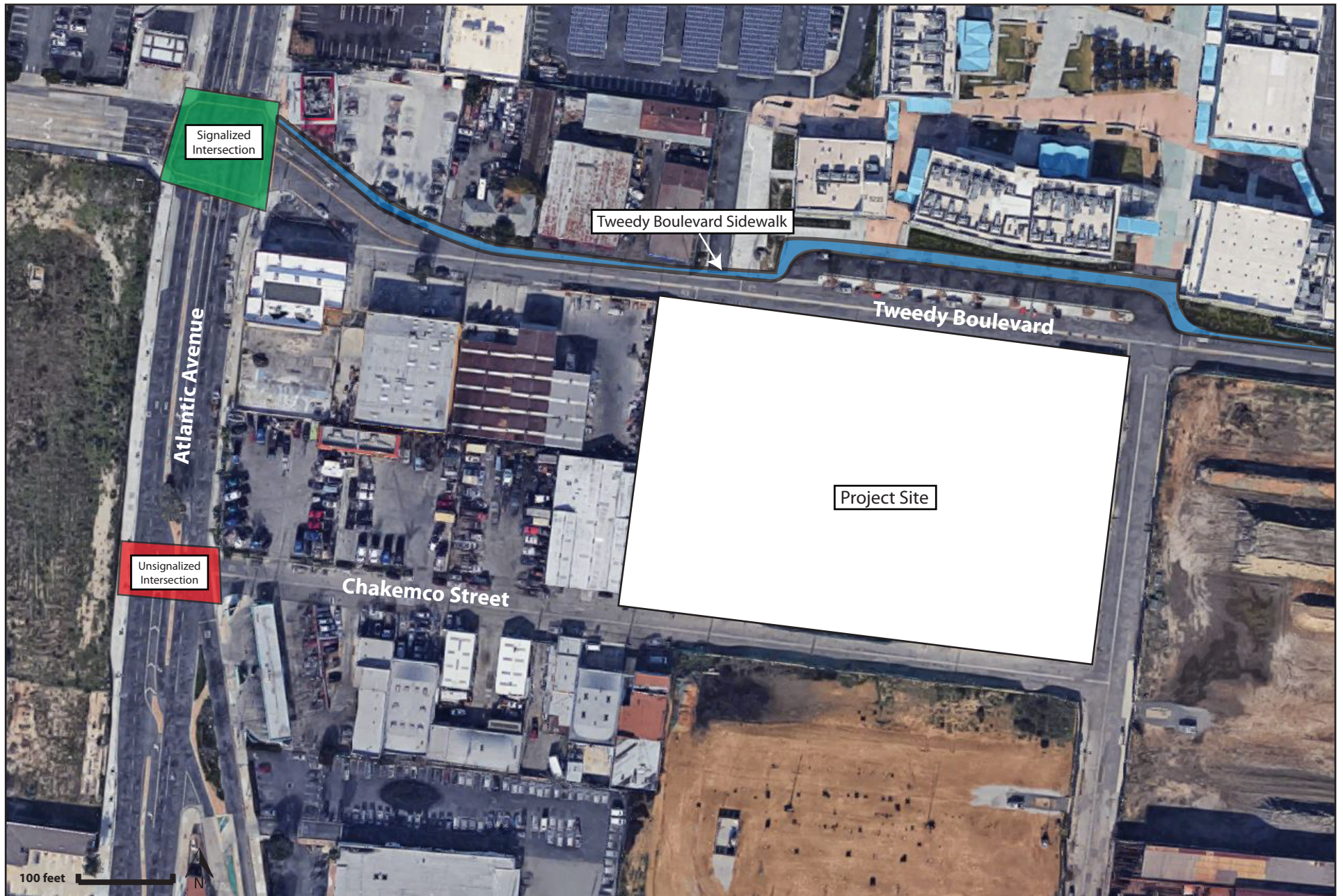
<sup>2</sup> OEHS. California Environmental Quality Act Specification Manual, Appendix C. Revised January 2007.

The City of South Gate rates traffic conditions using the concept of Level of Service, similar to the analysis of traffic impacts provided below. The applicable goals for traffic and circulation in the General Plan are listed below:

- Goal ME 3:** Minimize the adverse effects of traffic
- Objective ME 3.1:** Minimize and/or reduce adverse impacts on city streets from regional through traffic.
- Objective ME 3.2:** Calm traffic and protect residential neighborhoods from traffic intrusion
- P.1:** The city should use traffic calming and management measures on local and collector streets to discourage traffic from diverting into or taking short-cuts through residential neighborhoods
  - P.2:** The City should apply appropriate traffic management techniques to control the volume and speed of traffic to appropriate levels consistent with adjacent land uses on local streets, near schools, and along streets with a significant amount of residential development.
  - P.3:** The City should develop neighborhood traffic management programs where necessary and appropriate in residential neighborhoods and around schools, parks, and sensitive uses such as senior centers.

Furthermore, the Mobility Element includes Actions for Street Improvements in some corridors identified in Table 3.5-2 above.

- Action ME 1.5: Atlantic Avenue:** Widen from four lanes to six lanes throughout the City.
- Action ME 1.10 Firestone Boulevard:** Widen to a six lane boulevard. Between Atlantic Avenue and Garfield Avenue, Firestone Boulevard should be a minimum of eight lanes (excluding left turns).
- Action ME 1.11: Southern Avenue:** Extend east, as an Avenue (four lanes), across the Los Angeles River and the I-710 Freeway to connect to Garfield Avenue.
- Action ME 1.12: Tweedy Boulevard:** Conduct a study of Tweedy Boulevard. Tweedy Boulevard should remain a four lane street, but studies should address the feasibility of converting to a two lane street with traffic calming, traffic management, and parking strategies, to create a true multi-modal and pedestrian-oriented environment along the Tweedy Mile commercial corridor, including 15-foot sidewalks where feasible.



SOURCE: Google Earth, 2017

FIGURE 3.5-1

### ***Tweedy Boulevard Specific Plan***

The Project site is located within the Tweedy Boulevard Specific Plan. Tweedy Boulevard is more than three miles in length and is one of the main commercial corridors in the City. The Specific Plan area is approximately 650 acres in size, and contains Tweedy Mile – the downtown area of South Gate. . The specific plan aims to revitalize Tweedy Boulevard through guiding future development of mixed uses in a walkable environment, streamlining the development process, and serving as an incentive for economic development. The Project site would be located within the Tweedy East Sub-Area.<sup>3</sup>

#### **3.5.4 METHODOLOGY**

The analysis of potential impacts to pedestrian safety associated with the proposed project is based on information provided in the *Traffic Impact Study* from KOA Corporation (Appendix 3.5).

#### ***Standard Conditions of Approval***

These standard conditions of approval (SCs) are included within the Los Angeles Unified School District, School Upgrade Program EIR (Program EIR). Listed below are all applicable transportation features to be included in the Project.

- **SC-PED-1 Caltrans SRTS Program:** The LAUSD is a participant in the SRTS program administered by Caltrans and local law enforcement and transportation agencies. OEHS provides pedestrian safety evaluations as a component of traffic studies conducted for new school projects. This pedestrian safety evaluation includes a determination of whether adequate walkways and sidewalks are provided along the perimeter of, across from, and adjacent to a proposed school site and along the paths of identified pedestrian routes within a 0.25 mile radius of a proposed school site. The purpose of this review is to ensure that pedestrians are adequately separated from vehicular traffic.
- **SC-PED-2 Traffic and Pedestrian Safety requirements:** LAUSD has developed these performance guidelines to minimize potential pedestrian safety risks to students, faculty and staff, and visitors at LAUSD schools. The performance guidelines include the requirements for student drop-off areas, vehicle access, and pedestrian routes to school. Appendix C of the SUP Program EIR states school traffic studies shall identify measures to ensure separation between pedestrians and vehicles along potential pedestrian routes, such as sidewalks, crosswalks, bike paths, crossing guards, pedestrian and traffic signals, stop signs, warning signs, and other pedestrian access measures.
- **SC-PED-3 Sidewalk requirements for New Schools:** LAUSD shall coordinate with the responsible traffic jurisdiction/agency to ensure these areas are improved prior to the opening of a school. Improvements shall include but are not limited to: (1) Clearly designate passenger loading areas with the use of signage, painted curbs, etc (2) Install new walkway and/or sidewalk segments where none

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<sup>3</sup> City of South Gate, Tweedy Boulevard Specific Plan, website: <http://tweedy.arroyogroup.com/>, accessed August 1, 2016

exist (3) Any substandard walk/sidewalk segments shall be improved to a minimum of eight feet wide (4) Provide other alternative measures that separate foot traffic from vehicular traffic, such as distinct travel pathways or barricades

- **SC-PED-4 School Traffic Safety Reference Guide REF – 4492.1:** Guide sets forth requirements for traffic and pedestrian safety, and procedures for school principals to request assistance from OEHS, the Los Angeles Schools Police Department (LASPD), or the local police department regarding traffic and pedestrian safety. Distribution and posting of the Back to School Safety Tips flyer is required. This guide also includes procedures for traffic surveys, parking restrictions, crosswalks, advance warning signs (school zone), school parking signage, traffic controls, crossing guards, or for determinations on whether vehicle enforcement is required to ensure the safety of students and staff.
- **SC-PED-5 School Design Guide:** The Guide states student drop-off and pick-up, bus loading areas, and parking areas shall be separated to allow students to enter and exit the school grounds safely.
- **SC-T-3** Coordinate with the local City or County Jurisdiction and agree on the following:
  - Compliance with the jurisdiction's design guidelines for access, parking, and circulation in the vicinity of the project
  - Scope of analysis and methodology for the traffic and pedestrian study, including trip generation rates, trip distribution, number and location of intersections, traffic impact thresholds
  - Implementation of SRTS, traffic control and pedestrian safety devices  
Traffic and pedestrian safety impacts studies shall address local traffic and congestion during morning arrival times, and before and after evening stadium events
  - Loading zones will be analyzed to determine adequacy of pick-up and dropoff points. Recommendations will be developed in consultation with the local jurisdiction for curb loading bays or curb parking restrictions to accommodate loading needs and will control double parking and across-the-street loading.
- **SC-T-4** LAUSD shall require its contractors to submit a construction worksite traffic control plan to the LADOT for review prior to construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.

### 3.5.5 THRESHOLDS OF SIGNIFICANCE

LAUSD has determined the following thresholds for determining the significance of impacts related to pedestrian safety. Impacts related to pedestrian safety are considered significant if the proposed Project would:

- PED -1: Substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses



- PED – 2: Create unsafe routes to schools for students walking from local neighborhoods
- PED – 3: Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard

### 3.5.6 IMPACTS AND MITIGATION MEASURES

**PED-1**                      **Would the project substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses?**

**PED-2**                      **Would the project create unsafe routes to schools for students walking from local neighborhoods?**

#### *Construction Impacts*

During construction, construction vehicles would need to access the Project site. The majority of construction equipment would be staged on the site, limiting the amount of equipment that would access the site on a daily basis and trips would cease once construction is complete. The limited number of construction vehicles accessing the site would therefore not result in substantially increase pedestrian safety hazards due to incompatible uses. To further ensure pedestrian safety during construction, **MM PED-1** would be implemented to prohibit construction vehicles from accessing the site during the peak AM and PM hours when most students would be walking to the existing LHSC. With the implementation of **MM-PED-1**, construction impacts associated with the creation of unsafe routes to schools would be less than significant.

#### *Operation Impacts*

As stated in Section 3.6, Transportation, based on the proposed 459 seat capacity of the school, the Project would generate approximately 188 AM peak hour trips (101 inbound trips and 87 outbound trips) and 138 PM peak hour trips (62 inbound trips and 76 outbound trips). The anticipated number of students who would walk to and from the school site (37) was calculated using the mode split characteristics of LAUSD schools, established by surveys conducted for LAUSD's SUP Program EIR.<sup>4</sup> Without sufficient pedestrian facilities there is the potential for pedestrian safety hazards or unsafe routes. A sidewalk on the south side of Tweedy Boulevard to the west of the Project site (between Legacy Lane and Atlantic Avenue) is currently under construction by LAUSD will be completed by the time the Project is constructed. This new sidewalk will avoid a condition where all student pedestrians would need to cross Tweedy Boulevard to access the ISLC campus, creating potential delay in inbound and outbound vehicle

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<sup>4</sup> Details on the calculations for estimated pedestrian volumes are provided in the TIA in Appendix 3.5-1.

traffic for both schools. In case the new sidewalk is not constructed by the time the Project is constructed, LAUSD will request that the City of South Gate provide crossing guards for north-south pedestrian crossing at the Tweedy Boulevard/Legacy Place site intersection, to provide balance between vehicle inbound and outbound movements and pedestrians. Furthermore, the Project's pick up and drop off operations have been designed to accommodate existing, adjacent uses and enhance pedestrian safety along Tweedy Boulevard. As required by Standard Condition **SC-T-3**, all local pedestrian routes will have adequate sidewalk facilities, per LAUSD and City of South Gate design standards. LAUSD has committed to the following Project procedures to ensure pedestrian safety:

- LAUSD shall coordinate with the City of South Gate to install appropriate traffic controls, school warning and speed limit signs, school crosswalks and pavement markings. LAUSD shall install these improvements with the site improvements.
- LAUSD shall coordinate with the City of South Gate to prepare a "Pedestrian Routes to School" map. This map would provide a final adopted pedestrian route network, with indications for both sides of each included roadway. As part of the "Pedestrian Routes to School" map, parents and students should be notified to use the existing controlled intersections as crossing points. LAUSD shall conduct these actions with the completion of site improvements.
- LAUSD shall coordinate with the City of South Gate to install signs for the area of transition between the public roadway of Tweedy Boulevard and the on-site pick-up/drop-off area. The locations of prohibited on-street parking areas adjacent to the campus should be determined during that coordination effort. LAUSD shall conduct these actions with the completion of site improvements.

Following the implementation of these pedestrian access standards by LAUSD, impacts associated with the potential for hazardous design features or unsafe routes to school during operation would be less than significant.

### ***LAUSD Standard Conditions***

**Standard Conditions SC-PED-1, SC-PED-2, SC-PED-3, SC-PED-4, SC-PED-5, SC-T-3, SC-T-4**

### ***Mitigation Measures***

**MM-PED-1:** The construction contractor or its designee shall ensure that during construction activities, construction trucks shall not access the site during specific peak student loading/unloading times as specified by LAUSD and the Legacy High School Complex. This requirement shall be included on all construction documents.

### ***Residual Impacts***

Mitigation Measure **MM-PED-1** would maintain safety of pedestrian routes of local neighborhoods during Project construction activities by limiting construction truck access during peak school drop-off/pick-up hours. With implementation of this measure, impacts would be less than significant.

**PED-3                      Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard**

### ***Construction Impacts***

There are no major arterial roadways in the immediate vicinity of the Project site. Atlantic Avenue, a primary arterial roadway, is located directly west of the Project site. Trucks would reasonably use Atlantic Avenue, I-710, and Firestone Boulevard as major regional roadways to arrive at Tweedy Boulevard and eventually the Project site.

Atlantic Boulevard has a functional four-way traffic signal at the intersection of Tweedy Boulevard. As such, Project construction trucks or other vehicles accessing the site would not be impeded upon or impede on pedestrian safety. Furthermore, in accordance with the District's PEIR's **Standard Condition SC-T-4**, construction-related trucks would be required to access the site during off-peak commute periods.

Therefore, the construction of the Project would not cause a significant impact to pedestrian safety associated with an arterial roadway or freeway.

### ***Operation Impacts***

As described above, Atlantic Avenue, a primary arterial roadway, is located directly west of the Project site. I-710 is located 0.37 miles east of the Project, but a concrete channelized portion of the Los Angeles River provides a buffer between the Project site and the freeway. Therefore, safety hazards associated with being adjacent to a freeway would be less than significant as there is no direct access between the I-170 and the Project site.

Atlantic Avenue has signaling, posted speed limits, and protected pedestrian crossings at major intersections, including Tweedy Boulevard, the closest intersection to the Project site. Additionally, the proposed Project would be implemented in accordance with LAUSD standards, including establishing school speed zones within the local neighborhood and requiring drop-off areas to be located 90 feet or



more away from major streets. As mentioned previously, the proposed Project would be designed to ensure safe arrival and departure of all transportation modes.

Therefore, pedestrian safety impacts associated with the proximity of an arterial roadway would be less than significant.

### ***LAUSD Standard Conditions***

#### **Standard Condition SC-T-4**

#### ***Mitigation Measures***

No mitigation is required.

#### ***Residual Impacts***

Impacts would be less than significant.

### **3.5.7 CUMULATIVE ANALYSIS**

The proposed Project has the potential to combine with reasonably foreseeable development to result in significant cumulative impacts to pedestrian safety relating to vehicle access. Related Projects and locations have been provided in Table 3.0-1 and Figure 3.0-1 in **Section 3.0 Environmental Setting**. There are two area projects identified within a 1.5 mile radius from the Project site; both located west of the Project site. The Related Projects are located west of the Project site at the intersection of Tweedy Boulevard and Atlantic Avenue. One project, a mixed-use project located at 9923 Atlantic Avenue could potentially result in a cumulative pedestrian safety impact as it is located 350 feet from the Project site. However, the Project includes sufficient pedestrian safety measures (i.e., new sidewalks) to ensure site specific impacts would not occur. Therefore, these projects would not combine to create areas of cumulative impacts related to pedestrian safety. Therefore, the proposed project would not contribute to a cumulatively considerable impact related to pedestrian safety.

#### ***Mitigation Measures***

No mitigation is required

#### ***Residual Impact***

The Project would not contribute to cumulatively considerable pedestrian safety impact. Impacts are considered to be less than significant.

## 3.6 TRANSPORTATION

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### 3.6.1 INTRODUCTION

This EIR section analyzes the potential for adverse impacts on existing transportation conditions and pedestrian safety resulting from implementation of the proposed Project. Data used to prepare this section were taken from the *Traffic Study for Los Angeles Unified School District International Learning Center Addition* prepared by KOA Corporation, dated May 16, 2016 (**Appendix 3.6-1**). This traffic analysis has been conducted to identify and evaluate the impacts that traffic generated by the proposed Project would have on the surrounding roadway network. The traffic analysis follows City of South Gate traffic study guidelines and is consistent with traffic impact assessment guidelines set forth in the 2010 Congestion Management Program (CMP) for Los Angeles County.

### 3.6.2 EXISTING CONDITIONS

The proposed Project is located in southeastern Los Angeles County in the City of South Gate, in a predominantly urban setting. The surrounding uses include the existing LHSC campus directly north of the Project Site across Tweedy Boulevard, a concrete channelized portion of the Los Angeles River approximately 1,200 feet east of the Project Site, a strip mall comprised of general commercial uses to the west along Atlantic Avenue, and a vacant parcel owned by LAUSD that separates the Project Site from existing single-family residences to the south. The Project is proposed on Tweedy Boulevard - a highly trafficked corridor in the City of South Gate. However, the portion of Tweedy Boulevard that the proposed Project would be located on experiences less traffic than the commercial areas, in part due to the limited number of uses and the configuration of the roadway which services only a few uses in this portion. The proposed Project would be directly south of LHSC. The existing campus serves approximately 1,431 students and as a result experiences heavy traffic during school pick up and drop off times.<sup>1</sup> A surface parking lot with 58 parking spaces occupies the northeast portion of the site. None of these parking spaces are allotted for student use. Currently, 277 parking spaces are available in the existing LHSC in the form of street parking along Tweedy Boulevard and within a surface parking lot located on the far west portion of LHSC.

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<sup>1</sup> *Environmental Science Associates, SRHS 9 Recirculated Final EIR, August 2009*

### ***Regional Roadways***

Regional access to the site is provided by the Long Beach Freeway (I-710) which is approximately 0.5 miles east of the site, and the Glenn Anderson Freeway (I-105) which is approximately 2 miles south of the site.

I-710 provides a link to the Project site for any southbound and northbound traffic in the regional vicinity, extending from the City of Long Beach in southern Los Angeles County to Valley Boulevard in the City of Alhambra. The nearest on and off-ramps to the Project site are on Abbot Road.

I-105 provides access for easterly and westerly traffic in the regional vicinity. I-105 generally runs from Los Angeles International Airport (LAX) on the east to the city of Norwalk to the west. The nearest on and off-ramps to the Project site would be south of the Project site on Atlantic Boulevard.

Secondary regional access to the Project site is provided via the Harbor Freeway (I-110) located approximately 10 miles west of the Project site. This interstate highway provides access to northerly and southerly traffic traveling further west of I-710. Atlantic Avenue, Imperial Highway, and Firestone Boulevard also provide additional regional access in the Project site vicinity. These local roadways extend through several jurisdictions, and are roadways that could serve traffic arriving and leaving the Project site.

### ***Air Transportation***

The nearest airports are the Compton/Woodley Airport (located approximately 7 miles southwest of the Project site) and the Hawthorne Municipal airport (located approximately 11 miles west of the Project site). The Compton Airport provides two runways for air traffic and the Hawthorne airport provides one runway. These airports are primarily reliever airports and act to mainly provide additional capacity when primary commercial airports are overwhelmed.

Long Beach Airport (located approximately 14 miles south of the Project site) and LAX (located approximately 15 miles west of the Project site) are the nearest airports that provide routine, commercial air carrier services.

### ***Rail Transportation***

The City of South Gate is not currently served by rail transit within its city limits. However, regional rail transit connection is provided by Metrolink which provides commuter rail service throughout Southern California. The major Metrolink hub is Union Station in downtown Los Angeles, where seven Metrolink lines radiate outward from this terminus station. The nearest station to the Project site is located on 6433 East 26<sup>th</sup> Street, Commerce, approximately 6 miles to the north.

Amtrak provides intercity rail service and offers connections in Los Angeles County and destinations throughout its service area. Union Station, approximately 12 miles northwest of the Project site located at 800 North Alameda Street is the nearest Amtrak station.

## Local Setting

### *Existing Roadway Circulation System*

Important roadways within the vicinity of the Project site have been classified into the following categories, based on their function and design and the City of South Gate General Plan:

- **Boulevards (Primary Arterial)** are major streets that carry both local and through traffic and are expected to carry the highest volumes of traffic in the City. They provide limited access to adjacent land uses. Boulevards are multi-modal streets that serve as key transit corridors, emergency response routes, and may also serve as truck routes. Boulevards are functionally equivalent to a Primary Arterial. Firestone Boulevard, Imperial Highway, Long Beach Boulevard, Atlantic Avenue, Garfield Avenue, and Paramount Boulevard act as these arterials in the City.
- **Avenues (Secondary Arterials)** are secondary streets. They carry primarily local traffic and also some through traffic. They serve shorter trips and provide access to adjacent land uses. They are local transit corridors and are the primary bicycle routes and pedestrian routes in the City. Avenues are functionally equivalent to Secondary Arterial. Tweedy Boulevard, Southern Avenue Extension, California Avenue, State Street, and Century Boulevard (West) are designated as Avenues within the City.
- **Streets (Collector)** connect neighborhoods to each other and to commercial and other districts. They also connect arterials to local roads. Streets are functionally equivalent to Collector Streets. Santa Ana Avenue, Independence/Ardmore, Southern Avenue, Gardendale Street, Main Street, Truba Avenue, Otis Street, Alexander Street, Wilcox Avenue New Extension, Rayo Avenue, and Borwick Avenue are designated as Streets within the City.
- **Collector Streets** are roadways which have an ultimate roadway design section of two travel lanes with limited vehicular access to the roadway from driveways and cross streets. The roadway is usually undivided and does not always accommodate left turn pockets at intersections. Collector streets are designed to provide both access and limited mobility, servicing local traffic from residential, commercial, and industrial uses and providing access to the arterial roadway system. When fully improved and operating at LOS E, collectors can accommodate approximately 15,000 vehicles per day.
- **Local Roads** are roads that serve local land uses, typically residential but can also serve industrial and/or commercial uses. They carry low traffic volumes and are exclusively oriented to local traffic. All other roads in the City are designated as local roads.

## Roadway Descriptions

**Firestone Boulevard** is an east-west Boulevard (Primary Arterial) with eight lanes between Atlantic Avenue and Garfield Avenue and six lanes west of Atlantic Avenue. Firestone Boulevard has a posted 35 mph speed limit with separate left turn pockets in each direction. Parking is generally permitted in roadway segments with four travel lanes and generally prohibited in roadway segments with six travel lanes. Firestone Boulevard does not border the Project site, but is a major intermediate corridor for local access to the Project. Access to the Project site is provided via the intersection of Firestone Boulevard and either Atlantic Avenue or Rayo Avenue.

**Southern Avenue** is an east-west Avenue (Secondary Arterial) with generally four travel lanes bordered by Atlantic Avenue to the east and Alameda Street to the west. Left-turns on Southern Avenue are mainly performed via the center median dividing opposing easterly/westerly traffic. The posted speed limit is 25 mph. Parking is generally permitted on both sides of Southern Avenue. Access to the Project site is provided via the intersection of Southern Avenue and Atlantic Avenue.

**Wood Avenue** is an east-west local road with two undivided travel lanes. Parking on Wood Avenue is prohibited on either sides of the street with no posted speed limit. As Wood Avenue is primarily a residential street, the prima facie speed limit would be 25 mph.

**Tweedy Boulevard** is an east-west Avenue (Secondary Arterial) with four divided travel lanes. Parking is generally permitted on either side of the road. Tweedy Boulevard provides separate left-turn pockets on major intersections for vehicles traveling in either direction. The posted speed limit is 30 mph for west-bound traffic and not posted for east-bound traffic. Tweedy Boulevard provides the most immediate access to the Project site. As part of the original LHSC development plan, the portion of Tweedy Boulevard between Atlantic Avenue and the LHSC will be widened to accommodate a sidewalk along the southern edge. In addition, the portion of Tweedy Boulevard between Adella Avenue and Burtis Street will be vacated and it will be turned into a cul-de-sac. These various improvements were analyzed as part of the original CEQA documentation for the LHSC.

**Michigan Avenue** is an east-west local road consisting of two undivided travel lanes with no posted speed limit. As Michigan Avenue is primarily a residential street, the prima facie speed limit would be 25 mph. Parking on Michigan Avenue is generally permitted on either side of the road. Michigan Avenue feeds into Atlantic Avenue on its eastern border, which acts as the major intersection with Tweedy Boulevard before entering LHSC.

**Aldrich Road** is an east-west local road consisting of two undivided travel lanes with no posted speed limit. As Aldrich road is primarily a residential street, the prima facie speed limit would be 25 mph.

Parking on Aldrich Road is generally permitted on either side of the street. Aldrich Road connects Adella Avenue that leads to Tweedy Place and eventually the Project site. Currently, the northern intersection of Aldrich Road and Adella Avenue contains a roadway block that inhibits traffic from accessing Tweedy Place.

**Orange Avenue** is a north-south local road consisting of two undivided travel lanes with no posted speed limit. As Orange Avenue is primarily a residential street, the prima facie speed limit would be 25 mph. Parking on Orange Avenue is generally permitted on either side of the road.

**Pinehurst Avenue** is a north-south local road consisting of two divided travel lanes with a posted speed limit of 25 mph. Parking on Pinehurst Avenue is generally permitted on either side of the road. Pinehurst Avenue feeds into Tweedy Boulevard on its northern border and eventually ends on Southern Avenue.

**Atlantic Avenue** is a north-south Boulevard (Primary Arterial) with four divided travel lanes and a posted speed limit of 35 mph. Parking is generally permitted with a two hour limit on either side of the road, and separate left turn pockets are provided with major intersections including Tweedy Boulevard. The confluence of Atlantic Avenue and Tweedy Boulevard is the nearest major intersection to LHSC.

**Rayo Avenue** is a north-south Street (connector street) with two divided travel lanes and no posted speed limit near the Project site. Rayo Avenue provides a connection between two major thoroughfares near the Project site: Firestone Boulevard and Atlantic Avenue. Parking is permitted in either side of Rayo Avenue.

**Wright Road** is a north-south Street (connector street) with two divided travel lanes and a posted speed limit of 35 mph. Wright Road provides a connection between Atlantic Avenue and the Imperial Highway – two major corridors in the vicinity of the Project site. Separated left turn pockets are provided in major intersections on both directions. Parking is permitted on either sides of Wright Road.

**Adella Avenue** is a north-south local road consisting of two undivided travel lanes and no posted speed limit. As Adella Avenue is primarily a residential street, the prima facie speed limit would be 25 mph. Parking on Adella Avenue is permitted on either sides of the road. As part of the original LHSC development plan, the portion of Adella Avenue between Tweedy Boulevard Avenue and the future Legacy Lane will be vacated. This improvement was analyzed as part of the original CEQA documentation for the LHSC and is expected to be completed prior to the start of construction of the proposed Project.

**Chakemco Street** is an east-west local street consisting of two undivided travel lanes and no posted speed limit. Chakemco Street primarily consists of commercial uses and vacant lots that are currently

fenced and owned by LAUSD. As there is no posted sign limit, the prima facie speed limit would be 25 mph. The portion of Chakemco Street that runs through the Project site would be vacated as part of the Project. A new street named Legacy Lane would divide the existing commercial uses from the proposed school.

**Burtis Street** is a north-south local street that borders the Los Angeles River to the east and a vacant parcel owned by LAUSD to the west. Currently, there are no land uses that exist on Burtis Street except the aforementioned vacant lot that is owned by LAUSD. Burtis Street is a cul-de-sac that connects into the eastern end of Tweedy Boulevard with no posted sign limit.

**Legacy Lane** is a local street that would to be constructed. Legacy Lane would perimeter the proposed Project and would allow north-south and east-west travel on different segments of the street. Legacy Lane would traverse north-south as it cuts through Chakemco Street, dividing the commercial uses from the proposed Project. Past Chakemco Street to the east, Legacy Lane would be an east-west street between Adella Avenue and Burtis Street.

### ***Study Area***

The traffic analysis study area (study area) is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the Project. The area studied for potential impacts generally includes those intersections that are:

- Immediately adjacent or in close proximity to the Project site;
- In the vicinity of the Project site that are documented to have current or projected future adverse operational issues; and
- In the vicinity of the Project site that are forecast to experience a relatively greater percentage of Project-related vehicular turning movements (e.g., at freeway ramp intersections).

The following study intersections were selected for analysis of potential impacts due to the Project based on the above criteria, as well as Project peak hour vehicle trip generation, the anticipated distribution of Project vehicular trips, existing intersection/corridor operations, and the City of South Gate staff consultation and recommendations<sup>2</sup>:

1. Atlantic Avenue/Firestone Boulevard
2. Rayo Avenue/Firestone Boulevard

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<sup>2</sup> \* denotes unsignalized intersections.

3. Atlantic Avenue/Southern Avenue
4. Rayo Avenue/Southern Avenue\*
5. Pinehurst Avenue/Tweedy Boulevard
6. Atlantic Avenue/Tweedy Boulevard
7. Atlantic Avenue/Chakemco Street\*
8. Atlantic Avenue/Wright Road\*
9. Atlantic Avenue/Michigan Avenue
10. Abbott Road-I-710 southbound off-ramp/Wright Road

Seven of the ten study intersections selected for analysis are presently controlled by traffic signals. Three of the remaining study intersections, (Rayo Avenue/Southern Avenue; Atlantic Avenue/Chakemco Street; Atlantic Avenue/Wright Road), are currently unsignalized stop-sign controlled intersections. The existing lane configurations at the study intersections are displayed in **Figure 3.6-1, Study Intersections Selected for Analysis**. **Figures 3.6-2 Existing Lane Geometry** shows existing lane configurations. **Figure 3.6-3a Existing Intersection Volumes, AM Peak Hour** and **Figure 3.6-3b Existing Intersection Volumes, PM Peak Hour** show the existing peak hour turn movement in the study area.

### *Existing Study Intersection Levels of Service*

LOS values range from LOA A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOSE is typically defined as the operating “capacity” of a roadway. Typically LOS D is the lowest acceptable operating condition.

For analysis of LOS at signalized intersections, the Highway Capacity Manual (HCM) methodology was used as required by the City’s General Plan. Under the HCM method, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The resulting LOS value is directly related to the control delay value. Additional information on LOS methodology is provided in the Methodology section below.

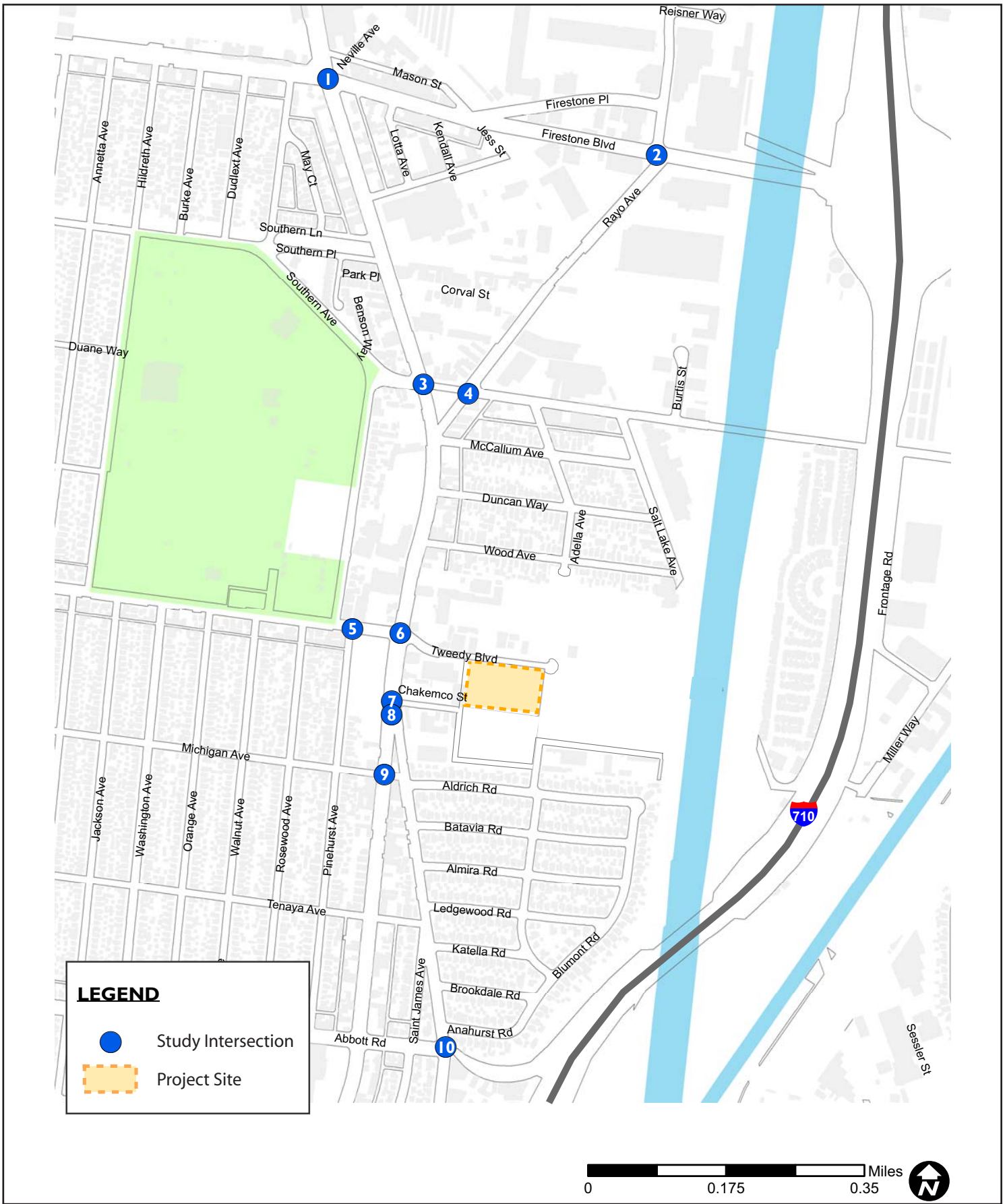


**Table 3.6-1, Existing Study Area Intersection Levels of Service**, summarizes existing operations at the studied intersections. To determine the AM and PM peak hour traffic volumes, manual traffic counts were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The peak hour consists of the one hour period in each of the AM period and the PM period in which there is the greatest traffic volume as measured by these traffic counts.

**Table 3.6-1  
Existing Study Area Intersection Levels of Service**

Map Reference	Intersection	Peak Hour	Seconds of Delay	LOS
1	Atlantic Avenue/Firestone Boulevard	AM	25.7	C
		PM	25.0	C
2	Rayo Avenue/Firestone Boulevard	AM	25.1	C
		PM	23.2	C
3	Atlantic Avenue/Southern Avenue	AM	14.6	B
		PM	15.9	B
4	Rayo Avenue/Southern Avenue	AM	16.8	C
		PM	13.5	B
5	Pinehurst Avenue/Tweedy Boulevard	AM	13.9	B
		PM	9.3	A
6	Atlantic Avenue/Tweedy Boulevard	AM	27.5	C
		PM	26.0	C
7	Atlantic Avenue/Chakemco Street	AM	35.2	E
		PM	40.5	E
8	Atlantic Avenue/Wright Road	AM	13.4	B
		PM	16.0	C
9	Atlantic Avenue/Michigan Avenue	AM	12.7	B
		PM	11.8	B
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	18.1	B
		PM	17.1	B

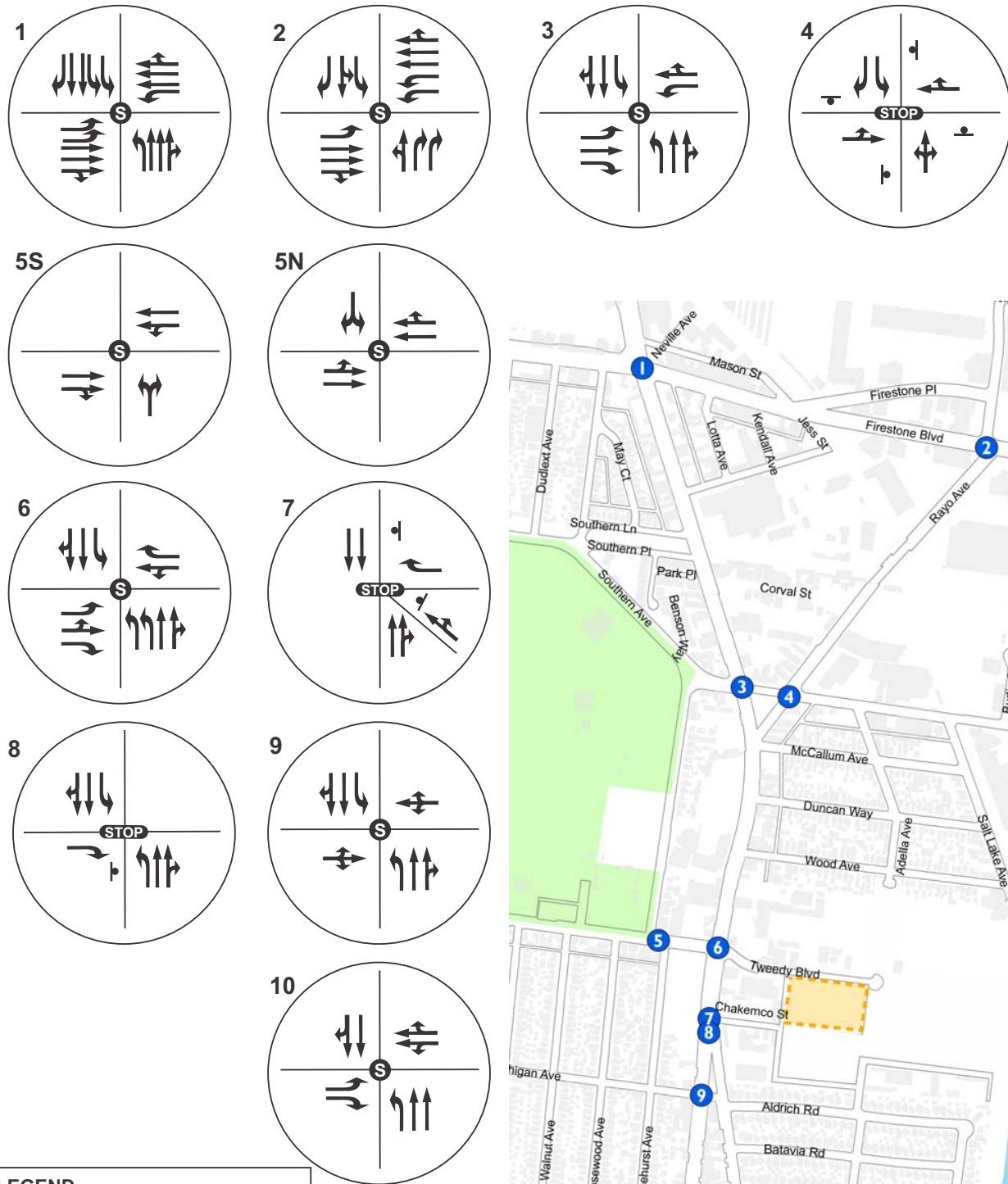
Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project, Table 3, page 12 (Appendix 3.6-1)



SOURCE: KOA Corporation

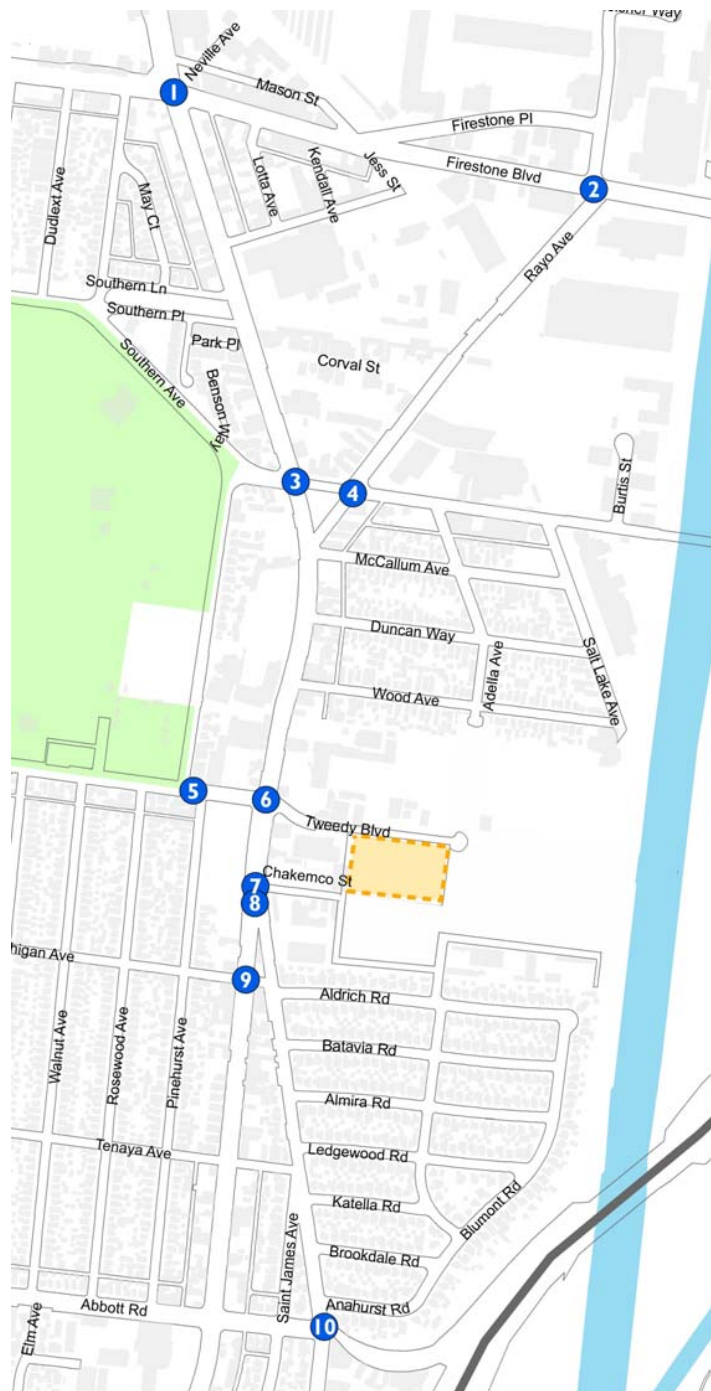
FIGURE 3.6-1

# Intersections Selected for Analysis



#### LEGEND

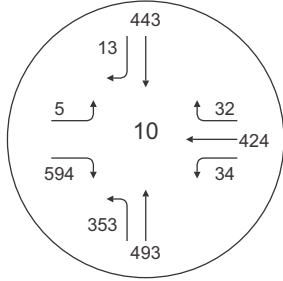
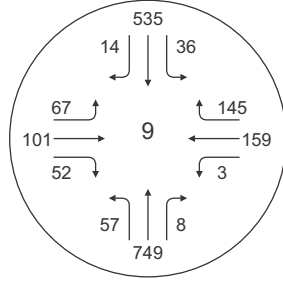
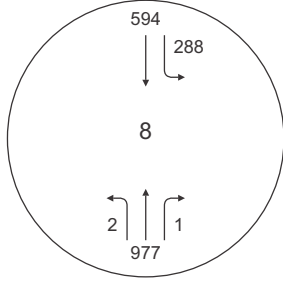
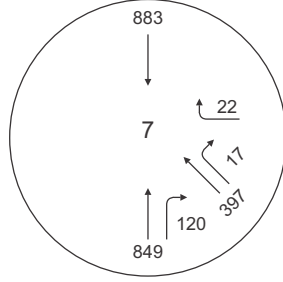
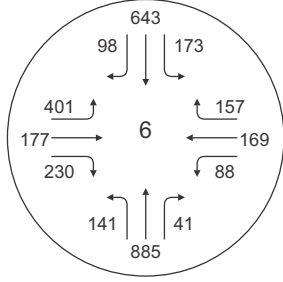
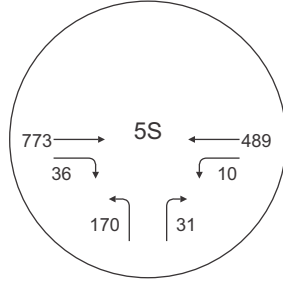
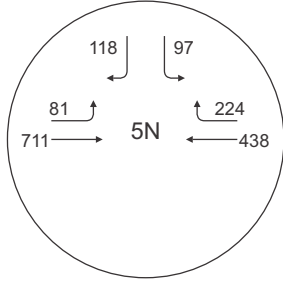
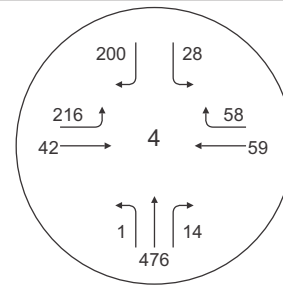
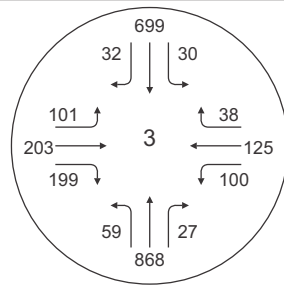
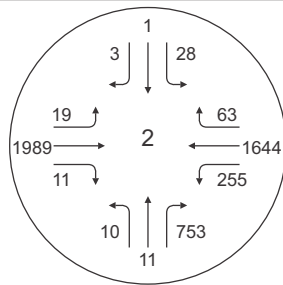
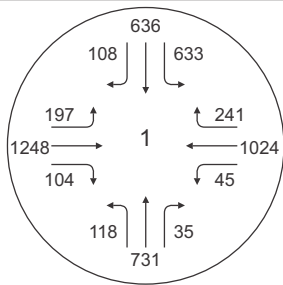
- Study Intersections
- Project Site
- S Signalized Intersection
- STOP Stop Sign Controlled Intersection
- T Stop Sign
- ↔ Intersection Lane Geometry



SOURCE: KOA Corporation

FIGURE 3.6-2

Intersection Geometry



#### LEGEND

Project Site

Study Intersection

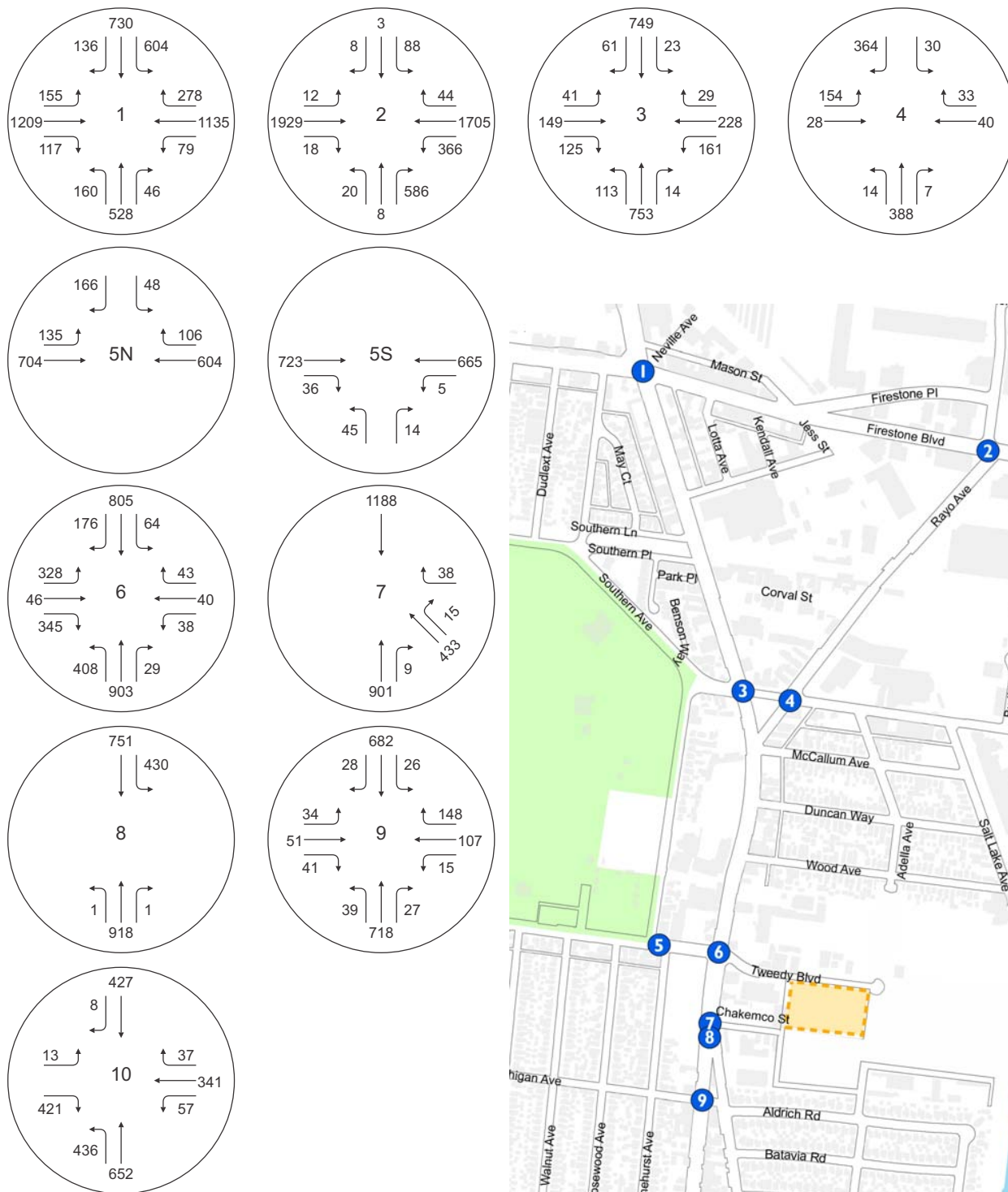
Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-3a

Existing Intersection Traffic Volumes, AM Peak Hour





**LEGEND**

Project Site

Study Intersection

Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-3b

Existing Intersection Traffic Volumes, PM Peak Hour

The City endeavors to provide LOS that will not exceed LOS 'E' at signalized intersections located at or adjacent to designated Major Commercial Districts. The City also endeavors to provide LOS that does not exceed LOS 'D' at unsignalized intersections.

### ***Public Transit Service***

The Project area is served by bus lines operated by the Los Angeles County Metropolitan Transportation Authority (LACMTA or "Metro") [Routes 260, 115, 117, 612, 762] and the City of South Gate Get Around Town Express (GATE) [Westside Route]. The City of South Gate is not currently served by rail transit within its city limits). The existing bus stop locations are shown in **Figure 3.6-4, Existing Transit Service in the Project Area** and specific line information are shown in **Table 3.6-2 Existing Area Transit Service** below.

**Table 3.6-2  
Existing Area Transit Service**

Service Provider	Line Number	Service Direction	Line Termini	Peak Frequency	Nearest Point to Site
Metro	260	North-South	Altadena & Compton	8-20 Minutes	Tweedy Blvd. & Atlantic Ave.
Metro	115	East-West	Playa del Rey & Norwalk	9-18 minutes	Firestone Blvd & Atlantic Ave
Metro	117	East-West	LAX & Downey	8-15 minutes	Tweedy Blvd. & Atlantic Ave.
Metro	612	Circular loop	Willowbrook, Lynwood, South Gate & Huntington Park	60 minutes	Abbott Rd. & Atlantic Ave.
Metro	762	North-South	Pasadena & Compton	8-31 minutes	Tweedy Blvd. & Atlantic Ave.
South Gate	Westside Route	Circular loop	Tweedy Blvd. & Atlantic Ave., Santa Fe Ave. & Ardmore Ave.	24 minutes	Tweedy Blvd. & Atlantic Ave.

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project, Table 2, page 10 (Appendix 3.6-1)

### 3.6.3 REGULATORY FRAMEWORK

#### *Federal*

There are no applicable federal regulations regarding Traffic/Transportation for this Project.

#### **State**

#### *Congestion Management Program (CMP)*

The CMP was enacted by the California Legislature in 1989 to improve traffic congestion in urban areas. The program became effective with the passage of Proposition 111 in 1990, which also increased the State gas tax. Funds generated by Proposition 111 are available to cities and counties for regional road improvements, provided these agencies are in compliance with CMP requirements. The intent of the legislation was to link transportation, land use, and air quality decisions by addressing the impact of local growth on the regional transportation system. State statute requires that a congestion management program be developed, adopted, and updated biennially for every county that includes an urbanized area, which shall include every city and county government within that county. Therefore, the City of South Gate must comply with CMP requirements in developing a circulation plan for the City.

Under this legislation, regional agencies are designated within each county to prepare and administer the CMP for agencies within that county. Each local planning agency included in the CMP has the following responsibilities:

- Assisting in monitoring the roadways designated within the CMP system
- Adopting and implementing a trip reduction and travel demand ordinance
- Analyzing the impacts of local land use decisions on the regional transportation system
- Preparing annual deficiency plans for portions of the CMP system where LOS standards are not maintained

The Los Angeles County Metropolitan Transportation Authority (Metro) is the CMP agency for Los Angeles County. Metro has the responsibility to review compliance with the CMP by agencies under its jurisdiction. For any agency out of compliance, after receiving notice and after a correction period, a portion of state gas tax funds may be withheld if compliance is not achieved. In addition, compliance with the CMP is necessary to preserve eligibility for state and federal funding of transportation projects.

Metro adopted the County's first CMP in 1992, and completed its most recent update in 2010. In connection with the CMP, Metro has issued CMP Traffic Impact Analysis Guidelines (CMP TIA Guidelines). The statute requires that all state highways and principal arterials be included within the

CMP roadway system. Within the City of South Gate, the following roadways are designated as CMP roadways and are within the Project site vicinity:

- I-710 Freeway
- Firestone Boulevard
- Alameda Street

### ***Complete Streets Act (Assembly Bill 1358)***

Assembly Bill (AB) 1358, the Complete Streets Act, was signed into law in September 2008. AB 1358 requires cities and counties, when updating the part of a local general plan that address traffic and roadways, to ensure that those plans account for the needs of all roadway users. The goal of the legislation is to improve safety, access, and mobility for all travelers in California; and recognize that active transportation modes (i.e., bicycle and pedestrian) and transit modes as integral elements of the transportation system. The legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of all users as well as motorists.

### **Local**

The California legislature granted school districts the power to exempt school property from local zoning requirements, so long as the school district complies with Government Code Section 53094. This section States:<sup>3</sup>

*(a) Notwithstanding any other provision of this article, this article does not require a school district to comply with the zoning ordinances of a county or city unless the zoning ordinance makes provision for the location of public schools and unless the city or county has adopted a general plan.*

*(b) Notwithstanding subdivision (a), the governing board of a school district, that has complied with the requirements of Section 65352.2 of this code and Section 21151.2 of the Public Resources Code, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for nonclassroom facilities, including, but not limited to, warehouses, administrative buildings, and automotive storage and repair buildings.*

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<sup>3</sup> California Legislative Information, Article 5 Section 53094, Website: [http://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=GOV&sectionNum=53094](http://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=53094), accessed 08/05/2016



*(c) The governing board of the school district shall, within 10 days, notify the city or county concerned of any action taken pursuant to subdivision (b). If the governing board has taken such an action, the city or county may commence an action in the superior court of the county whose zoning ordinance is involved or in which is situated the city whose zoning ordinance is involved, seeking a review of the action of the governing board of the school district to determine whether it was arbitrary and capricious. The city or county shall cause a copy of the complaint to be served on the board. If the court determines that the action was arbitrary and capricious, it shall declare it to be of no force and effect, and the zoning ordinance in question shall be applicable to the use of the property by the school district.*

Nonetheless, the LAUSD considers local plans and policies for the communities surrounding its facilities.

### ***LAUSD Traffic and Pedestrian Safety Requirements for New Schools***

LAUSD developed the *Traffic and Pedestrian Safety Requirements* for new schools to guide site planning and identify performance requirements to minimize potential pedestrian safety risks to students, staff, and visitors at LAUSD schools. The performance guidelines include requirements for: student drop-off areas, vehicle access, and pedestrian routes to school.

### ***City of South Gate General Plan***

The Mobility Element of the City of South Gate General Plan sets forth the plan for transportation within the City of South Gate. The element recognizes that the impacts of traffic should be minimized in residential neighborhoods and in commercial and recreational areas. Traffic should flow smoothly, but at appropriate, low, and safe speeds.

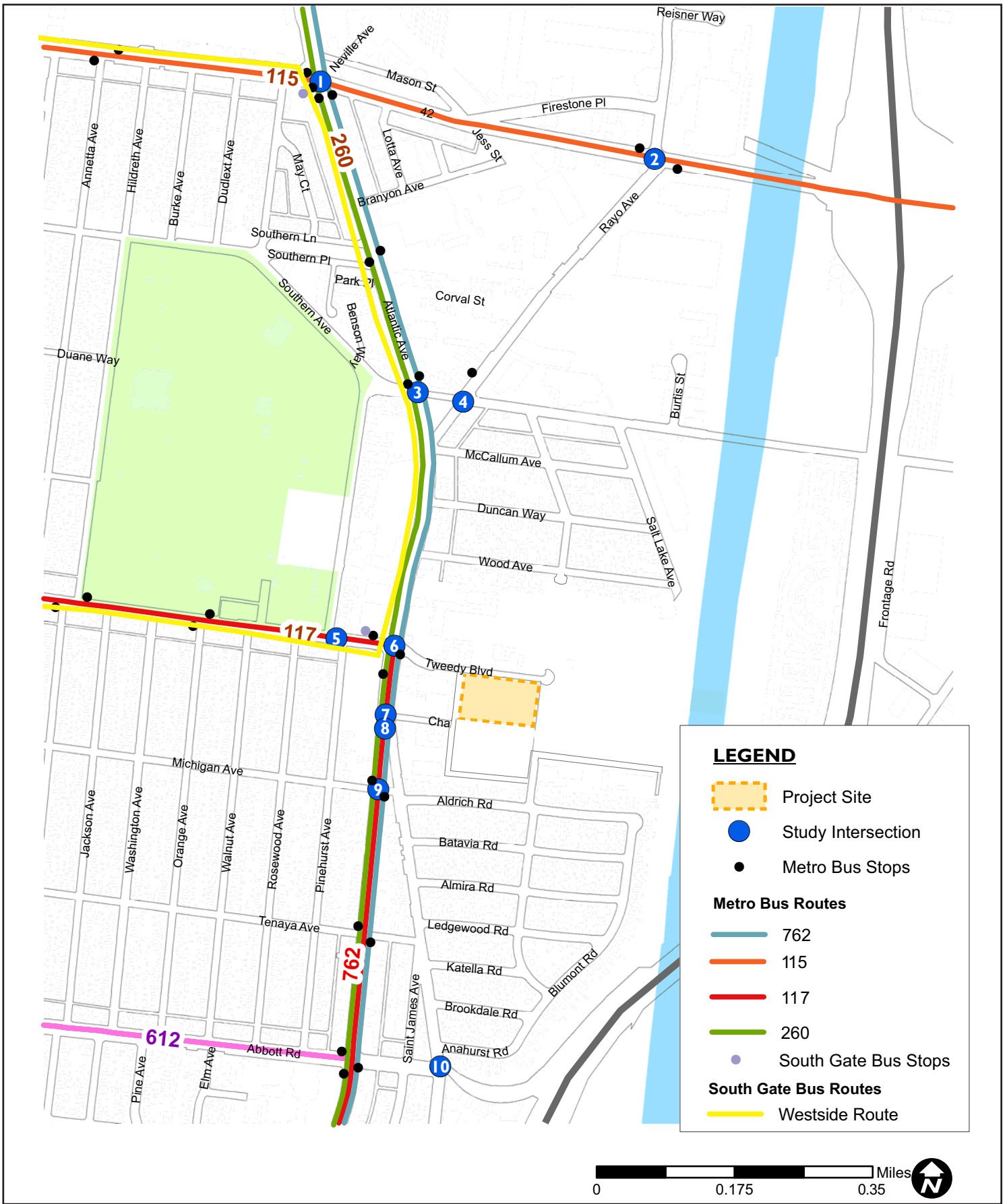
The City of South Gate rates traffic conditions using the concept of Level of Service, similar to the analysis of traffic impacts provided below. The applicable goals for traffic and circulation in the General Plan are listed below:

- |                          |   |
|--------------------------|---|
| <b>Goal ME 3:</b>        | Minimize the adverse effects of traffic   |
| <b>Objective ME 3.1:</b> | Minimize and/or reduce adverse impacts on city streets from regional through traffic.   |
| <b>Objective ME 3.2:</b> | Calm traffic and protect residential neighborhoods from traffic intrusion   |
| <b>P.1:</b>              | The city should use traffic calming and management measures on local and collector streets to discourage traffic from diverting into or taking short-cuts through residential neighborhoods |

- P.2:** The City should apply appropriate traffic management techniques to control the volume and speed of traffic to appropriate levels consistent with adjacent land uses on local streets, near schools, and along streets with a significant amount of residential development.
- P.3:** The City should develop neighborhood traffic management programs where necessary and appropriate in residential neighborhoods and around schools, parks, and sensitive uses such as senior centers.

Furthermore, the Mobility Element includes Actions for Street Improvements in some corridors identified in **Table 3.6-2 Existing Area Transit Service** above.

- Action ME 1.5: Atlantic Avenue:** Widen from four lanes to six lanes throughout the City.
- Action ME 1.10 Firestone Boulevard:** Widen to a six lane boulevard. Between Atlantic Avenue and Garfield Avenue, Firestone Boulevard should be a minimum of eight lanes (excluding left turns).
- Action ME 1.11: Southern Avenue:** Extend east, as an Avenue (four lanes), across the Los Angeles River and the I-710 Freeway to connect to Garfield Avenue.
- Action ME 1.12: Tweedy Boulevard:** Conduct a study of Tweedy Boulevard. Tweedy Boulevard should remain a four lane street, but studies should address the feasibility of converting to a two lane street with traffic calming, traffic management, and parking strategies, to create a true multi-modal and pedestrian-oriented environment along the Tweedy Mile commercial corridor, including 15-foot sidewalks where feasible.



SOURCE: KOA Corporation

FIGURE 3.6-4

# Existing Bus Service in the Project Area

The Mobility Element of the General Plan also provides Level of Service definitions in regards to the City of South Gate and in Volume to Capacity ratio (v/c ratios). **Table 3.6-5, Level of Service Definitions**, summarizes level of service criteria. The letter scale ranges from A to F, with LOS A representing free flow conditions and LOS F representing congested conditions. Volume-to-capacity is the ratio of demand flow rate to capacity for a traffic facility.

**Table 3.6-3**  
**Level of Service Definitions**

Level of Service	Definition
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form
C	Good operation. Occasionally drivers may have to wait for more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Fair operation. Cars are sometimes required to wait for more than 60 seconds during short peaks. There is no long-standing traffic queues. This level is typically associated with design practice for peak periods.
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersections approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go type traffic flow.

*Source: City of South Gate General Plan, Mobility Element, May 2009*

### ***Tweedy Boulevard Specific Plan***

The Project site is located within the future Tweedy Boulevard Specific Plan. Tweedy Boulevard is more than three miles in length and is one of the main commercial corridors in the City. The Specific Plan area is approximately 650 acres in size, and contains Tweedy Mile – the downtown area of South Gate. The draft plan was released in November 2016. The specific plan aims to revitalize Tweedy Boulevard through guiding future development of mixed uses in a walkable environment, streamlining the development process, and serving as an incentive for economic development. The Project site would be located within the Tweedy East Sub-Area.<sup>4</sup>

<sup>4</sup> City of South Gate, Tweedy Boulevard Specific Plan, website: <http://tweedy.arroyogroup.com/>, accessed August 1, 2016

### 3.6.4 METHODOLOGY

#### Study Scenarios

- Existing (2015) Conditions
- Existing (2015) Conditions With Project
- Future (2019) Conditions with Ambient Growth and Area Projects
- Future (2019) Conditions with Ambient Growth, Area Projects, and the Proposed Project

#### *Existing Conditions*

Traffic counts at the study intersections were conducted during weekday peak-period traffic conditions on Tuesday November 10, 2015 during the 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM timeframes.

Fieldwork in the study area was undertaken to identify the general cross-section of major roadways, to identify traffic controls and approach lane configurations at each study intersection, and to located on-street parking areas and transit stops.

The existing LOS values for each of the study intersections are provided in **Table 3.6-1 Existing Intersection Levels of Service**. Summaries of the conducted traffic counted are provided in **Appendix 3.6-1**.

#### Project Trip Generation and Distribution

The applied trip generation rates were based on those identified with Trip Generation (9<sup>th</sup> Edition), published by the Institute of Transportation Engineers (ITE). Detailed methodology for trip generation and distribution are provided in **Appendix 3.6-1**. Based on the proposed 459 seat capacity of the school, the Project would generate approximately 188 AM peak hour trips (101 inbound trips and 87 outbound trips) and 138 PM peak hour trips (62 inbound trips and 76 outbound trips).

Trip distribution is the process of assigning the directions from which traffic will access a project site. Trip distribution is dependent upon the land use characteristics of the project and the general location of other land uses to which project trips would originate or terminate. Project trip distribution was primarily based on the student service area of the new facility. **Figure 3.6-5 Project Trip Distribution Percentages**, shows the expected distribution of trips.

The final product of the trip assignment process is a full accounting of Project trips by direction and turning movement within the study area. The net Project trip assignment is provided in **Figure 3.6-5a**

**Existing with Project Intersection Traffic Volumes, AM Peak Hour and Figure 3.6-5b Existing with Project Intersection Traffic Volumes, PM Peak Hour.**

### ***Existing (2015) with Project Conditions***

Based on the traffic projected for the Project and the existing traffic volumes, a separate existing with Project conditions scenario was analyzed. This scenario is interpreted as being required by recent CEQA court rulings (i.e., Sunnyvale, Friends of Smart Rail).

### ***Future (2019) Conditions***

The Project is anticipated to be operational by 2019. To define regional traffic growth that would affect operations at the study intersections through the year 2019, an ambient growth rate was defined. This annual growth rate of one percent is designated in the Guidelines for Development of Traffic Impact Analysis (TIA), City of South Gate. This growth rate was used to increase existing (2015) traffic volumes to establish future (2019) base traffic volumes, using a total four year factor of 1.04.

### ***Future (2019) Projects***

In addition to future ambient growth, traffic from the area/related projects (approved and pending developments) was considered before examining traffic impacts from the proposed Project. City planning staff were consulted to define locations of sizable development projects. Daily and peak-hour trips that would be generated from each of the area projects were computed. The trip rates were based on ITE Trip Generation (9<sup>th</sup> Edition).

### ***Level of Service Analysis and Impacts***

Weekday AM and PM peak hour traffic impacts at each of the ten study intersections were quantitatively assessed. As described above, the City endeavors to provide LOS that will not exceed LOS 'E' at signalized intersections located at or adjacent to Major Commercial Districts. The City also endeavors to provide LOS that does not exceed LOS 'D' at unsignalized intersections.

### **Level of Service Methodology**

The methodology used for the analysis and evaluation of traffic at each study intersection is based on calculating the applicable Level of Service (LOS) for the intersection. LOS describes the quality of traffic flow with values ranging from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, where LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating "capacity" of a roadway. The City of South Gate has established traffic

impact thresholds in the Guidelines for Development Traffic Impact Analysis (July, 2009) for signalized intersections operating at LOS D or worse and for unsignalized intersections operating at LOS F or worse. The City of South Gate Guidelines for Development Traffic Impact Analysis document states the following:

*At an unsignalized intersection, when the minor stop-controlled approach operates at LOS F and does not have acceptable operation in terms of total control delay, and the addition of project trips increases the total control delay to more than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multilane approach. The project mitigation should bring the facility to operate at LOS E minimum or to bring the total control delay to less than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multilane approach at a minimum.*

*At an unsignalized intersection, when the minor stop-controlled approach operates at LOS F and does not have an acceptable operation in terms of total control delay, and the addition of more than 50 peak-hour project trips contributes to the continuing operational failure at the minor approach. The project mitigation should bring the facility to pre-project, or existing conditions.*

For analysis of LOS intersections, the Highway Capacity Manual (HCM) methodology was utilized, as required by the City's General Plan. Under the HCM method, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The resulting LOS value is directly related to the control delay value. The LOS value ranges for each type of intersections are listed below in **Table 3.6-4 LOS Value Range Signalized and Unsignalized Intersections**.

**Table 3.6-4**  
**LOS Value Range Signalized and Unsignalized Intersections**

LOS	Average Control Delay (sec/veh) Signalized	Average Control Delay (sec/veh) Unsignalized
A	0 – 10	0 – 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	>80	>50

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project, page 7

It should be noted that unsignalized intersections LOS criteria can be further reduced into two intersection types: all-way stop controlled and two-way stop controlled. All-way stop-controlled intersection LOS is expressed in terms of the average vehicle delay of all the movements, much like that of a signalized intersection. Two-way stop controlled intersection LOS is defined in terms of the average

vehicle delay of the approach with the worst-case operations. **Table 3.6-4 LOS Value Range, Signalized and Unsignalized Intersections** shows LOS for unsignalized intersections, for both all-way and two-way stop control configurations.

### *Standard Conditions of Approval*

These standard conditions of approval (SCs) are included within the Los Angeles Unified School District, School Upgrade Program EIR (Program EIR). Listed below are all applicable transportation SCs to be included in the Project.

- **SC-PED-1 Caltrans SRTS Program:** The LAUSD is a participant in the SRTS program administered by Caltrans and local law enforcement and transportation agencies. OEHS provides pedestrian safety evaluations as a component of traffic studies conducted for new school projects. This pedestrian safety evaluation includes a determination of whether adequate walkways and sidewalks are provided along the perimeter of, across from, and adjacent to a proposed school site and along the paths of identified pedestrian routes within a 0.25 mile radius of a proposed school site. The purpose of this review is to ensure that pedestrians are adequately separated from vehicular traffic.
- **SC-PED-2 Traffic and Pedestrian Safety requirements:** LAUSD has developed these performance guidelines to minimize potential pedestrian safety risks to students, faculty and staff, and visitors at LAUSD schools. The performance guidelines include the requirements for student drop-off areas, vehicle access, and pedestrian routes to school. Appendix C states school traffic studies shall identify measures to ensure separation between pedestrians and vehicles along potential pedestrian routes, such as sidewalks, crosswalks, bike paths, crossing guards, pedestrian and traffic signals, stop signs, warning signs, and other pedestrian access measures.
- **SC-PED-3 Sidewalk requirements for New Schools:** LAUSD shall coordinate with the responsible traffic jurisdiction/agency to ensure these areas are improved prior to the opening of a school. Improvements shall include but are not limited to: (1) Clearly designate passenger loading areas with the use of signage, painted curbs, etc (2) Install new walkway and/or sidewalk segments where none exist (3) Any substandard walk/sidewalk segments shall be improved to a minimum of eight feet wide (4) Provide other alternative measures that separate foot traffic from vehicular traffic, such as distinct travel pathways or barricades
- **SC-PED-4 School Traffic Safety Reference Guide REF – 4492.1:** Guide sets forth requirements for traffic and pedestrian safety, and procedures for school principals to request assistance from OEHS, the Los Angeles Schools Police Department (LASPD), or the local police department regarding traffic and pedestrian safety. Distribution and posting of the Back to School Safety Tips flyer is required. This guide also includes procedures for traffic surveys, parking restrictions, crosswalks, advance warning signs (school zone), school parking signage, traffic controls, crossing guards, or for determinations on whether vehicle enforcement is required to ensure the safety of students and staff.
- **SC-PED-5 School Design Guide:** The Guide states student drop-off and pick-up, bus loading areas, and parking areas shall be separated to allow students to enter and exit the school grounds safely.
- **SC-T-3:** LAUSD will coordinate with the City of South Gate to agree on the following:



- Compliance with the City’s design guidelines for access, parking, and circulation in the vicinity of the Project.
  - Scope of analysis and methodology for the traffic and pedestrian study, including trip generation rates, trip distribution, number and location of intersections to be studied, and traffic impact thresholds
  - Implementation of SRTS, traffic control and pedestrian safety devices.
  - Fair share contribution and/or other mitigation measures for potential traffic impacts
  - Traffic and pedestrian safety impact studies shall address local traffic and congestion during morning arrival times, and before and after evening stadium events.
  - Traffic study will use the latest version of ITE Trip Generation manual to determine trip generation rates based on the size of the school facility, unless otherwise required by local jurisdiction
  - Loading zones will be analyzed to determine the adequacy as pick-up and drop-off points. Recommendations will be developed in consultation with the local jurisdiction for curb loading bays or curb parking restrictions to accommodate loading needs and will control double parking and across-the-street loading.
- **SC-T-4:** LAUSD shall require its contractors to submit a construction worksite traffic control plan to the City of South Gate for review prior to construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction. All measures identified in the detailed Traffic Control Plan shall be implemented during construction to ensure that adequate and safe access remains available on-site.
  - **SC-T-5:** LAUSD shall incorporate applicable Best Management Practices (BMPs) including but not limited to: LAUSD shall encourage ride-sharing programs for students and teachers.

### 3.6.5 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to traffic and transportation are contained in the environmental checklist form contained in Appendix G of the CEQA Statutes and Guidelines. Impacts related to transportation and traffic are considered significant if the proposed Project would:

- TRA-1: 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)

- TRA-2: Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways
- TRA-3: 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
- TRA-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- TRA-5: Result in inadequate emergency access
- TRA-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities

An Initial Study was prepared that determined the Project would have a less than significant impact or no impact related to the following thresholds:

- TRA-3: 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
- TRA-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities

### 3.6.6 IMPACTS AND MITIGATION MEASURES

- TRA-1                      Would the project 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)?**

#### *Construction Impacts*

Construction of the project is anticipated to begin August 2017 and would last approximately 24 months. Construction will happen in phases and the approximate durations are provided below:

- Demolition of the existing parking lot on the north side of the project site. Demolition is anticipated to last approximately one month.
- Mass and rough grading of the entire project site. Grading is expected to last approximately one month.
- The next phase of construction would be driving of piles to support the proposed buildings. Pile driving would occur on various portions of the Project site during the one month duration of this phase.
- The final phase would be the construction of the buildings and installation of infrastructure. During this phase the three new buildings would be constructed, infrastructure such as roadways

improvements and any necessary utility infrastructure would occur. The final phase would include landscaping improvements. Construction is expected to last approximately 21 months.

Consistent with the City of South Gate's Noise Ordinance, construction is scheduled to occur Monday through Friday from 7:00 AM to 5:00 PM from November to February, and from 7:00 AM to 7:00 PM from March to October. No construction would occur on Sundays or holidays. Therefore, Construction workers would typically arrive before the weekday morning commute peak period when construction commences at 7:00 AM, and but could leave during the weekday afternoon commute peak period.

Designated truck routes would be used during Project construction and would require construction and delivery vehicles to approach the Project site in an easterly direction from Tweedy Boulevard and Atlantic Boulevard. Construction and delivery vehicles will similarly exit the Project site in a westerly direction into Tweedy Boulevard or north onto Atlantic Boulevard.

Construction truck traffic will utilize the Tweedy Boulevard entrance to and from the Project site. Tweedy Boulevard would provide construction trucks with the most direct access from the regional road network (e.g., Atlantic Avenue, the I-105, the I-710). As required by SC-T-4, LAUSD would prepare a Traffic Control Plan prior to the initiation of construction in order to further minimize potential conflicts between construction activity and through traffic in the vicinity of the Project site. The Traffic Control Plan will identify all traffic control measures, haul routes, delineators, and signs required to be implemented by the construction contractor throughout the duration of construction activity. The specific details and extent of associated staging of construction equipment and materials will be included in that plan. As part of the plan, traffic control personnel would be stationed full-time at the job site entrance and exit on Tweedy Boulevard to designate truck routes.

#### **Construction Equipment, Hauling and Deliveries**

It is assumed that heavy construction equipment such as graders, dozers, scrapers, and tractors would be trucked to the Project site at the commencement of construction activities and would be staged on site, and would therefore not travel to and from the Project site on a daily basis. Although no structures are located on the Project site, demolition of the existing parking lot would be required, necessitating the hauling of construction debris from the Project site. The Project is expected to require the removal of 1,700 cubic yards of soils and the import of approximately 8,376 cubic yards of soil. As such, there would be a need to truck soils on and off the site.

### Construction Worker Traffic

In general, the fourth stage of Project buildout would require the largest number of construction workers on the Project Site. This stage entails the actual construction of the proposed Project including infrastructure, roadway construction and the installation of backbone infrastructure such as sewers, storm drains, utilities and sidewalks. The fourth and last stage would occur in the final 21 months of the anticipated 24 months of Project construction activities. The construction trip generation was based on information provided by LAUSD on intensity of truck hauling and construction employment intensities during the peak period of construction. The inputs to the analysis included 50-60 truck trips per day and eight employees on-site during this peak period.<sup>5</sup> Based on the anticipated construction schedule, construction workers are expected to arrive at the Project Site between 6:00 AM and 7:00 AM (i.e., before the morning commuter peak hours) and most are expected to depart after 5:00 PM (which may coincide with the afternoon commuter peak hours). The higher range of trucks was used at 60 round trips, and this was converted into a total of 120 one-way trips per day. A passenger car equivalency (PCE) factor of 2.5 was applied, resulting in a 300 trip total on a daily basis. This was divided by an eight-hour workday to define peak hour trips, at 38 trips in each peak hour period. Employee trips were assumed to be generated as one vehicle trip per employee in each peak period (inbound commute, outbound commute).

**Table 3.6-5 Project Construction Period Traffic** provides a summary of the project construction period trip generation, based on this methodology. Trips were routed to and from the I-710 freeway in the analysis, via Firestone Boulevard and Imperial Highway. The LOS/impact analysis provided in Table 3.6-5 indicates that there were not be any significant traffic impacts in the study area, per City of South Gate impact thresholds.

Construction worker parking is anticipated to be provided on-site, as such there would be no need for construction workers to park on nearby streets. This would eliminate the potential for worker parking to result in a reduction in lane capacity, or any potential neighborhood impacts due to parking. Construction worker parking be included in the traffic control plan submitted to the City of South Gate as required by SC-T-4.

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<sup>5</sup> Construction schedules, equipment and worker information provided by LAUSD Facilities Division. Facilities Division has overseen the construction of numerous schools in the District.

**Table 3.6-5**  
**Project Construction Period Traffic**

Map Reference	Intersection	Peak Hour	Existing Conditions		Existing Plus Project Construction		Change	Significant?
			Seconds of Delay	LOS	Seconds of Delay	LOS		
1	Atlantic Avenue/Firestone Boulevard	AM	25.7	C	25.9	C	0.2	No
		PM	25.0	C	25.1	C	0.1	No
2	Rayo Avenue/Firestone Boulevard	AM	25.1	C	25.1	C	0.0	No
		PM	23.2	C	23.2	C	0.0	No
3	Atlantic Avenue/Southern Avenue	AM	14.6	B	14.5	B	-0.1	No
		PM	15.9	B	15.8	B	-0.1	No
4	Rayo Avenue/Southern Avenue*	AM	16.8	C	16.8	C	0.0	No
		PM	13.5	B	13.5	B	0.0	No
5	Pinehurst Avenue/Tweedy Boulevard	AM	13.9	B	13.9	B	0.0	No
		PM	9.3	A	9.3	A	0.0	No
6	Atlantic Avenue/Tweedy Boulevard	AM	27.5	C	28.0	C	0.5	No
		PM	26.0	C	26.1	C	0.1	No
7	Atlantic Avenue/Chakemco Street*	AM	35.2	E	36.1	E	0.9	No
		PM	40.5	E	41.4	E	0.9	No
8	Atlantic Avenue/Wright Road*	AM	13.4	B	13.5	B	0.1	No
		PM	16.0	C	16.2	C	0.2	No
9	Atlantic Avenue/Michigan Avenue	AM	12.7	B	12.6	B	-0.1	No
		PM	11.8	B	11.8	B	0.0	No
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	18.1	B	18.1	B	0.0	No
		PM	17.1	B	17.1	B	0.0	No

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project (**Appendix 3.6-1**)

Notes:

/a/ Units for Seconds of Delay are in Seconds

/b/ Bolded intersections have LOS E

\*denotes unsignalized intersection

## Operational Impacts

As shown above in **Table 3.6-1**, all signalized study intersections under existing conditions operate at LOS C or better, which meets City standards for arterial roads, and the preferred standards for residential roads. Additionally, all unsignalized study intersections operate at LOS C or better, with the exception of the intersection of Atlantic Avenue & Chakemco Street. As intersections represent the most constrained

part of the circulation system, no mid-block congestion is expected to occur on roadways with intersections that meet County standards.

The City of South Gate has established traffic impact thresholds in the Guidelines for Development Traffic Impact Analysis (July, 2009) for signalized intersections operating at LOS D or worse and for unsignalized intersections operating at LOS F or worse. All of the signalized study intersections would continue to operate at LOS C or better with the proposed Project. Among the three unsignalized intersections, the intersection of Atlantic Avenue & Chakemco Street would operation at LOS F in the p.m. peak hour in the future pre-project condition. The City of South Gate Guidelines for Development Traffic Impact Analysis document states the following:

*At an unsignalized intersection, when the minor stop-controlled approach operates at LOS F and does not have acceptable operation in terms of total control delay, and the addition of project trips increases the total control delay to more than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multilane approach. The project mitigation should bring the facility to operate at LOS E minimum or to bring the total control delay to less than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multilane approach at a minimum.*

*At an unsignalized intersection, when the minor stop-controlled approach operates at LOS F and does not have an acceptable operation in terms of total control delay, and the addition of more than 50 peak-hour project trips contributes to the continuing operational failure at the minor approach. The project mitigation should bring the facility to pre-project, or existing conditions.*

The Project would generate approximately 188 AM peak-hour trips and 138 PM peak hour trips during a typical weekday.<sup>6</sup> **Figures 3.6-5a Existing with Project Intersection Traffic Volumes, AM Peak Hour** and **3.6-5b Existing with Project Intersection Traffic Volumes, PM Peak Hour** illustrate the effects of Project trips at the studied intersections during the AM and PM peak hours, respectively.

As described in the Methodology section above, traffic volumes were calculated for the following scenarios: (1) existing (2015) traffic conditions without the Project (2) and existing (2015) traffic conditions with the Project (Existing Plus Project). In addition, a third “cumulative” scenario that includes the Project and Related Projects for the year 2019 (Future Cumulative with Project) is provided at the end of this section. The projected future levels of service for Existing and Existing Plus Project scenarios are provided in **Table 3.6-4, Existing Plus Project Study Intersection Levels of Service**.

Based on the changes in v/c ratio or delay shown in **Table 3.6-6 Existing Plus Project Study Intersection Level of Service** and described below, the Project would not create any new significant congestion under the Existing Plus Project scenario.

<sup>6</sup> KOA Corporation, *Traffic Impact Study, LAUSD International Learning Center Addition*, (2016) 15.

**Table 3.6-6**  
**Existing Plus Project Study Intersection Levels of Service**

Map Reference	Intersection	Peak Hour	Existing Conditions		Existing Plus Project		Change	Significant?
			Seconds of Delay	LOS	Seconds of Delay	LOS		
1	Atlantic Avenue/Firestone Boulevard	AM	25.7	C	25.7	C	0.0	No
		PM	25.0	C	25.2	C	0.2	No
2	Rayo Avenue/Firestone Boulevard	AM	25.1	C	25.1	C	0.0	No
		PM	23.2	C	23.2	C	0.0	No
3	Atlantic Avenue/Southern Avenue	AM	14.6	B	14.9	B	0.3	No
		PM	15.9	B	16.1	B	0.2	No
4	Rayo Avenue/Southern Avenue*	AM	16.8	C	16.9	C	0.1	No
		PM	13.5	B	13.5	B	0.0	No
5	Pinehurst Avenue/Tweedy Boulevard	AM	13.9	B	13.9	B	0.0	No
		PM	9.3	A	9.3	A	0.0	No
6	Atlantic Avenue/Tweedy boulevard	AM	27.5	C	29.6	C	2.1	No
		PM	26.0	C	26.4	C	0.4	No
7	Atlantic Avenue/Chakemco Street*	AM	35.2	E	36.4	E	1.2	No
		PM	40.5	E	41.6	E	1.1	No
8	Atlantic Avenue/Wright Road*	AM	13.4	B	13.6	B	0.2	No
		PM	16.0	C	16.3	C	0.3	No
9	Atlantic Avenue/Michigan Avenue	AM	12.7	B	12.7	B	0.0	No
		PM	11.8	B	11.8	B	0.0	No
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	18.1	B	18.2	B	0.1	No
		PM	17.1	B	17.2	B	0.1	No

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project , Table 5, page 20 (**Appendix 3.6-1**)

Notes:

/a/ Units for Seconds of Delay are in Seconds

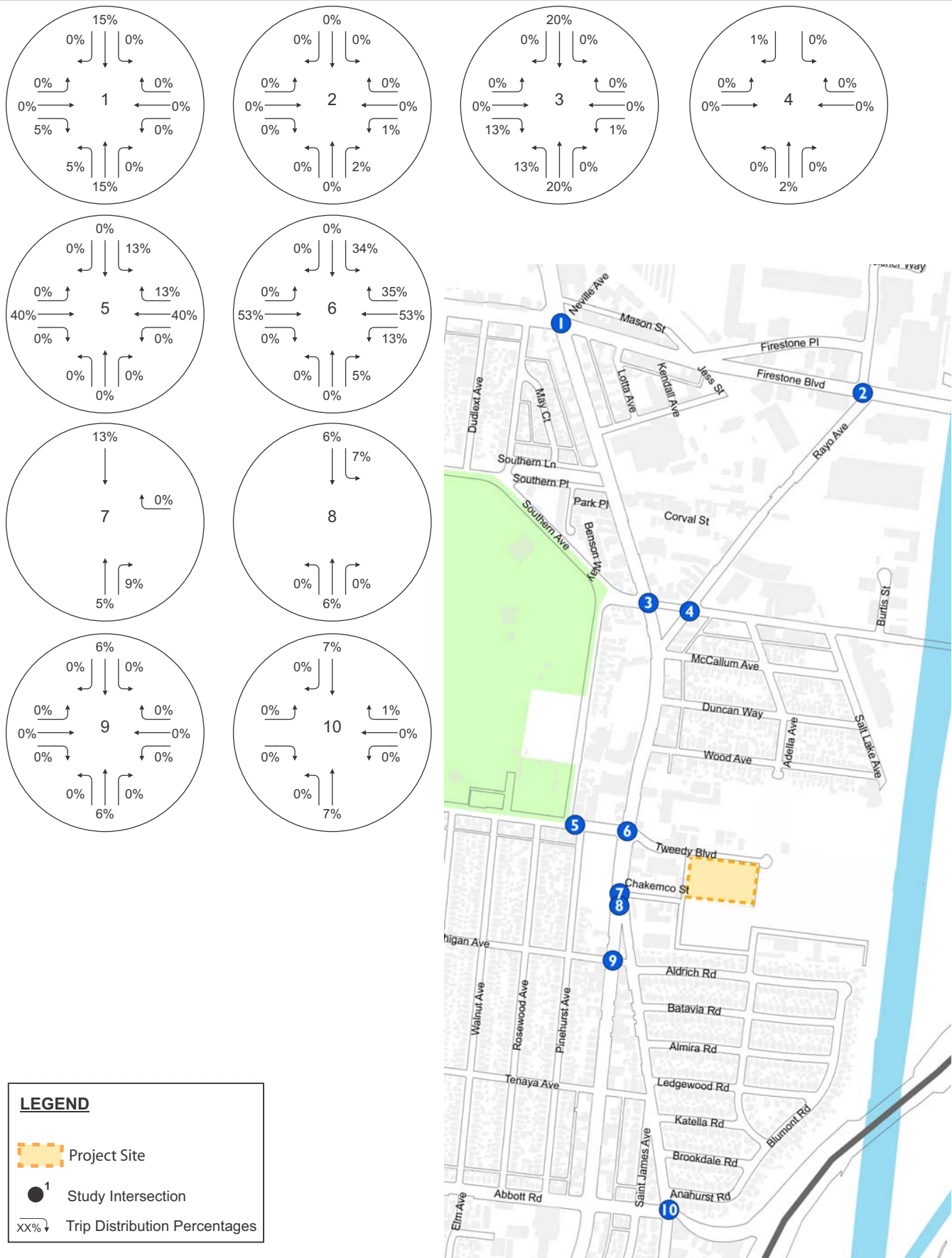
/b/ Bolded intersections have LOS E

\*denotes unsignalized intersection

As shown in **Table 3.6-6**, nine of the ten study intersections would continue to operate at good peak-hour levels of service values with Project traffic under this scenario. The intersection of Atlantic Avenue & Chakemco Street would continue to operate at LOS values of E in the AM and PM peak hours. Impacts would be less than significant. Roadway segment analysis was not included in the defined study area for the proposed Project for two reasons. First, the Project does not have any direct access into residential neighborhoods, and therefore typical residential roadway analysis examined for potential neighborhood cut-through traffic would not apply. Second, the City of South Gate also does not require such analysis

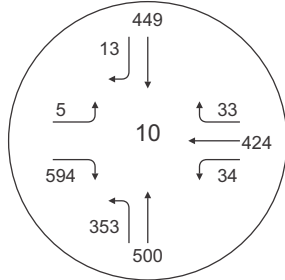
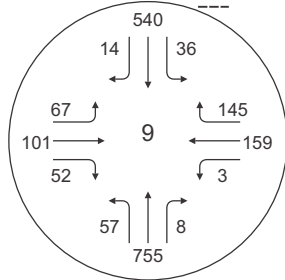
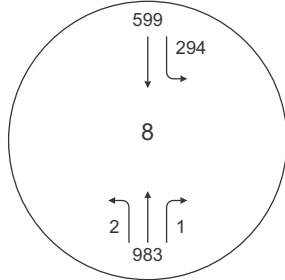
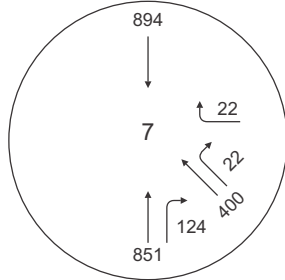
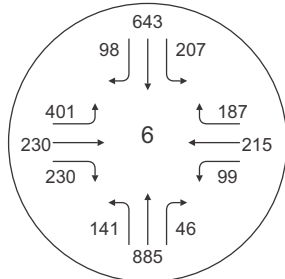
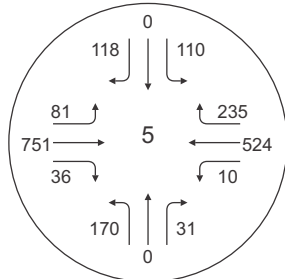
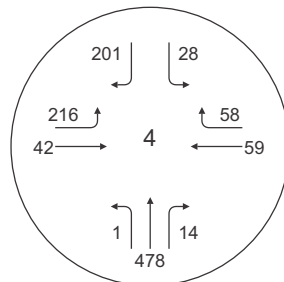
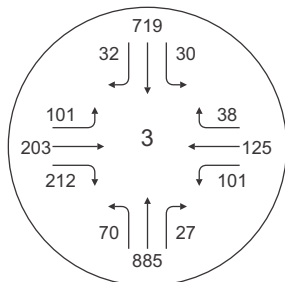
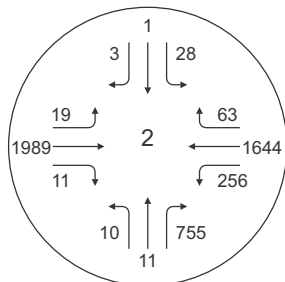
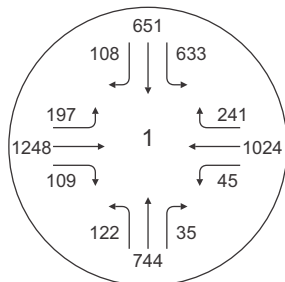
and does not define thresholds for roadway segment analysis. Also, roadway segment analysis tends to be done for growing communities, to determine for long-term planning purposes the number of lanes that roadways should be built out to accommodate. The Project does not require a long-term cumulative exercise such as this, which might apply to a General Plan or Specific Plan level of programmatic analysis of impacts over a long-term period. For these reasons, a roadway segment analysis was not conducted.





SOURCE: KOA Corporation

FIGURE 3.6-5



#### LEGEND



Project Site



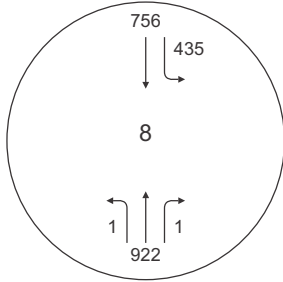
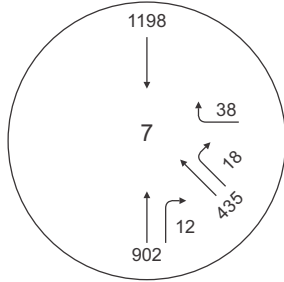
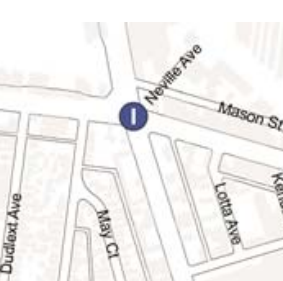
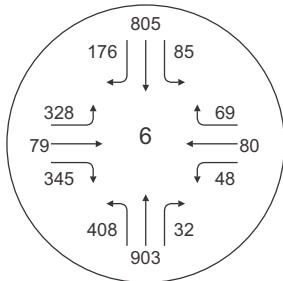
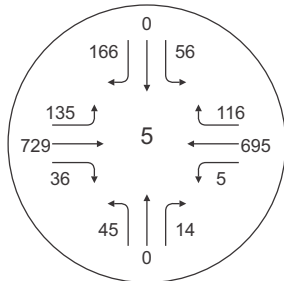
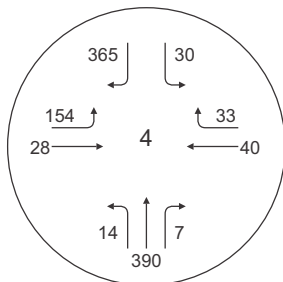
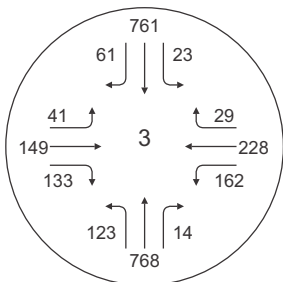
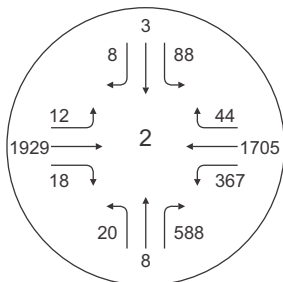
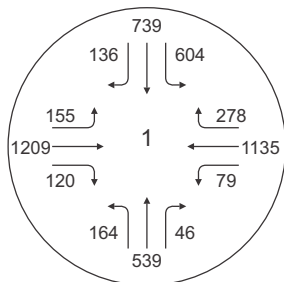
Study Intersection



Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-6a



#### LEGEND



Project Site



Study Intersection



Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-6b

### ***LAUSD Standard Conditions***

SC-PED-1, SC-PED-2, SC-PED-3, SC-PED-4, SC-PED-5 and T-3

### ***Mitigation Measures***

Impacts would be less than significant. No mitigation is required.

### ***Residual Impacts***

Impacts would be less than significant.

**TRA-2                      Would the project conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?**

### ***Construction Impacts***

The CMP TIA Guidelines require that intersection monitoring locations must be examined if the Project will add 50 or more trips during either the AM or PM weekday peak hours. The nearest CMP arterials monitoring locations are Firestone Boulevard and Alameda Street, which is approximately ½-mile north of the Project site and 2.8 miles west of the Project site, respectively. The nearest CMP freeway is the I-710.

As described above, construction traffic would result in approximately 8 vehicles accessing the site during peak hours. As such, construction traffic would not meet the CMP threshold.

### ***Operational Impacts***

The CMP for Los Angeles County requires analysis of traffic impacts of individual development projects that are potentially regionally significant. The proposed Project is an addition to an existing school on a vacant lot directly south of the existing Legacy High School Complex. The Project would only generate trips in the local area, and therefore not be considered regionally significant.

Based on the anticipated generation of Project traffic derived from trip generation calculations and local service area of the school, operation of the Project will not add 50 or more trips during either the AM or PM weekday peak hours (i.e., of adjacent street traffic) to the CMP monitored location in the Project vicinity on Firestone Boulevard and Alameda Street, which is stated in the CMP TIA Guidelines as the threshold criteria for a traffic impact assessment.

The CMP TIA Guidelines require that freeway monitoring locations must be examined if the Project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The closest freeway monitoring location is the Long Beach Freeway (I-710). Based on the trip distribution and assignment, proposed Project trips would be primarily local rather than regional in nature. The proposed Project is expected to add less than 150 new trips per hour to any freeway segments near the Project site. The total peak-hour trip generation of the Project would be lower than the threshold in either analyzed peak period. Therefore, impact analysis at CMP freeway monitoring stations is not required.

In summary, Firestone Boulevard and Alameda Street (the nearest CMP arterials) and I-170 (the nearest CMP freeways) would continue to operate within acceptable parameters and are not expected to adversely affect the existing traffic conditions associated with the proposed Project. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation is required.

### ***Residual Impacts***

Impacts would be less than significant.

**TRA-4                      Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

The proposed Project would utilize the existing network of regional and local roadways that serve the area. In addition, a separate curbed vehicular drop-off and pick-up lane, similar to the existing LHSC drop-off and pick-up lane, will be located along Tweedy Boulevard. Under the proposed Project, Tweedy Boulevard would be widened to accommodate a cement tree lined median and an eastbound 12 foot drop off and pick-up lane, as well as two eastbound 12 foot drive through lanes. While the student drop-off and pick-up operations have been planned to minimize potential vehicular queueing on the local street system and conflicts with the existing LHSC drop off and pick up operations, the design could cause a permanent alteration to vehicular and pedestrian circulation and patterns.

Implementation of the standard conditions by LAUSD shall ensure safety of pedestrian access along Tweedy Boulevard. The following tasks shall be undertaken:

- LAUSD shall coordinate with the City of South Gate to install appropriate traffic controls, school warning and speed limit signs, school crosswalks and pavement markings. LAUSD shall install these improvements with the site improvements.

- LAUSD shall coordinate with the City of South Gate to prepare a “Pedestrian Routes to School” map. This map would provide a final adopted pedestrian route network, with indications for both sides of each included roadway. As part of the “Pedestrian Routes to School” map, parents and students should be notified to use the existing controlled intersections as crossing points. LAUSD shall conduct these actions with the completion of site improvements.
- LAUSD shall coordinate with the City of South Gate to install signs for the area of transition between the public roadway of Tweedy Boulevard and the on-site pick-up/drop-off area. The locations of prohibited on-street parking zones adjacent to the campus should be determined during that coordination effort. LAUSD shall conduct these actions with the completion of the site improvements.

LAUSD would provide new sidewalk facilities within the limits of the Project site. An additional sidewalk on the south side of Tweedy Boulevard to the west of the project site is being designed by LAUSD and will be included as part of Project construction. This new sidewalk will avoid creating potential delay in inbound and outbound vehicle traffic for both schools.

#### **Student Pick-up/Drop-off**

An on-site pick-up/drop-off area would be provided along the northern frontage of the Project site, immediately adjacent to and south of Tweedy Boulevard. Vehicle traffic accessing the pick-up/drop-off area would move in an easterly direction along Tweedy Boulevard, turn right into the proposed Project access driveway at the eastern terminus of Tweedy Boulevard, and head east within the site into the pick-up/drop-off area. This route avoids direct overlap with LHSC vehicle activity.

Exiting vehicles would turn back onto Tweedy Boulevard heading east at a second outbound driveway on the east side of the pick-up/drop-off area. A vehicle turnaround route would be provided within the circulation roadway network, sending vehicles westbound to Atlantic Boulevard and bypassing the LHSC pick up/drop off area.

With the implementation of these applicable design features into right-of-way construction and student drop off and pick up operations and the applicable standard conditions under the District’s School Upgrade Program EIR (SUP PEIR), impacts under this scenario to Project site access would be less than significant.

Furthermore, LAUSD requires new construction to comply with guidelines set by the document “Traffic and Pedestrian Safety Requirements for New Schools.” The proposed pick-up/drop-off area would adhere to all guidelines including bus and passenger loading, and multiple points of egress for vehicle. Loading areas for the school would be located on-site and away from the travel lanes of any public roadways. The proposed staff/faculty parking access point would be on the local roadway of Legacy Lane. There would not be any safety hazards that would conflict with these driveways. All-way control would be established at the Tweedy boulevard intersection with Legacy Lane. This was implemented

with the completion of the LHSC to help provide orderly traffic flow when the occasional truck trip is made along the new access roadway.

Following LAUSD standard conditions for the design of new schools and with the implementation of **Standard Condition SC-PED-1, SC-PED-2, SC-PED-3, SC-PED-4, SC-PED-5, SC-T-3, and SC-T-4** from the District's Program EIR, impacts to substantial hazards due to design features would be less than significant.

### ***LAUSD Standard Conditions***

**SC-PED-1, SC-PED-2, SC-PED-3, SC-PED-4, SC-PED-5, SC-T-3, SC-T-4**

### ***Mitigation Measures***

None are required.

### ***Residual Impacts***

Impacts would be less than significant.

**TRA-5                      Result in inadequate emergency access**

### ***Construction Impacts***

Emergency vehicles would access the Project site via Tweedy Boulevard, as this roadway is the primary and only access to the LHSC. Following the transport of the construction vehicles, all construction would be limited to on-site activities, therefore not obstructing right-of-way access for emergency vehicles. Furthermore, consultation with the Los Angeles County Fire Department (LACFD) and the City of South Gate's Police Department would occur prior to the commencement of any construction activities on-site. The proposed Project would incorporate the requirements of the LACFD and the Los Angeles County Sheriff Department for emergency access in construction activities, and would provide adequate circulation for all emergency vehicles entering the site. Therefore, the construction of the Project would not conflict with emergency access to the Project site.

### ***Operation Impacts***

The proposed Project is not anticipated to interfere with an emergency response plan or evacuation plan. As stated previously, the proposed Project would involve a partial reconstruction of Tweedy Boulevard to widen and accommodate a cement tree-lined median and an eastbound 12 foot drop off and pick up



lane, as well as two eastbound 12 foot drive-through lane. The widening of Tweedy Boulevard would be adequate to accommodate emergency vehicles to access the existing LHSC and the proposed Project.

Furthermore, the proposed Project would incorporate the requirements of the LACFD and the Los Angeles County Sheriff Department for emergency access in construction activities, and driveways would be constructed to City of South Gate's and LAUSD design standards. Fire truck access to within 150 feet of all building exterior walls would be provided in interior roadways, as required by the LAFCD. Compliance and adherence to all applicable emergency construction protocol would result in a less than significant impact to emergency access to the Project site.

### ***Mitigation Measures***

No mitigation is required.

### ***Residual Impacts***

Impacts would be less than significant.

## **3.6.6 CUMULATIVE ANALYSIS**

### ***Construction Impacts***

Construction of Related Projects within the project vicinity may have cumulatively considerable impacts. Related Projects and locations have been provided in **Table 3.0-1** and **Figure 3.0-1** in the Section **3.0 Environmental Setting**. There are two Related Projects identified within a 1.5 mile radius from the Project site. Cumulative construction traffic impacts would occur if the projects are constructed on the same timeline and construction traffic from the Related Projects would impact the same roadways, intersections, or access points as the Project. The two Related Projects are located within 1.5 miles of the proposed Project, share Atlantic Avenue, and therefore may result in potentially significant impacts at the time of build out of all the projects.

### ***Operation Impacts***

**Table 3.6-7 Trip Generation - Related Projects**, shows the expected trips associated with the Related Projects.



**Table 3.6-7**  
**Trip Generation - Related Projects**

Map ID	Name	Location	Land Use	Intensity	Units	Daily Total	AM Peak Hour			PM Peak Hour		
							In	Out	Total	In	Out	Total
1	Mixed-Use	9923 Atlantic Avenue	Retail/ Apartment	50 105	k.s.f. d.u.	2,833	40	61	101	131	119	251
2	Shopping Center	10000 Atlantic Avenue	Retail	6	k.s.f.	256	4	2	6	11	12	23
<b>Total</b>						<b>3089</b>	<b>44</b>	<b>63</b>	<b>107</b>	<b>142</b>	<b>131</b>	<b>274</b>

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project, Table 6, Page 23

These generated trips were added to the study area roadway system using a distribution and assignment methodology appropriate to the area roadway network. Additional adjustments were made for area projects near the perimeter of the study area. To analyze future conditions with trips generated by Related Projects, intersection turn volumes and ambient growth and traffic were input into the analysis for intersections.

**Table 3.6-8 Future (2019) Without Project Conditions LOS** shows the estimated future impacts of the Related Projects without Project traffic. As shown in the table, with the addition of ambient growth and Related Projects, LOS values at the intersection of Atlantic Avenue and Chakemco Street would continue to operate at LOS E in the AM peak hour and would worsen to LOS F during the weekday PM peak hour.

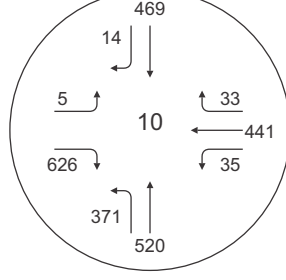
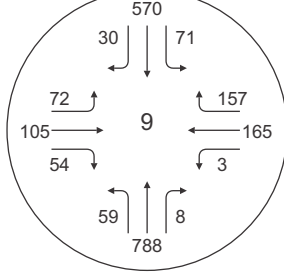
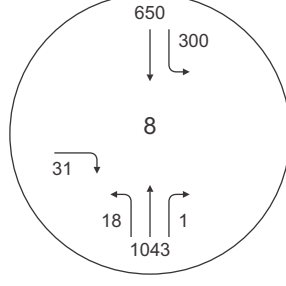
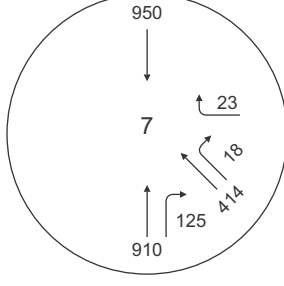
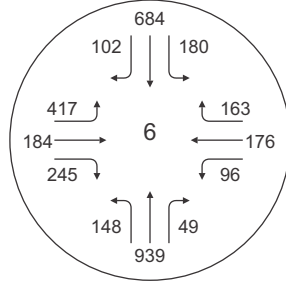
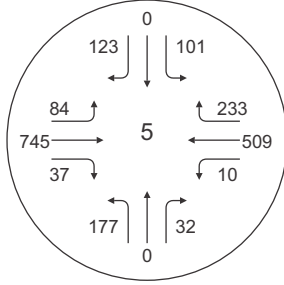
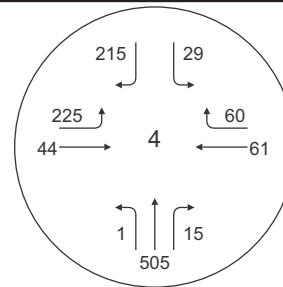
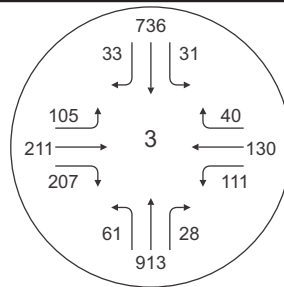
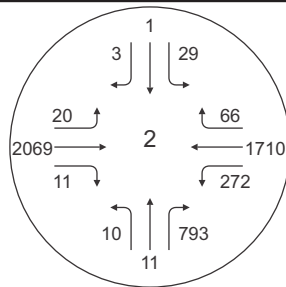
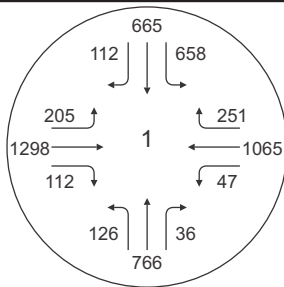
**Table 3.6-8  
Future (2019) Without Project Conditions LOS**

Map Reference	Intersection	Peak Hour	Existing Conditions		Future Without Project		Change
			Seconds of Delay	LOS	Seconds of Delay	LOS	
1	Atlantic Avenue/Firestone Boulevard	AM	25.7	C	26.1	C	0.4
		PM	25.0	C	25.6	C	0.6
2	Rayo Avenue/Firestone Boulevard	AM	25.1	C	28	C	2.9
		PM	23.2	C	26.1	C	2.9
3	Atlantic Avenue/Southern Avenue	AM	14.6	B	16.3	B	1.7
		PM	15.9	B	18	B	2.1
4	Rayo Avenue/Southern Avenue*	AM	16.8	C	19.5	C	2.7
		PM	13.5	B	15.3	C	1.8
5	Pinehurst Avenue/Tweedy Boulevard	AM	13.9	B	15.5	B	1.6
		PM	9.3	A	10.2	B	0.9
6	Atlantic Avenue/Tweedy Boulevard	AM	27.5	C	30.9	C	3.4
		PM	26.0	C	29.2	C	3.2
7	Atlantic Avenue/Chakemco Street*	AM	35.2	E	46.5	E	11.3
		PM	40.5	E	61.1	F	20.6
8	Atlantic Avenue/Wright Road*	AM	13.4	B	14.5	B	1.1
		PM	16.0	C	19.1	C	3.1
9	Atlantic Avenue/Michigan Avenue	AM	12.7	B	14.3	B	1.6
		PM	11.8	B	13.7	B	1.9
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	18.1	B	20.6	C	2.5
		PM	17.1	B	19.5	B	2.4

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project, Table 7, page 24 Notes: /a/ Units for Seconds of Delay are in Seconds

/b/ Bolded intersections have LOS E

\*denotes unsignalized intersection



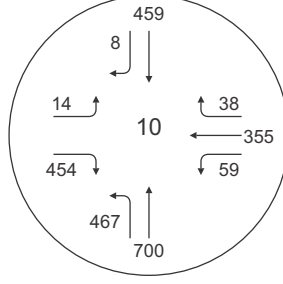
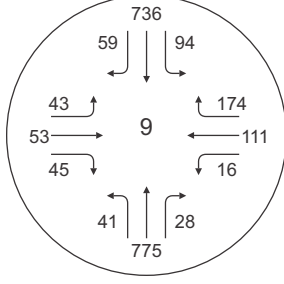
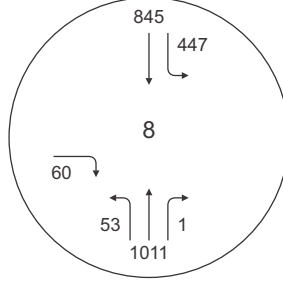
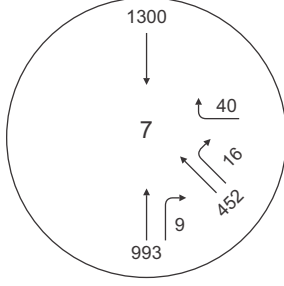
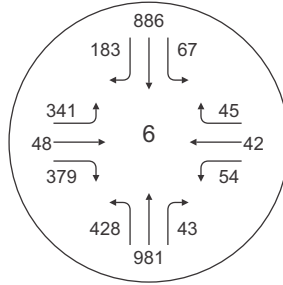
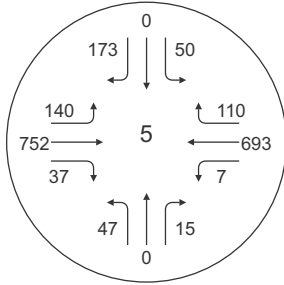
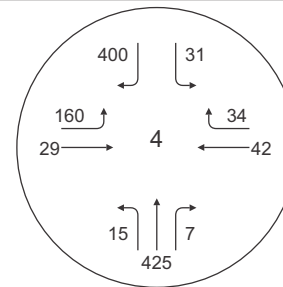
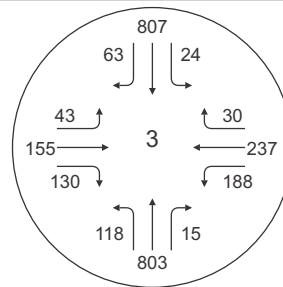
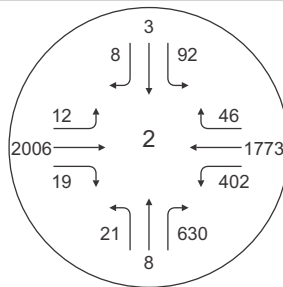
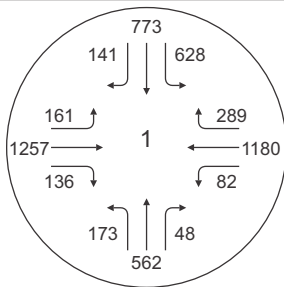
#### LEGEND

- Project Site
- Study Intersection
- Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-7a

Future Without Project Volumes, AM Peak Hour



# **LEGEND**

Project Site

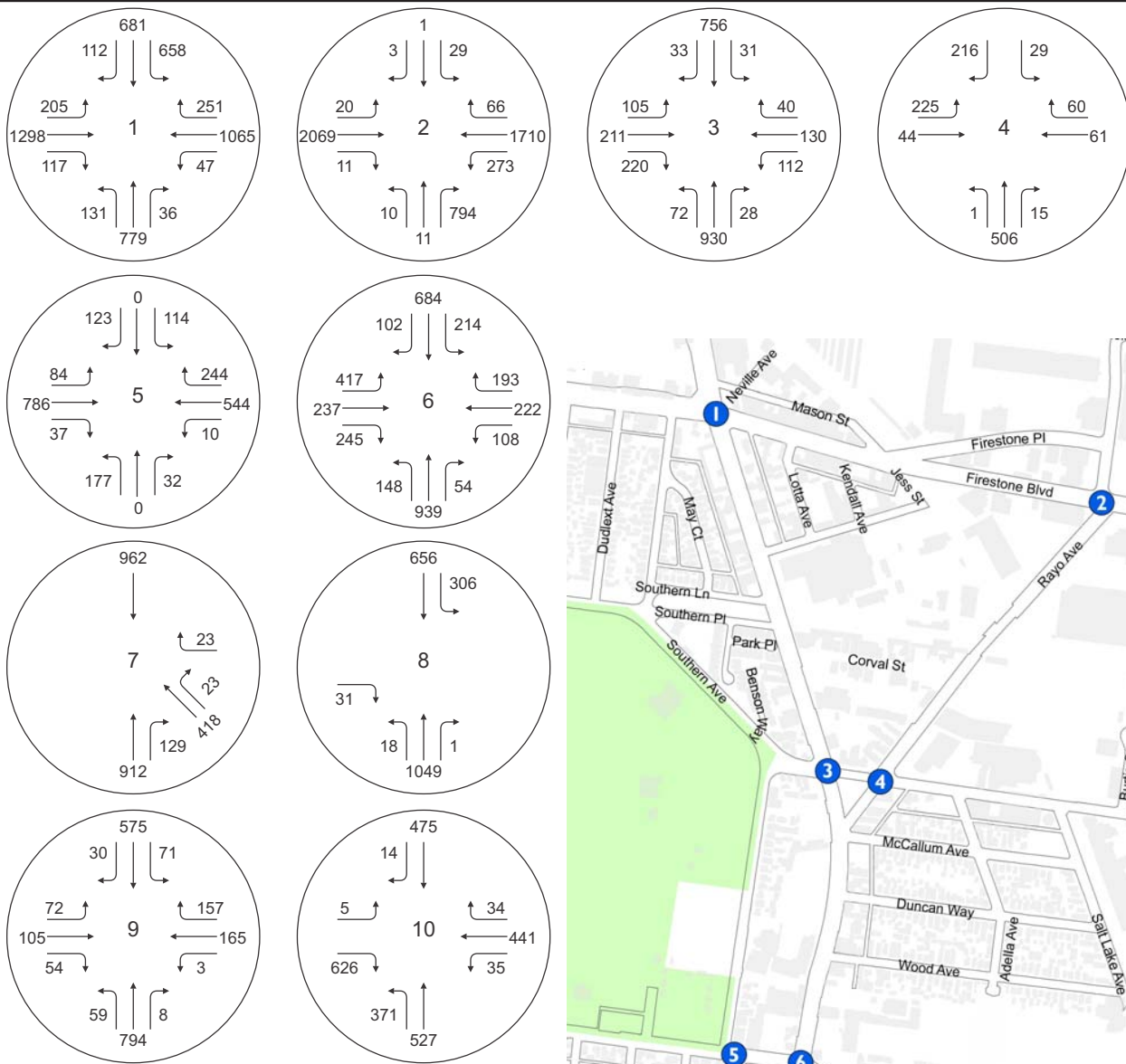
Study Intersection

Intersection Volumes




SOURCE: KOA Corporation

FIGURE 3.6-7b

Future Without Project Volumes, PM Peak Hour



#### LEGEND

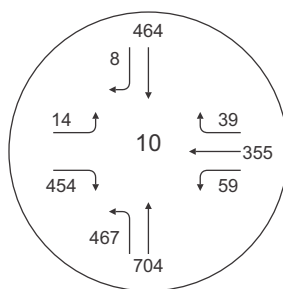
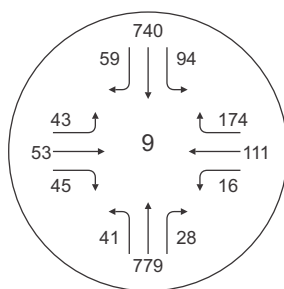
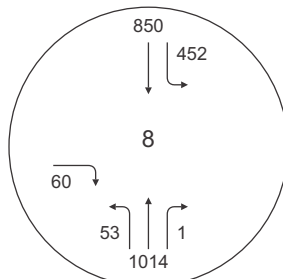
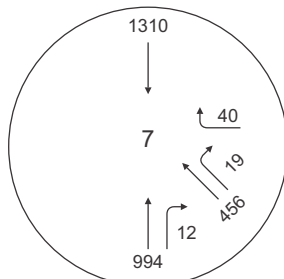
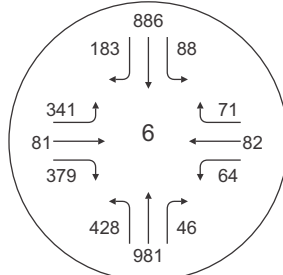
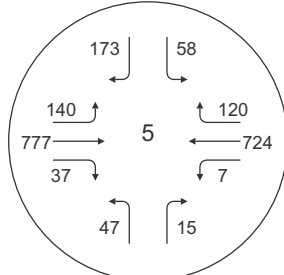
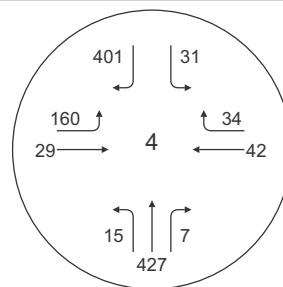
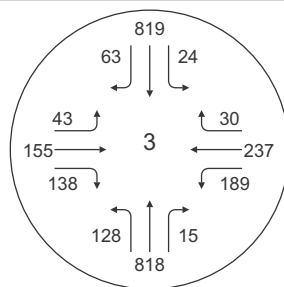
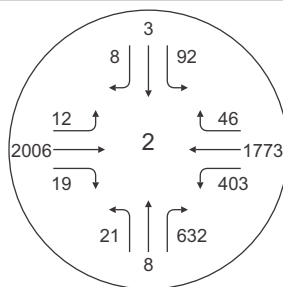
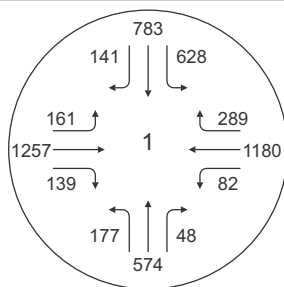
-  Project Site
-  Study Intersection
-  Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-8a

Future With Project Volumes, AM Peak Hour





#### LEGEND



Project Site



Study Intersection



Intersection Volumes

SOURCE: KOA Corporation

FIGURE 3.6-8b

Future With Project Volumes, PM Peak Hour

**Table 3.6-9 Future (2019) With Project Conditions LOS**, summarizes the resulting LOS values and the cumulative effects associated with the proposed Project (e.g., Related Projects and the proposed Project). With the addition of the proposed Project, the LOS values at the intersection of Atlantic Avenue and Chakemco Street would continue to operate at LOS E in the AM peak hour and operate at LOS F during the weekday PM. peak hour. The remaining nine study intersections would still operate at LOS C or better. The resulting AM and PM peak hour volumes are shown in **Figure 3.6-8a Future With Project Volumes, AM Peak Hour** and **Figure 3.6-8b Future With Project Volumes, PM Peak Hour**.

**Table 3.6-9  
Future (2019) With Project Conditions LOS**

Map Reference	Intersection	Peak Hour	Existing Conditions		Future With Project		Change
			Seconds of Delay	LOS	Seconds of Delay	LOS	
1	Atlantic Avenue/Firestone Boulevard	AM	25.7	C	26.2	C	0.5
		PM	25.0	C	25.8	C	0.8
2	Rayo Avenue/Firestone Boulevard	AM	25.1	C	28.1	C	3.0
		PM	23.2	C	26.2	C	3.0
3	Atlantic Avenue/Southern Avenue	AM	14.6	B	16.7	B	2.1
		PM	15.9	B	18.2	B	2.3
4	Rayo Avenue/Southern Avenue*	AM	16.8	C	19.6	C	2.8
		PM	13.5	B	15.4	C	1.9
5	Pinehurst Avenue/Tweedy Boulevard	AM	13.9	B	15.5	B	1.6
		PM	9.3	A	10.2	B	0.9
6	Atlantic Avenue/Tweedy Boulevard	AM	27.5	C	33.4	C	5.9
		PM	26.0	C	29.9	C	3.9
7	Atlantic Avenue/Chakemco Street*	AM	35.2	E	48.4	E	13.2
		PM	40.5	E	62.6	F	22.1
8	Atlantic Avenue/Wright Road*	AM	13.4	B	14.8	B	1.4
		PM	16.0	C	19.5	C	3.5
9	Atlantic Avenue/Michigan Avenue	AM	12.7	B	14.3	B	1.6
		PM	11.8	B	13.7	B	1.9
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	18.1	B	20.6	C	2.5
		PM	17.1	B	19.5	B	2.4

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project , Table 8, page 30

Notes:

Units for Seconds of Delay are in Seconds

Bolded intersections have LOS E

\*denotes unsignalized intersection

All of the signalized study intersections would continue to operate at LOS C or better with the proposed Project. Among the three unsignalized intersections, the intersection of Atlantic Avenue and Chakemco Street would operation at LOS F in the PM peak hour in the Future Without Project condition. **Table 3.6-10 Future With and Without the Project** shows the incremental effect of the proposed Project and the significant impact that would occur at the intersection of Atlantic Avenue and Chakemco Street.

**Table 3.6-10**  
**Future LOS With and Without the Project (2019)**

Map Reference	Intersection	Peak Hour	Future Without Project (2019)		Future With Project (2019)		Change In Delay (Sec.)	Sig Impact?
			Seconds of Delay	LOS	Seconds of Delay	LOS		
1	Atlantic Avenue/Firestone Boulevard	AM	26.1	C	26.2	C	0.1	No
		PM	25.6	C	25.8	C	0.2	No
2	Rayo Avenue/Firestone Boulevard	AM	28.0	C	28.1	C	0.1	No
		PM	26.1	C	26.2	C	.01	No
3	Atlantic Avenue/Southern Avenue	AM	16.3	B	16.7	B	0.4	No
		PM	18.0	B	18.2	B	0.2	No
4	Rayo Avenue/Southern Avenue*	AM	19.5	C	19.6	C	0.1	No
		PM	15.3	C	15.4	C	0.1	No
5	Pinehurst Avenue/Tweedy Boulevard	AM	15.5	B	15.5	B	0.0	No
		PM	10.2	B	10.2	B	0.0	No
6	Atlantic Avenue/Tweedy Boulevard	AM	30.9	C	33.4	C	2.5	No
		PM	29.2	C	29.9	C	0.7	No
7	Atlantic Avenue/Chakemco Street*	AM	46.5	E	48.4	E	1.9	No
		PM	<b>61.1</b>	<b>F</b>	<b>62.6</b>	<b>F</b>	<b>1.5</b>	<b>YES</b>
8	Atlantic Avenue/Wright Road*	AM	14.5	B	14.8	B	0.3	No
		PM	19.1	C	19.5	C	0.4	No
9	Atlantic Avenue/Michigan Avenue	AM	14.3	B	14.3	B	0.0	No
		PM	13.7	B	13.7	B	0.0	No
10	Abbot Road-I-710 southbound off-ramp/Wright Road	AM	20.6	C	20.6	C	0.0	No
		PM	19.5	B	19.5	B	0.0	No

Source: KOA Corporation, 2017

As shown in the tables above, in the Future With Project scenario, the intersection of Atlantic Avenue and Chakemco Street would continue to operate at LOS F in the PM. peak hour and the total control delay would be more than 4.0 vehicle-hours for the single-lane approach on Chakemco Street (the City's



threshold for impacts). Therefore, the proposed Project in combination with Related Projects would create significant cumulative traffic impact at this study intersection.

### **Traffic Signal Warrant Analysis**

A traffic signal warrant analysis was conducted at the study intersection of Atlantic Avenue and Chakemco Street. This analysis was performed to determine if requirements would be met for a new traffic signal based on the future traffic volumes.

The analysis was based on the Manual on Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration and amended for use in California by Caltrans.

Warrant 3 was utilized to determine whether or not the intersection met the peak hour signal warrant. The MUTCD states that engineering judgement must be used for final decision on implementing new signalization, whether or not warrants are met.

- **Warrant 3 – Peak Hour Volume** – This is to determine whether, for one hour during the day, minor street traffic suffers undue delay in entering or crossing the major street. Part A, consisting of three – sub-sections, examines the total volume and vehicle hours of delay on the minor approach. Part B evaluates the peak hour volumes of both approaches of the major streets and highest approach of the minor street. Warrant 3 would be met if Part A or Part B shows impact on traffic flow.

Both Part A and B meet the peak hour warrant for the Atlantic Avenue and Chakemco Street intersection under the Future With Project condition. Therefore, Warrant 3 is met for installation of a new traffic signal. The warrant analysis worksheet is included in Appendix 3.6-1.

Signalization of the intersection of Atlantic Avenue and Chakemco Street would reduce the Future With Project impact to less than significant as shown in **Table 3.6-11 Impacted Intersection with Mitigation – Future (2019) With Project Condition**. Therefore, implementation of a three way traffic signal is included as Mitigation Measure MM-TRA-1. **Figure 3.6-9, Atlantic/Chakemco Signalization Plan** depicts the location of where signalization is proposed, as well as the overall signalization overall concept. Regarding intersection geometry, the intersection of Atlantic Avenue/Chakemco Street is currently unsignalized, with stop-sign control at the minor approach of Chakemco Street. The turn movements at the Chakemco Street approach are restricted to westbound right-turn. The Wright Road approach to Atlantic Avenue is south of but immediately adjacent to the Chakemco Street intersection. Turn movements at the northern intersection are restricted to northbound through and westbound right-turn movements. The Wright Road approach to Atlantic Boulevard is angled sharply to the north. As shown in Figure 3.6-9, signalization of the Chakemco Street intersection would be complicated by the presence of this Wright Road approach and multiple driveways in the immediate vicinity.

Implementation of Mitigation Measure MM-TRA-1 would also require partial removal of the raised median on Atlantic Avenue and consolidation of both the Chakemco Street and Wright Road intersections with Atlantic Avenue, or a consolidation of traffic controls.

**Table 3.6-11**  
**Impacted Intersection with Mitigation –Future (2019) With Project Condition**

Map Reference	Intersection	Peak Hour	Future (2019) without mitigation		Future (2019) with mitigation	
			Seconds of Delay	LOS	Seconds of Delay	LOS
7	Atlantic Avenue/Chakemco Street	AM	48.4	E	17.8	B
		PM	62.6	F	19.6	B

Source: KOA Corporation, 2016 Traffic Study for LAUSD International Learning Center Addition Project

Nonetheless, with implementation of the proposed mitigation, the intersection of Atlantic Avenue/Chakemco Street would operate at LOS B during AM and PM peak hours and the impact at this intersection would be reduced to less than significant.

### ***Mitigation Measure***

**MM-TRA-1** The project applicant shall install a three-way traffic signal in the Atlantic Avenue/Chakemco Street intersection. The signalization would cover the northbound Atlantic Avenue Approach, the Chakemco Street approach, and the Wright Road approach. Southbound Atlantic Avenue would not be controlled by the signal.

### ***Residual Impact***

As described above, the construction of the proposed Project would contribute to a cumulative impact at the intersection on Atlantic Avenue/Chakemco Street. With build out of the proposed Project and the Related Projects, the specified intersection would operate at LOS F during PM peak hours. Implementation of Mitigation Measure MM-TRA-1 would reduce the cumulative traffic impact to less than significant.

However, the identified cumulative impact would remain significant unless the signalization of the Atlantic Avenue/Chakemco Street intersection, identified in Mitigation Measure MM-TRA-1, occurs prior to the opening of the proposed school. The traffic signals and associated improvements, including installation of signage and curb ramps, require approval by the City of South Gate. Discussions between

LAUSD and the City indicate that these improvements are not likely to be approved and installed prior to the proposed school's opening. If the Project is approved, LAUSD plans to complete construction of the Project by August 2019 and commence operation by September 2019. Representatives of LAUSD's Facilities Services Division and the City's Engineering and Public Works Departments have discussed a proposed memorandum of understanding between these two agencies by which LAUSD would fund these improvements and the City would acquire property interests (if necessary) and approve permits needed for the improvements. Since LAUSD cannot ensure that the signalization plan improvements would be completed prior to the school's opening, the Project's traffic impacts on the Atlantic Boulevard and Chakemco Street intersection could result in a significant and unavoidable cumulative traffic impact.

Therefore, due to the uncertainty of LAUSD to implement the proposed mitigation in the necessary timeframe, the cumulative impact at the intersection of Atlantic Avenue and Chakemco Street is found to remain significant and unavoidable



### 3.7.1 INTRODUCTION

This section evaluates potential impacts associated with the consumption of energy that would result from the implementation of the proposed project. The section generally follows the guidance for the evaluation of energy impacts provided in Appendix F, Energy Conservation, of the *State CEQA Guidelines*.

It is noteworthy that the directives in Appendix F are advisory. In addition, Appendix F states the following: “Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project. The following list of energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances specific items may not apply or additional items may be needed. Where items listed below are applicable or relevant to the project, they should be considered in the EIR.” Therefore, the evaluation below does not address every directive in Appendix F. As directed by CEQA, the focus of the analysis is whether the Project would result in a wasteful or inefficient consumption of energy, and whether mitigation is required to avoid or reduce inefficient or wasteful consumption of energy.

### 3.7.2 EXISTING CONDITIONS

#### Electricity Supply

Southern California Edison (SCE) provides electrical power to business and residents in the City of South Gate. The service area for SCE is 50,000 square miles and includes 180 cities across 11 counties, which serve over 14 million people in central, coastal, and Southern California.<sup>1</sup> In 2013, SCE added over 1,800 megawatts (MW) of generation capacity from their new Walnut Creek, CPV Sentinel, and El Segundo generation stations.<sup>2</sup> SCE delivered approximately 87 billion kWh of electricity in 2015.<sup>3</sup> SCE currently maintains 12,782 miles of transmission lines, 90,401 miles of distribution lines, 1,433,336 electric poles, 720,800 distribution transformers, and 2,959 substation transformers. SCE’s service territory ranges from Mono County in the northeast to San Bernardino County in the southeast and Orange County in the

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<sup>1</sup> Southern California Edison – Our service territory, website: <https://www.sce.com/wps/portal/home/about-us/who-we-are/leadership/>, accessed November 17, 2016.

<sup>2</sup> California Energy Commission - Energy Facility Status Power Plant Projects Since 1996, website: [http://www.energy.ca.gov/sitingcases/all\\_projects.html](http://www.energy.ca.gov/sitingcases/all_projects.html), accessed November 17, 2016.

<sup>3</sup> Southern California Edison ‘Who We Are’ website: <https://www.sce.com/wps/portal/home/about-us/who-we-are/> accessed November 17, 2016.

southwest. SCE continues to expand their service territory (within their existing service area) on a project-by-project basis.

Power lines are located along the streets surrounding the Project site, including Tweedy Boulevard, Chakemco Street, Adella Avenue, Tweedy Place, and Burtis Street. The proposed Project would receive power by connecting to the existing easements and power lines surrounding the site.

## Natural Gas

Natural gas is provided and distributed to residents and businesses in the City of South Gate by the Southern California Gas Company (SoCalGas). According to the 2016 California Gas Report, SoCalGas is expected to provide an average of 2,526,000 Kilo British Thermal Unit (kBtu) per day by 2021.<sup>4</sup> In addition, due to modest economic growth, energy efficiency standards and programs, renewable electricity goals and the decline in commercial and industrial demand, starting in 2013 and continuing through 2035, natural gas demands are projected to decline at an annual rate of 0.6 percent throughout the SoCalGas service area.<sup>5</sup>

SoCalGas purchases gas supplies on a daily, monthly and longer-term basis from producers and marketers in California, Canada, the Rockies, and elsewhere in the U.S. Southwest. In 2012, natural gas was used in California to produce electricity (45.6 percent), in residential uses (20.8 percent), in industrial uses (14.5 percent), oil and gas industry operations (9.4 percent), in commercial uses and for transportation (8.6 percent), for agriculture (0.5 percent), and other unspecified uses (0.6 percent). The total natural gas usage in 2012 was 23,323 million therms.<sup>6</sup>

## Petroleum Based Fuel

In 2015, it is estimated that 14.9 billion gallons of gasoline (non-diesel)<sup>7</sup> and 2.81 billion gallons of diesel fuel<sup>8</sup> were sold statewide. The estimated 2015 gasoline sales for Los Angeles County were approximately 3.47 billion gallons, and 313 million gallons of diesel fuel.<sup>9</sup>

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<sup>4</sup> 2016 California Gas Report, prepared by the California Gas and Electric Utilities, Table 1-SCG, website, <https://www.socalgas.com/regulatory/documents/cgr/2016-cgr.pdf>, accessed October 29, 2016.

<sup>5</sup> Ibid. 2016 California Gas Report, prepared by the California Gas and Electric Utilities, pg. 64.

<sup>6</sup> California Energy Commission, Energy Almanac, Overview of Natural Gas in California, Natural Gas Supply. <http://energyalmanac.ca.gov/naturalgas/overview.html>, accessed October 29, 2016.

<sup>7</sup> California Energy Commission, California Gasoline Data, Facts, and Statistics. [http://www.boe.ca.gov/sptaxprog/reports/MVF\\_10\\_Year\\_Report.pdf](http://www.boe.ca.gov/sptaxprog/reports/MVF_10_Year_Report.pdf), accessed October 29, 2016.

<sup>8</sup> California Energy Commission, Diesel Fuel Data, Facts, and Statistics. [http://www.boe.ca.gov/sptaxprog/reports/Diesel\\_10\\_Year\\_Report.pdf](http://www.boe.ca.gov/sptaxprog/reports/Diesel_10_Year_Report.pdf), accessed October 29, 2016.

### 3.7.3 REGULATORY FRAMEWORK

#### Federal

##### *Energy Independence and Security Act*

In December 2007, the President signed the Energy Independence and Security Act of 2007, which sets a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022. The Act also sets a national fuel economy standard of 35 miles per gallon (mpg) by 2020. The Act contains provisions for energy efficiency in lighting and appliances and for green building technology implementation in federal buildings. On July 11, 2008, the United State Environmental Protection Agency (US EPA) issued an Advanced Notice of Proposed Rulemaking (ANPRM) on regulating GHGs under the Clean Air Act (CAA). The ANPRM reviews the various CAA provisions that may be applicable to the regulation of GHGs and presents potential regulatory approaches and technologies for reducing GHG emissions. On April 10, 2009, the US EPA published the Proposed Mandatory Greenhouse Gas Reporting Rule in the *Federal Register* (US EPA 2009). The rule was adopted on September 22, 2009 and covers approximately 10,000 facilities nationwide that account for 85 percent of US GHG emissions.

On September 15, 2009, the US EPA and the US Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA) jointly established a national program that set new standards to reduce GHG emissions and improve fuel economy; these standards apply to model year 2012 through 2016 light-duty vehicles. The proposed standards would be phased in and would require passenger cars and light-duty trucks to comply with a declining emissions standard. In 2012, passenger cars and light-duty trucks had to meet an average standard of 295 grams of CO<sub>2</sub> per mile and 30.1 mpg. By 2016, the vehicles have to meet an average standard of 250 grams of CO<sub>2</sub> per mile and 35.5 mpg.<sup>10</sup> The US EPA and US DOT formally adopted these standards on April 1, 2010.

##### *Energy Policy and Conservation Act*

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the US. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the US DOT) for establishing and regularly updating vehicle standards. The US EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the CAFE program, the average

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<sup>9</sup> California Energy Commission, *California Annual Retail Fuel Outlet Report Results (CEC-A15) Spreadsheets*, [http://www.energy.ca.gov/almanac/transportation\\_data/gasoline/2015\\_A15\\_Results.xlsx](http://www.energy.ca.gov/almanac/transportation_data/gasoline/2015_A15_Results.xlsx), accessed October 29, 2016.

<sup>10</sup> The CO<sub>2</sub> emission standards and fuel economy standards stated are based on US EPA formulas.

fuel economy for new light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from 13.1 mpg for the 1975 model year to 27.5 mpg for the 2012 model year and is proposed to increase to 54.5 mpg by 2025.

### ***Energy Star Program***

In 1992, the US EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, US EPA joined with the US Department of Energy to expand the program, which now also includes qualifying commercial, industrial, and residential buildings.

## **State**

### ***Title 24***

Title 24, Part 6, of the California Code of Regulations contains the California Energy Commission's (CEC) Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On April 23, 2008, the CEC adopted the 2008 standards, which applied to projects that submitted an application for a building permit on or after January 1, 2010. The CEC adopted the 2008 standards for a number of reasons: (1) to provide California with an adequate, reasonably priced, and environmentally sound supply of energy; (2) to respond to Assembly Bill 32 (AB 32; the Global Warming Solutions Act of 2006), which requires California to reduce its greenhouse gas emissions to 1990 levels by 2020; (3) to pursue the statewide policy that energy efficiency is the resource of choice for meeting California's energy needs; (4) to act on the findings of California's Integrated Energy Policy Report, which indicate that the 2008 Standards are the most cost-effective means to achieve energy efficiency, reduce the energy demand associated with water supply, and reduce greenhouse gas emissions; (5) to meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures in the update of all state building codes; and (6) to meet the Executive Order in the Green Building Initiative



to improve the energy efficiency of nonresidential buildings through aggressive standards.<sup>11</sup> In 2013, updates were made to the 2008 Title 24 standards (effective January 1, 2014).

The California Green Building Standards Code, which is Part 11 of the Title 24 Building Standards Code, is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2013 CALGreen Code is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools, and hospitals) throughout California beginning on January 1, 2014. The 2013 CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction solid waste reduction, indoor water use reduction, building material selection, natural resource conservation, site irrigation conservation, and more. Additionally, this code encourages buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, the CEC believes a green building should achieve at least a 15 percent reduction in energy usage when compared to California's mandatory energy efficiency standards.

### ***AB 32, Executive Order S-3-05, and Executive Order B-30-15***

In addition to Title 24, AB 32, Executive Order S-3-05, and Executive Order B-30-15 are anticipated to result in the future regulation of energy resources in California. In order to achieve the GHG emission reductions targeted under AB 32 and the two executive orders, it is generally accepted that California will need to improve its overall energy efficiency, in addition to the use of more renewable energy resources. Pursuant to AB 32, the California Air Resources Board (CARB) is working with other state agencies (including the CEC), to implement feasible programs and regulations that reduce emissions and improve energy efficiency.<sup>12</sup>

### ***Renewable Portfolio Standard***

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

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<sup>11</sup> See <http://www.energy.ca.gov/title24/2008standards/index.html>, 2013.

<sup>12</sup> See <http://www.arb.ca.gov/cc/ghgsectors/ghgsectors.htm#electric>, September 13, 2013 (highlights targeted improvements for the energy sector).

### ***Senate Bill 350***

Senate Bill 350 (SB 350) was signed into law in 2015. The legislation requires that, by 2030, 50 percent of all electricity provided by power plants in California must be from renewable sources. SB 350 further requires the CEC to establish annual targets for statewide energy efficiency savings and demand reduction that would achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030. The bill requires the state Public Utilities Commission to establish efficiency targets for investor-owned electrical and gas corporations consistent with the 2030 goal, and the CEC to establish annual targets for energy efficiency savings and demand reductions for local publicly-owned electric utilities consistent with the 2030 goal. Each retailer of electricity must regularly file an integrated resource plan (IRP) for review and approval.

### ***Other Energy Related Statutes and Executive Orders***

Additional legislation and executive orders focused on energy efficiency in California are summarized briefly below:

- Assembly Bill 1613 (Blakeslee 2007): This legislation, also known as the Waste Heat and Carbon Emissions Reduction Act, was designed to encourage the development of new combined heat and power systems in California with a generating capacity of up to 20 MW.
- Senate Bill 1 (Murray, 2006): This legislation enacted the Governor's Million Solar Roofs program and has an overall objective of installing 3,000 MW of solar photovoltaic systems.
- Senate Bill 1389 (Bowen, 2002): This legislation requires the CEC to prepare a biennial integrated energy policy report that contains an assessment of major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. It also requires the CEC to provide policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety.
- Executive Order S-14-08 (Schwarzenegger 2008): This order established accelerated RPS targets—specifically 33 percent by 2020.
- Executive Order S-21-09 (Schwarzenegger 2009): This order requires CARB to adopt regulations, by July 31, 2010, increasing California's RPS to 33 percent by 2020.
- Senate Bill 32 (Pavley 2016) requires the state to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030, a much more ambitious target than the previous goal of hitting 1990 levels by 2020.

## Local

### 2013 Building Code

Currently, the City of South Gate enforces the most recent and effective update to the California Building Code (CBC).

The 2013 California Green Building Standards Code, referred to as *CALGreen*, became effective on January 1, 2014. *CALGreen* sets minimum standards that all new structures can meet to minimize significantly the state's overall carbon output. Local jurisdictions retain the administrative authority to exceed the new *CALGreen* standards. The *CALGreen* Standards are set forth in Part 11 of Title 24 of the California Code of Regulations.

*CALGreen* requires that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant emitting finish materials. *CALGreen*'s mandatory measures establish a minimum for green construction practices, and incorporate environmentally responsible buildings into the everyday fabric of California cities without significantly driving up construction costs in a slow economy.

*CALGreen* also has more stringent, voluntary provisions that have been placed in the appendix for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

Key optional measures are included in a two tiered system designed to allow jurisdictions to adopt codes that go beyond the State mandatory provisions. The non-residential tiers include increased reduction in energy usage by 15 or 30 percent and increased reduction in potable water use, parking for clean air vehicles, cool roofs, construction waste diversion, use of recycled materials, and use of low-emitting resilient flooring and thermal insulation.

The code addresses the critical issue of compliance verification by utilizing the existing building code enforcement infrastructure. The mandatory *CALGreen* measures would be inspected and verified by local building departments, in this case the City of South Gate Department of Building and Safety, using special inspectors as they determine necessary.

### ***LAUSD Collaborative for High Performance Schools Criteria***

LAUSD is the first school district in the United States to adopt and implement the Collaborative for High Performance Schools (CHPS) Criteria.<sup>13</sup> The LAUSD Board of Education adopted a Resolution on High Performance School Facilities requiring Phase II and future phase schools to be certified according to CHPS.<sup>14</sup> These measures are considered beneficial to improving environmental quality. LAUSD has incorporated these into the project design and operation of projects as part of standard LAUSD practices. The CHPS criteria are assumed to be part of the District's projects as they may apply to specific projects and are not included as mitigation measures. CHPS recommends flexible standards to promote energy efficiency, water efficiency, site planning, materials, and indoor environmental quality. Certain CHPS points are mandatory and are identified below as part of certain LAUSD Design Standards.

Under CHPS Criteria EE1.0: Minimum Energy Performance, new school designs must exceed the California energy efficiency standards (Title 24 – 2008, Part 6) by 15 percent or energy-efficient lighting with occupancy controls and/or economizers on the package equipment must be included in the design.<sup>15,16</sup> In addition, new buildings must meet 2013 Title 24 standards, which became effective on July 1, 2014.

#### **3.7.4 METHODOLOGY**

Appendix F recommends that an EIR present the total energy required by a project by fuel type and end use, during construction, operation, and removal of the project. The methodology used to estimate the construction-phase energy use is described below.

With respect to energy consumption during occupancy/operation, the increased electricity and natural gas demand due to operation/occupancy of the proposed Project were estimated using the CalEEmod emissions model. In addition, as the proposed Project would result in daily vehicle trips to and from the Project site, the increase in the consumption of petroleum-based fuel was calculated based on vehicle

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<sup>13</sup> Los Angeles Unified School District. Key OEHS Programs. Available at: <http://achieve.lausd.net/Page/3495>

<sup>14</sup> Los Angeles Unified School District. 28 October 2003. Los Angeles City Board of Education Resolution, Sustainability and the Design and Construction of High Performance Schools. Los Angeles, CA. Available at: [http://www.laschools.org/documents/download/sustainability%2Fhealthy\\_schools%2FBoard\\_Resolution\\_on\\_CHPS.pdf](http://www.laschools.org/documents/download/sustainability%2Fhealthy_schools%2FBoard_Resolution_on_CHPS.pdf)

<sup>15</sup> Collaborative for High Performance Schools. 2009. California Criteria for High Performance Schools Best Practices Manual. Volume III. 2009 Edition. Available at: <http://www.chps.net/manual/index.htm>

<sup>16</sup> California Energy Commission. 2008 Building Energy Efficiency Standards. Available at: <http://www.energy.ca.gov/2008publications/CEC-400-2008-001/CEC-400-2008-001-CMF.PDF>

miles travelled (VMT). CalEEmod was used to estimate VMT. Energy consumption during occupancy/operation is described below.

### 3.7.5 THRESHOLDS OF SIGNIFICANCE

Neither Appendix F of the *State CEQA Guidelines* nor PRC Section 21100(b)(3)) provides a threshold of significance that might be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing “the wasteful, inefficient, and unnecessary consumption of energy.” Based on this focus of the guidelines, for purposes of this Draft EIR, the proposed Project would have a significant impact related to energy consumption if it would:

- ENE -1:     Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the project.

### 3.7.6 IMPACTS AND MITIGATION MEASURES

- ENE-1                   **The Project would not involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the project.**

#### *Construction Impacts*

Project construction would require minor demolition, grading, utility installation, foundation construction, building construction, paving, and landscaping installation. All construction would be typical for the region and building type. During construction, energy would be consumed in the form of petroleum-based fuels (i.e., gasoline and diesel) used to power off-road construction vehicles and equipment on the Project site, for construction worker travel to and from the Project site, as well as for delivery truck trips; and to operate generators to provide temporary power for lighting and electronic equipment. The manufacturing of construction materials used by the proposed Project would also involve energy use. Due to the large number of materials and manufacturers involved in the production of construction materials (including manufacturers in other states and countries), upstream energy use cannot be reasonably estimated. However, it is reasonable to assume that manufacturers of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. Furthermore, neither the City nor the District has

control over or the ability to influence energy resource use by the manufacturers of construction materials. Therefore, this analysis does not evaluate upstream energy use.

The average annual and total consumption of gasoline and diesel fuel during Project construction was estimated using the same assumptions and factors from CalEEMod that were used in estimating construction air emissions in **Section 3.1, Air Quality**. As shown in **Table 3.7-1, Off-Road Construction Equipment Diesel Fuel Consumption**, and **Table 3.7-2, Construction Worker Gasoline Consumption**, a total of approximately 187,675 gallons of diesel fuel, and 3,026,213 gallons of gasoline would be consumed over the Project's construction horizon, or approximately 93,837.5 gallons of diesel fuel, and 1,513,107 gallons of gasoline annually.

**Table 3.7-1**  
**Off-Road Construction Equipment Diesel Fuel Consumption**

Phase	Equipment Type	Units	Hours	Horse Power	Load Factor	Number of Days	Fuel Usage Factor <sup>a</sup>	Diesel Usage <sup>b</sup>
Demolition	Concrete/Industrial Saws	1	8	81	0.73	23	0.05	544
	Excavators	3	8	162	0.38	23	0.05	1,699
	Rubber Tired Dozers	2	8	255	0.40	23	0.05	1,877
Grading	Graders	1	8	174	0.41	21	0.05	599
	Rubber Tired Dozers	1	8	255	0.40	21	0.05	857
	Tractors/Loaders/ Backhoes	3	7	97	0.37	21	0.05	791
	Cranes	1	7	226	0.29	21	0.05	482
	Forklifts	3	8	89	0.2	21	0.05	449
	Generator Sets	1	8	84	0.74	21	0.05	522
	Welders	1	8	46	0.45	21	0.05	174
	Excavators	1	8	162	0.38	21	0.05	517
Pile Driving	Concrete/Industrial Saws	1	8	81	0.73	22	0.05	521
	Excavators	4	8	162	0.38	22	0.05	2,167
	Rubber Tired Dozers	3	8	255	0.40	22	0.05	2,693
	Tractors/Loaders/ Backhoes	3	8	97	0.37	22	0.05	948
	Graders	1	8	174	0.41	22	0.05	628
	Cranes	1	7	226	0.29	22	0.05	505
	Forklifts	3	8	89	0.2	22	0.05	470
	Generator Sets	1	8	84	0.74	22	0.05	547
	Welders	1	8	46	0.45	22	0.05	182
Paving	Cement and Mortar Mixers	2	6	9	0.56	23	0.05	69
	Pavers	1	8	125	0.42	23	0.05	483
	Paving Equipment	2	6	130	0.36	23	0.05	646
	Rollers	2	6	80	0.38	23	0.05	420
	Tractors/Loaders/ Backhoes	1	8	97	0.37	23	0.05	330

Phase	Equipment Type	Units	Hours	Horse Power	Load Factor	Number of Days	Fuel Usage Factor <sup>a</sup>	Diesel Usage <sup>b</sup>
Building	Cranes	1	7	226	0.29	456	0.05	10,460
Construction	Forklifts	3	8	89	0.20	456	0.05	9,740
	Generator Sets	1	8	84	0.74	456	0.05	11,338
	Tractors/Loaders/ Backhoes	1	8	97	0.37	456	0.05	6,547
	Welders	1	8	46	0.45	456	0.05	3,776
	Cement and Mortar Mixers	2	6	9	0.56	456	0.05	1,379
	Pavers	1	8	125	0.42	456	0.05	9,576
	Rollers	2	6	80	0.38	456	0.05	8,318
	Paving Equipment	2	6	130	0.36	456	0.05	12,805
Architectural Coatings	Air Compressors	1	6	78	0.48	66	0.05	742
<b>Project Total</b>								<b>93,801</b>

Source: CalEEMod Model Data; DKA Planning, 2016

Notes:

<sup>a</sup> horsepower/gallon/hour

<sup>b</sup> in gallons

**Table 3.7-2**  
**Construction Worker Petroleum Fuel Consumption**

Phase	Number of Daily Trips	Number of Days	Average Round-Trip Commute Distance (in miles)	Fuel Usage (ave mpg) <sup>a</sup>	Fuel Usage (in gallons)
<b>Worker Trips (Gasoline)</b>					
Demolition	15	23	14.7	18.6	94,330
Grading	23	21	14.7	18.6	132,062
Pile Driving	15	22	14.7	18.6	90,229
Building Construction	20	456	14.7	18.6	2,493,590
Architectural Coatings	5	66	14.7	18.6	90,229
Paving	20	23	14.7	18.6	125,774
<b>Total Gasoline Usage</b>					<b>3,026,213</b>
<b>Hauling Trips (Diesel)</b>					
Demolition	187 <sup>b</sup>	--	20	25.1	93,874
<b>Total Diesel Usage</b>					<b>93,874</b>

Source: CalEEMod Model Data; DKA Planning, 2016

Notes:

*ave* – average mpg – miles per gallon

<sup>a</sup> This is a conservatively estimated total, as it assumes no electric, hybrid or other alternate fuel use vehicles in the fleet mix.

<sup>b</sup> Number of haul trips total for entire phase

The estimated amounts of energy resources reported in **Tables 3.7-1** and **3.7-2** would be consumed over a period of two years (24 months) and would represent a small percentage of the total energy used in the state. More importantly, for reasons presented below, this consumption would not represent a wasteful and inefficient use of energy resources.

There is growing recognition among developers and retailers that sustainable construction is not any more expensive than “business as usual” construction methods, and further, that there are long-term significant cost-savings potential in utilizing green building practices and materials. In addition, the proposed Project would feature a sustainable design to comply with CALGreen and CHPS, which would result in the use of sustainable materials and recycled content that would reduce energy consumption during Project construction. Construction materials would include recycled materials and products originating from nearby sources to the extent feasible in order to comply with CALGreen and to reduce costs of transportation.

Worker trips are estimated in Table 3.7-2 above. Worker trips are expected to vary by phase; however, trips would be temporary and would occur over the two year timeframe of construction activity. As these trips would be temporary, they would not be wasteful or inefficient use of energy. As discussed in **Section 3.1, Air Quality**, CARB has adopted Title 13 Section 2485, an Airborne Toxic Control Measure (ATCM), to limit diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants. All diesel-fueled commercial heavy- and medium-duty vehicles are required to comply with these measures. The ATCM requires that construction idling times shall be minimized either by shutting equipment off when not in use, or limiting the maximum idling time to five minutes. It also requires that all construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications, and that all equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Mitigation Measures **MM-AQ-1**, **MM-AQ-2** and Standard Conditions of Approval **SC-AQ-2**, and **SC-AQ-3** require that construction equipment be selected to minimize emissions, and that all diesel-powered off-road equipment larger than 50 horsepower and operating on the site for more than two days continuously shall, at a minimum, meet US EPA particulate matter emissions standards for Tier 3 engines or equivalent. Idling restrictions and the use of newer engines and properly maintained equipment would result in less fuel combustion and energy consumption. Furthermore, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

For the reasons listed above, the proposed Project would not involve the inefficient, wasteful, and unnecessary use of energy during construction and the construction-phase impact related to energy consumption would be less than significant.



## *Operational Impacts*

### **Electricity and Natural Gas**

Title 24 represents the state policy on building energy efficiency. The goals of the Title 24 standards are to improve energy efficiency of residential and non-residential buildings, minimize impacts during peak energy-usage periods, and reduce impacts on state energy needs. The proposed Project is required to comply with Title 24, and therefore would be energy efficient. Furthermore, the proposed Project would include features to minimize energy consumption, many of which are mandated by the CALGreen and CHPS, which would further reduce the amount of electricity and natural gas consumed by the proposed project.

It is anticipated that SCE and SoCalGas would be able to provide electricity and natural gas to the Project site using existing infrastructure. Only minor modifications to the distribution system would be required to connect the proposed Project to the existing off-site electrical and natural gas systems. Further, the Project's demand for electricity by itself would not require the construction of new power generation facilities.

The proposed Project does not include a residential component, and would not induce population growth. The students who would attend the new school are existing students that currently attend other schools. As such, no new students would be generated through this Project. Many of the proposed students are currently housed in less efficient portable classrooms off-site; therefore, the construction of the new energy efficient school would be an environmental benefit.

Further, the electrical loads and natural gas demand that would be required by the proposed Project are within the parameters of projected load growth in the City, and SCE and SoCalGas would be able to meet the demand in this area. Therefore, the proposed Project would not result in the consumption of energy resources that could not be accommodated within the long-term electricity and natural gas supply.

### **Petroleum-Based Fuel**

The proposed Project would result in the consumption of petroleum-fuel related to vehicular travel (quantified as VMT) to and from the Project site. **Table 3.7-3, Estimated Petroleum-based Fuel Usage at Buildout**, below, presents the projected consumption of approximately 12,672 gallons of diesel and 85,916 gallons of gasoline per year, or a total of 98,588 gallons of petroleum-based fuels per year based on an annual estimate of 1,916,104 VMT obtained from the CalEEMod results for the proposed Project.

This is a conservative estimate, given that it assumes no electric, hybrid, or other alternate fuel use vehicles in the fleet mix. Furthermore, this level of annual consumption is based on fuel efficiency rates (miles per gallon) shown in **Table 3.7.-3**. Federal and state laws and regulations will continue to require further improvements in fuel efficiency in motor vehicles produced and/or sold in the US and total annual consumption of petroleum-based fuel is expected to decrease over time.

**Table 3.7-3**  
**Estimated Petroleum-based Fuel Usage at Project Buildout**

Source	Fleet Mix <sup>a</sup>	Generation Factor <sup>b, c</sup>	Annual Consumption (in gallons)
Mobile			
Diesel (gallons)	16.6%	318,073/25.1 mpg	12,672
Gasoline (gallons)	83.4%	1,598,031/18.6 mpg	85,916
		<b>Total</b>	<b>98,588</b>

Source: DKA Planning and Impact Sciences 2016

Notes:

mpg = miles per gallon

<sup>a</sup> Data Source: FHWA OHPI, Highway Statistics, Fuel Consumption by State and Type

<http://www.fhwa.dot.gov/policyinformation/pubs/hf/pl11028/chapter5.cfm>

<sup>b</sup> Data Source: California Department of Transportation, 2007 California Motor Vehicle Stock, Travel and Fuel Forecast,

<http://www.energy.ca.gov/2008publications/CALTRANS-1000-2008-036/CALTRANS-1000-2008-036.PDF>

<sup>c</sup> Diesel-powered vehicles typically get 30-35% more miles per gallon than comparable vehicles powered by gasoline. US Department of Energy, Fuel Economy Guide, <http://www.fueleconomy.gov/feg/pdfs/guides/FEG2013.pdf>

As previously discussed, in 2015, it is estimated that 14.9 billion gallons of gasoline (non-diesel)<sup>17</sup> and 2.81 billion gallons of diesel fuel<sup>18</sup> were sold statewide. Thus, at buildout, the Proposed Project would represent less than 0.001 percent of the statewide annual gasoline consumption and less than 0.001 percent of the statewide annual diesel consumption. Further, as discussed above, since these students are currently housed off-campus, by relocating the students to the LHSC certain energy efficiencies would be gained. In part, these would result from the consolidation of students on one campus which would result in fewer trips for staff (i.e., all staff would be housed on one site and would not need to go back and forth). In addition, the construction of the Project would expand the District's "zone of choice" program in the South Gate area. This would allow increased flexibility in the schools attended by the students

<sup>17</sup> California Energy Commission, California Gasoline Data, Facts, and Statistics. [http://www.boe.ca.gov/sptaxprog/reports/MVF\\_10\\_Year\\_Report.pdf](http://www.boe.ca.gov/sptaxprog/reports/MVF_10_Year_Report.pdf), accessed October 29, 2016.

<sup>18</sup> California Energy Commission, Diesel Fuel Data, Facts, and Statistics. [http://www.boe.ca.gov/sptaxprog/reports/Diesel\\_10\\_Year\\_Report.pdf](http://www.boe.ca.gov/sptaxprog/reports/Diesel_10_Year_Report.pdf), accessed October 29, 2016.

among the participating schools and help reduce VMT by allowing students to attend schools closer to home.

For the reasons listed above, the proposed Project would not involve the inefficient, wasteful, and unnecessary use of energy during operation and the operation-phase energy impact would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Residual Impact***

Residual impacts are less than significant.

## **UNAVOIDABLE ADVERSE EFFECTS**

Appendix F of the *State CEQA Guidelines* recommends that the EIR report any unavoidable adverse impacts associated with the Project's energy use. The analysis presented above shows that the proposed Project would not result in a significant unavoidable impact associated with the use of energy.

## **IRREVERSIBLE COMMITMENT OF RESOURCES**

Appendix F states that an irreversible commitment of resources could occur if the project preempts future energy development or future energy conservation. The proposed Project would not preempt future energy development on the Project site since there are no energy resources located on or near the site. The proposed Project would also not preempt future energy conservation because the District would implement energy efficiency improvements through CHPS that become available in the future.

## **SHORT-TERM GAINS AND LONG-TERM IMPACTS**

Appendix F suggests that the project's short-term gains and long-term impacts can be evaluated by calculating the project's energy cost over the project's lifetime. As noted above, the proposed Project would not result in a wasteful use of energy. There would not be a reduction of long-term benefits for short-term gains as a result of the proposed Project.

## GROWTH INDUCING EFFECTS

Appendix F states that growth inducing effects may include the energy consumption of the growth induced by the project. As there is no residential component of the project, implementation of the proposed Project would not induce any population or employment growth beyond what has been anticipated by the region. Further, as described above, the proposed Project seeks to accommodate the existing ISLC students located off site. Therefore there would be no energy consumption related to growth induced by the proposed Project.

## 4.0 ALTERNATIVES

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### INTRODUCTION

The *State CEQA Guidelines* Section 15126.6 requires an EIR to assess a range of reasonable alternatives to a project, or to the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the proposed alternatives. This section of the Draft EIR analyzes Project alternatives and compares the potential environmental impacts of each alternative with the Project's potential environmental impacts.

As stated in the *State CEQA Guidelines*, project alternatives should be selected based on their ability to reduce significant impacts associated with the project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."<sup>1</sup> An EIR does not need to consider every conceivable alternative to a project, but rather the range of feasible alternatives should be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are evaluated.<sup>2</sup> In selecting project alternatives for analysis, the alternatives must be feasible. *State CEQA Guidelines* Section 15126.6(f)(1) states:

*Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries,... and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.*

The *State CEQA Guidelines* Section 15126.6(e)(2) requires the analysis of a "no project" alternative. This Section further states that if the environmentally superior alternative is the "no project" alternative, the EIR must identify an environmentally superior alternative among the other alternatives.

Case law suggests that the discussion of alternatives need not be exhaustive and that alternatives be subject to a construction of reasonableness.<sup>3</sup> The impacts of the alternatives may be discussed in less detail than the significant effects of the project proposed.<sup>4</sup>

As discussed above, the intent of an alternatives analysis is to avoid or substantially reduce the significant and unavoidable impacts identified for the Project, which are as follows:

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<sup>1</sup> *State CEQA Guidelines* Section 15126.6(b)

<sup>2</sup> *State CEQA Guidelines* Section 15126.6(f))

<sup>3</sup> *Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 26

<sup>4</sup> *State CEQA Guidelines* section 15126.6(d)

Construction Noise: The Project's construction noise impact inclusive of the existing ambient noise level would be 54.1 dBA which would exceed the 50 dBA threshold set by the City of South Gate. Project construction would elevate ambient noise levels at the Aldrich Road residences beyond the City's 50 dBA standard for duration of greater than 30 minutes per hour during construction work hours, and would therefore be considered significant and unavoidable.

Construction Vibration: The Project would exceed the vibration standards set by the FTA and the SGMC at Aldrich Road Residences and the commercial/industrial land uses west of the Project site. As a result, the Project's construction vibration impacts would be significant and unavoidable.

Cumulative Traffic: Project traffic would contribute to a cumulative intersection impact at Atlantic Avenue and Chakemco Street, resulting in a significant and unavoidable cumulative traffic impact.

## PROGRAM AND PROJECT OBJECTIVES

The following objectives have been established for the School Upgrade Program (SUP) and will aid decision makers in their review of the project and associated environmental impacts:

- Repair aging schools and improve student safety;
- Upgrade schools to modern technology and educational needs;
- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of small, high quality Pre-k through adult schools;
- Promote healthier environment through green technology.

### Project Specific Objectives

In addition, LAUSD has developed the following project specific objectives.

- Consolidate ISLC middle school and high school students on one campus under its one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;
- Relieve overcrowding at South Gate Middle School, which is currently one of the most heavily populated middle school sites in the District;
- Reduce District's reliance on relocatable buildings at South Gate Middle School;
- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;
- Use existing land owned by LAUSD to expand middle school options in the South Gate area.

## SELECTION OF ALTERNATIVES FOR ANALYSIS

According to the *State CEQA Guidelines*, the discussion of alternatives should focus on alternatives to a project or its location that can feasibly avoid or substantially lessen the significant effects of the project. The *State CEQA Guidelines* indicate that the range of alternatives included in this discussion should be sufficient to allow decision makers a reasoned choice. The alternative discussion should provide decision makers with an understanding of the merits and disadvantages of these alternatives.

Based on the Project's potentially significant impacts and the established objectives of the Project the following alternatives to the Project were selected for analysis:

### **Alternative 1 – No Project Alternative/No Development**

Section 15126.6(e) of the *State CEQA Guidelines* provides guidance on consideration of the no project alternative. When examining a development project on a specific piece of property, the No Project/No Development Alternative is the circumstance under which the proposed Project does not proceed and no new development occurs. Under a No Project/No Development scenario, the discussion compares the environmental effects of the property remaining in its current vacant state against the environmental effects that would occur if the proposed Project were approved and constructed.

### **Alternative 2 – No Project/Reasonable Development**

The *State CEQA Guidelines* require a discussion of what is “reasonably” expected to occur on a particular project site. Therefore, the No Project/Reasonable Development Alternative assumes the Project site were to proceed with a use other than the proposed Project.

### **Alternative 3 – Reduced Project Alternative**

This alternative evaluates a smaller project. Under the Reduced Project Alternative a smaller school that would accommodate fewer students would be constructed. This alternative assumes that the ISLC high school students would be moved to the new facility and ISLC middle school student would remain at Southeast Middle School. This assumption was made to achieve some reduction in trips (and associated impacts) at the Project site. It would also be possible to continue to accommodate ISLC high school students on the LHSC site north of Tweedy and house the ISLC middle school student on the Project site. However, this configuration would not achieve any reduction in the number of trips accessing the Project site and therefore would not be a suitable alternative.

## Alternatives Considered But Not Evaluated In Detail

The *State CEQA Guidelines* require an EIR to identify any alternatives that were considered by the lead agency but were rejected as infeasible and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) of the *State CEQA Guidelines* states the following:

*The EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination...Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

### Alternative Location

The District did not consider an alternative site for the Project, as one of the objectives of the Project is to combine all ISLC students onto one campus, as a result an alternative site would not have achieved this primary project objective. Although an alternative site was not considered, during the initial planning process for the Project, the District considered several options for accommodating the middle school on the Legacy campus north of Tweedy Boulevard. The District took several factors into consideration, but primarily was concerned with accommodating 424 students (based on 2015-16 school year enrollment). However, it was determined that accommodating all 424 ISLC students on the north campus would put additional strain on the facilities. In particular, the lunch areas and locker rooms would not be sufficiently sized to accommodate the additional students. As this alternative would not meet basic project objectives, it was eliminated from further consideration.

### Alternative Pick-up/Drop-off Options

During the NOP period and scoping meeting, several comments were made that suggested alternative drop-off and pick-up locations. Several such design modifications were considered during the planning process for the Project. The primary access for pick-up and drop-off operations for the existing high school is currently along Tweedy Boulevard. Vehicles travel in an easterly direction on Tweedy Boulevard into drop-off and pick-up zones for passenger cars. Traffic would then loop around a one-way drop-off area in front of the administration and classroom buildings along the northern side of Tweedy Boulevard and exit west to Atlantic Avenue. Pedestrian access to the existing LHSC is from both Tweedy Boulevard and Adella Avenue and includes an eight-foot sidewalk along the northern side of Tweedy Boulevard.

The proposed Project drop-off and pick-up operation would be designed to address safety and congestion issues regarding the additional vehicles for ISLC middle school students. A separate curbed



vehicular drop-off and pick-up lane, similar to the existing LHSC drop-off and pick-up lane, would be located along Tweedy Boulevard. Under the proposed Project, Tweedy Boulevard would be widened to accommodate a tree-lined median and an eastbound 12 foot drop-off and pick-up lane, as well as two eastbound 12 foot drive-through lanes. As shown in Figure 2.0-4, the vehicle queueing area would extend from the classroom building to the administration building and will allow for approximately 16 vehicles to queue completely on-site during drop-off and pick-up times. Speed humps would be installed in the two drive-through lanes to reduce vehicle speed. Signage would be installed along the parkway and would prohibit parking in the drop off and pick up area during arrival and dismissal times.

During the development of the Project design, additional pick-up and drop-off schemes were evaluated. One potential drop off area included creating a pick-up/drop-off area on future Legacy Lane directly west of the Project site. However, this alternative was deemed infeasible as it would require students to cross Legacy Lane to access the high school. Additionally, once parents drop off students, the driver would have to continue around the school and the future playfields to the turnaround at the end of the street. The driver would then have to go back around the school and make a left onto Tweedy Boulevard, exacerbating rather than mitigating traffic congestion and hazards.

The District determined this alternative would be unsafe due to the number of trucks that enter and exit the industrial land uses to the west. The presence of the trucks would create a safety hazard for the drivers of students as well as the students themselves that would need to cross Legacy Lane to access the school. This alternative would also further increase vehicular traffic noise at the residential uses south of the Project site, as vehicles would be closer to those residences compared to the proposed Project configuration. As this alternative would result in additional environmental impacts compared to the Project, that is, hazardous safety conditions and it would not avoid the significant environmental construction noise impact associated with the Project, nor would it eliminate the cumulative traffic impact at Atlantic Avenue and Chakemco Street, it was eliminated from further consideration.

## ANALYSIS METHODOLOGY

Each of the alternatives selected for analysis is evaluated in sufficient detail to determine whether its overall environmental impacts would be less, similar, or greater in comparison to the impacts of the proposed Project. The impact analyses sections for the proposed Project set forth in **Section 3.0** of this EIR include LAUSD Standard Conditions and mitigation measures that reduce the environmental impacts of the proposed Project. The analysis assumes that equally effective Standard Conditions and mitigation measures would apply to the alternatives.

Furthermore, each alternative is evaluated to determine whether the Project objectives would be substantially attained by the alternative. The evaluation of each alternative follows the process described below:

- The net environmental impacts of the alternative after implementation of Standard Conditions and reasonable mitigation measures are determined for each environmental issue area analyzed in the EIR;
- Post-mitigation significant and non-significant environmental impacts of the alternative and the Project are compared for each environmental issue area. Where the net impact of the alternative would be less adverse or more beneficial than the impact of the Project, the comparative impact is said to be “less.” Where the alternative’s net impact would be more adverse or less beneficial than the Project, the comparative impact is said to be “greater.” Where the impacts of the alternative and Project would be roughly equivalent, the comparative impact is said to be “similar”; and
- The comparative analysis of the impacts is followed by a general discussion of whether the purpose and basic Project objectives are feasibly and substantially attained by the alternative.

**Table 4.0-1 Comparative Alternatives Analysis** at the end of this section provides a summary matrix that compares the impacts of the Project with the impacts of each of the analyzed alternatives for each environmental issue addressed in this Draft EIR.

## COMPARATIVE IMPACT ANALYSIS

### Alternative 1 – No Project

Section 15126(2)(4) of the *State CEQA Guidelines* requires evaluation of the No Project Alternative. As described in the *State CEQA Guidelines*, the purpose of describing and analyzing the No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. Therefore, as required by the *State CEQA Guidelines*, the analysis must examine the impacts that might reasonably be expected to occur in the foreseeable future if the proposed project was not approved. Under the No Project Alternative, the Project site would remain in its abandoned state and no improvements would be made. This No Project analysis discusses the existing conditions at the time the NOP was prepared.

### *Air Quality*

Alternative 1 would not alter the site’s existing uses or result in any new construction or demolition activities and, therefore, would not generate additional localized or regional air pollutant emissions. No new trips would be generated at the Project site. Construction impacts under Alternative 1 would not occur and operational impacts under Alternative 1 would be avoided. Although Project air quality

impacts would be less than significant, no impact would occur under this alternative. Therefore, potential impacts would be less than those of the Project. However, it should be noted that trips associated with the ISLC students would continue to occur, but would occur at a different site.

### ***Geology***

Alternative 1 would not alter the existing uses on the Project site and would not introduce new uses or activities. Furthermore, Alternative 1 would not expose additional people and/or structures to potential adverse effects associated with geologic and seismic hazards, such as fault rupture, seismic groundshaking, liquefaction, lateral spreading, subsidence, landslides or expansive soils. Thus, the Project's less than significant impact associated with geology and soils would be avoided, and no impact would occur.

### ***Hazards and Hazardous Materials***

Under the No Project Alternative, no construction or demolition activities would occur and there would be no potential for the release of hazardous materials into the environment. In addition, potentially hazardous materials would not be stored or used on the Project site. Further, no impact would occur related to proximity to hazards such as existing pipelines or natural gas lines. Although Project hazardous materials impacts would be less than significant, there would be no potential impact under this alternative. Therefore, potential hazardous materials impacts associated with the No Project Alternative would be less than the Project.

### ***Noise***

Under the No Project Alternative, no construction or demolition activities would occur. In addition, no new noise sources would be generated including a new school. The significant and unavoidable impacts associated with Project construction and vibration would not occur. Therefore noise impacts associated with the No Project Alternative would be less than the Project.

### ***Pedestrian Safety***

Under this alternative, no new pedestrian activity would be generated and pedestrian activity in the area would remain the same as the existing conditions. Pedestrians would continue to access the main Legacy Campus on the north side of Tweedy Boulevard. No changes to the pedestrian network would occur. Therefore, potential pedestrian safety impacts would be less than the proposed Project.

### *Traffic*

Under this alternative, no new uses would generate trips on the Project site. As no new trips would be generated, this alternative would avoid the significant cumulative impact at the Atlantic Avenue and Chakemco Street intersection. Impacts under the No Project Alternative would be less than the Project.

### *Energy*

Under this alternative, no new uses would generate energy (either mobile source or stationary source) on the Project site. As no energy would be consumed, this alternative would have no impact on the consumption of energy resources. Impacts under the No Project Alternative would be less than the Project.

### *Relationship to the Project Objectives*

Alternative 1 would not meet the Project's purpose to provide a new school facility on the Project site to serve existing ISLC students. The Project site would remain vacant and underutilized. Alternative 1 would not meet any of the basic objectives of the Project:

- Repair aging schools and improve student safety;
- Upgrade schools to modern technology and educational needs;
- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of small, high quality Pre-k through adult schools;
- Promote healthier environment through green technology.
- Consolidate ISLC middle school and high school students on one campus under its one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;
- Relieve overcrowding at South Gate Middle School, which is currently one of the densest middle school sites in the District;
- Reduce District's reliance on relocatable buildings at South Gate Middle School;
- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;
- Use existing land owned by LAUSD to construct expanded middle school options in the South Gate area.

Additionally, this alternative would not include any of the Project benefits including reducing overcrowding at South Gate Middle School and consolidating the ISLC middle school and high school students on one campus.

## **Alternative 2 – No Project/Reasonable Development**

Under this alternative the District would use the site for a use other than the proposed Project. It is reasonable to assume some development would occur due to the high cost of land in the greater Los Angeles area.. Previous plans for the site included multi-purpose playfields; therefore the analysis below assumes implementation of playfields on the site.

### ***Air Quality***

Under this alternative, grading and site preparation activities would occur to prepare the Project site. As such, there would be some construction equipment, deliveries and so forth on the site for preparation and construction. However, as this alternative does not include the construction of the school building, it is assumed localized air quality construction emissions would be less than the proposed Project. Similarly, this alternative would generate fewer vehicle trips than the proposed Project thereby reducing operational emissions compared to the Project. Overall, construction and operation air quality emissions would be less than significant and reduced compared to the proposed Project.

### ***Geology***

Under this alternative new playfields would be constructed on the Project site. During construction standard conditions related to soil suitability would be implemented. It is likely that some accessory structures would be constructed (i.e., restrooms, bleachers, etc.) under this alternative. These structures would be subject to groundshaking in the event of a major earthquake. Therefore, impacts related to geology and soils would be similar to the proposed Project.

### ***Hazards and Hazardous Materials***

Alternative 2 would result in the construction of playfields on the site. As described in Section 3.3 Hazardous Materials, contaminants have been remediated from the site in accordance with state and federal requirements. Although the Project site is not currently listed on any hazardous materials listing site, past uses have included release of hazardous materials. This alternative would also include the construction of playfields in in proximity to existing pipelines and natural gas lines. As with the Project, construction of a curb would reduce this impact to less than significant. Impacts would be less than significant and would be similar to the proposed Project.

### *Noise*

Under Alternative 2, the Project site would be developed with playfields. Construction of these uses would not require the use of pile drivers or similar noisy construction equipment. However, as described in **Section 3.4 Noise**, the current ambient noise level is above the City's recommended threshold for noise in residential areas. As such, even with the limited amount of construction activity that would occur with this alternative, a significant and unmitigable impact could still occur. Similarly, the City's vibration threshold of 0.01 would likely be exceeded during construction. Therefore, although overall construction activity and noise would be reduced, it is expected that the City's thresholds would be exceeded and impacts would remain significant and unavoidable. Impacts would be similar to the proposed Project.

### *Pedestrian Safety*

Under this alternative, students would be expected to access the playfields resulting in some limited pedestrian trips. While the trips would be minimal and would occur intermittently, the potential for pedestrian safety impacts could still occur due to the existing conditions that does not include a sidewalk on the south side of Tweedy Boulevard. With the construction of the sidewalk, impacts would be less than significant and similar to the proposed Project.

### *Traffic*

Under this alternative, trips would be reduced compared to the proposed Project. It is expected that most trips for the playfields would occur in off-peak hours (i.e., event trips) and as such, the significant and unavoidable cumulative impact at the intersection of Atlantic Avenue and Chakemko Street would be avoided. Therefore, impacts would be reduced when compared with the proposed Project.

### *Energy*

Under this alternative, energy use would be reduced compared to the proposed Project. Alternative 2 would generate a limited number of trips for events, and some energy would be used to construct the playfields. Impacts would be less than significant. Overall, energy use would be reduced compared the proposed Project.

### *Relationship to Project Objectives*

Alternative 2 would eliminate the significant impact associated with the operational traffic. However, this alternative would not achieve the following project objectives:

- Repair aging schools and improve student safety;

- Upgrade schools to modern technology and educational needs;
- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of small, high quality Pre-k through adult schools;
- Promote healthier environment through green technology.
- Consolidate ISLC middle school and high school students on one campus under its one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;
- Relieve overcrowding at South Gate Middle School, which is currently one of the densest middle school sites in the District;
- Reduce District's reliance on relocatable buildings at South Gate Middle School;
- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;
- Use existing land owned by LAUSD to construct expanded middle school options in the South Gate area.

Additionally, this alternative would not include any of the Project benefits including reducing overcrowding at South Gate Middle School and consolidating the ISLC middle school and high school students on one campus.

### **Alternative 3 – Reduced Project Alternative**

The Reduced Project Alternative would include the construction of an addition to the Legacy High School Campus, similar to the proposed Project. However, under this alternative the school size would be reduced by 25 percent. Therefore, the new school would accommodate a total of 12 classrooms. A reduction in twenty five percent was selected as it would provide some classroom space for ISLC students on the campus. The administrative and auxiliary spaces would remain the same as proposed under the Project. Under this Alternative, it is assumed that the remainder of the ISLC middle school students would remain at Southeast Middle School and the removal of portable classrooms at South Gate Middle School would not occur.

### ***Air Quality***

Under this alternative site preparation including grading and minor excavation (for piles, etc.) would be necessary. Demolition activities would not occur at South Gate Middle School to remove the portable classrooms. Although the number of classrooms would be reduced by 25 percent to 12, a total of three buildings would be constructed which would require the use of heavy construction equipment. These

heavy construction equipment would produce localized air quality emissions, but because construction activity would be slightly reduced there would be a slight reduction in emissions, meaning this alternative would not exceed the SCAQMD's recommended localized standards of significance for NO<sub>2</sub> and CO during the construction phase. Construction activities would also produce PM<sub>10</sub> and PM<sub>2.5</sub> emissions, but these emissions would not exceed localized thresholds recommended by the SCAQMD. Further, the same standard conditions would be applied to this alternative, specifically SC-AQ-1 and SC-AQ-2. These conditions require the use of readily-available construction equipment with EPA-certified Tier 4 engines to reduce combustion-related NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Regulatory SC-AQ-4 addresses fugitive dust emissions of PM<sub>10</sub> and PM<sub>2.5</sub> that would be regulated by SCAQMD Rule 403, which calls for Best Available Control Measures (BACM) that include watering portions of the site that are disturbed during grading activities and minimizing tracking of dirt onto local streets. Additionally, SC-AQ-4 would ensure architectural coating used for the Project would comply with all VOC standards set by SCAQMD. As a result, construction impacts on localized air quality are considered less than significant. As such, impacts associated with construction air quality would be similar to the proposed Project and would be less than significant.

This alternative will also produce long-term air quality emissions to the region primarily as a result of motor vehicles accessing the Project site. Based on estimated traffic trip generation, the Project could add up to 743 net new vehicle trips to and from the Project site on a peak weekday at the start of operations in 2019. This alternative would result in approximately 558 trips to and from the Project site.<sup>5</sup> With regard to localized air quality impacts, the alternative would emit minimal emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> from area and energy sources on-site. Therefore, operational air quality impacts at the Project site would be incrementally reduced compared to the Proposed Project. However, these trips would continue to occur at Southeast Middle School. As such, operational air quality impacts would be less than significant and similar to the Project.

## *Geology*

Under this alternative, a new school would be constructed to accommodate existing ISLC students. These structures would be subject to groundshaking in the event of a major earthquake. As with the proposed Project, this alternative would be constructed in accordance with CBC requirements. With regard to soil suitability, this alternative would include construction of a school on the same site with no major design differences other than being 25 percent smaller in size. The same geotechnical recommendations would apply to the alternative. Therefore, impacts related to geology and soils would be similar to the proposed Project and less than significant.

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<sup>5</sup> Assumes 743 trips reduced by 25 percent.



### ***Hazards and Hazardous Materials***

Alternative 3 would result in the construction of a new school facility on the Project site. Although the Project site is not currently listed on any hazardous materials listing site, past uses have included hazardous materials. As described in **Section 3.3 Hazards**, contaminants have been remediated from the site in accordance with state and federal requirements. As with the proposed Project, construction and operation of the alternative would be in compliance with state and federal requirements related to hazardous materials. With regard to pipeline safety and other hazardous conditions related to the location of the Project site, this impacts would be similar to the proposed Project as they would continue to locate a school on the site. Impacts related to being located on a hazardous materials site and proximity to hazards would be less than significant and would be similar to the proposed Project.

### ***Noise***

Construction of this alternative would continue to require the use of pile drivers and similar noisy construction equipment. However, the reduction in the building size by approximately 25 percent could reduce the overall duration of the noisiest phases of construction. As described in **Section 3.4 Noise**, the current ambient noise level is above the City's recommended threshold for noise in residential areas. As such, even with reduced building size, construction activity would result in a significant and unmitigable temporary increase in noise levels. Similarly, the City's vibration threshold of 0.01 would likely be exceeded during construction. Therefore, although overall construction activity, timeframe, and resulting noise would be incrementally reduced, it is expected that the City's noise thresholds would be exceeded and temporary construction related noise impacts would remain significant and unavoidable. Impacts would be similar to the proposed Project.

### ***Pedestrian Safety***

This alternative would still result in pedestrian trips to the Project site, although the total number of students would be reduced by approximately 25 percent. Similar to the proposed Project, pedestrian improvements would be necessary to accommodate students accessing the site. Therefore, with construction of a sidewalk on the south side of Tweedy Boulevard, impacts would be similar to the proposed Project and less than significant.

### ***Traffic***

Under this alternative, trips would be incrementally reduced compared to the proposed Project. However, because the intersection of Chakemko Street and Atlantic Avenue is currently at LOS F, even with a project reduced in scale the significant and unavoidable cumulative impact at the intersection of

Atlantic Avenue and Chakemko Street would remain. However, as overall trips would be reduced, this impact would be incrementally reduced compared to the proposed Project. It is important to note that although these trips would not occur at this site, they would continue to occur at Southeast Middle School.

### ***Energy***

Under this alternative, energy would be used in the form of mobile trips to and from the Project site. Energy also would be used in the construction of the school buildings. During construction energy would be used in the form of gasoline and diesel fuel to power equipment as well as for worker trips. The reduction in building size would not necessarily translate to a reduction in energy consumed for the alternative by the same amount (i.e., 25 percent) however, it is expected that energy consumption during construction would be incrementally reduced compared to the proposed Project.

During operation energy would be used in the form of electricity and natural gas to provide heating, cooling and lighting for the buildings. It is assumed this alternative would also comply with CHPS Criteria EE1.0: Minimum Energy Performance, which requires new school designs must exceed the California energy efficiency standards (Title 24 – 2008, Part 6) by 15 percent or energy-efficient lighting with occupancy controls and/or economizers on the package equipment must be included in the design. Vehicle trips to the Project site would be reduced by 25 percent; however, some ISLC students would be accommodated off-site. Therefore, the total number of trips would remain the same as compared to the proposed Project and energy use would be approximately the same and would be less than significant. Overall, energy use would be slightly reduced compared to the proposed Project.

### ***Relationship to Project Objectives***

Alternative 3 would not reduce any significant and unavoidable impacts associated with the Project. Although this alternative would achieve some of the Project objectives, they would not be achieved to the same extent as the proposed Project. Further, this alternative would not achieve the following Project objective:

- Consolidate ISLC middle school and high school students on one campus under its one principal to support the international studies program and allow educators, students, and families to collaborate and enable the efficient and effective use of educational and operational resources;

The reduced capacity of this alternative would not accommodate all of the existing ISLC students, meaning some students would continue to be housed off site.

This alternative would only partially achieve the following project objectives:

- Create capacity to attract, retain and graduate more students through a comprehensive portfolio of small, high quality Pre-k through adult schools;

This objective would be partially achieved the ISLC would not be constructed to full capacity as students would continue to be split between school sites. .

The following objectives would not be achieved:

- Relieve overcrowding at South Gate Middle School, which is currently one of the densest middle school sites in the District;

This objective would not be achieved as ISLC students would continue to be accommodated on the Southeast Middle School site and, as a result, alignment of enrollment which would reduce overcrowding at South Gate Middle School could not occur.

- Reduce District's reliance on relocatable buildings at South Gate Middle School;

This objective would not be achieved. Overcrowding at South Gate Middle School would not be reduced under this alternative as ISLC students would continue to be accommodated at Southeast Middle School.

- Align middle school enrollment in the South Gate area by establishing a "Zone of Choice" including South Gate Middle School, Southeast Middle School, and the International Studies Learning Center;

This objective would not be achieved as the ISLC students would continue to occupy space at Southeast Middle School. There would not be sufficient capacity among South Gate schools to establish Zone of Choice.

## ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The *State CEQA Guidelines* Section 15126.6(e)(2) requires that and "environmentally superior" alternative be selected among the alternatives that are evaluated in the EIR. In general, the environmentally superior Alternative is the alternative that would be expected to generate the fewest adverse impacts. If the No Project Alternative is identified as environmentally superior, then another environmentally superior alternative shall be identified among the other alternatives. **Table 4.0-1** summarizes the effects of the alternatives.

Of the alternatives evaluated in this Draft EIR, Alternative 1, No Project/No Development Alternative, is considered the environmentally superior alternative as it would avoid all the significant and unavoidable impacts under the Project. However, as discussed above, the No Project/No Development Alternative would not meet the objectives established for the Project.

With respect to the State CEQA Guidelines requirement to identify an environmentally superior alternative other than the No Project/No Development Alternative, neither of the other alternatives would reduce the significant unavoidable impact related to construction noise and vibration.

Alternative 2 is considered environmentally superior to the Proposed Project as it would reduce the cumulative operational traffic impact associated with the proposed Project. However, this alternative would not achieve any of the Project objectives, including providing new space for existing ISLC students.

Alternative 3 is also considered environmentally superior as it would incrementally reduce the cumulative traffic impact associated with the Project. However, this alternative would not be reduced to less than significant and would remain significant and unavoidable. Further, it is important to note that under this alternative the same total number of trips will continue to occur, but trips will be spread across two sites (ISLC and Southeast Middle School). This alternative would achieve some of the basic project objectives; however, a reduced school site would not accommodate all of the ISLC students, as such this scheme and would result in ISLC students at two sites (the Project site and Southeast Middle School) which would be a continuation of the existing condition that is operationally challenging for the school and the District.

## COMPARISON OF ALTERNATIVES

**Table 4.0-1** summarizes the effects of the alternatives.

**Table 4.0-1**  
**Comparison of Alternatives to the Proposed Project**

<b>Environmental Issue Area</b>	<b>Proposed Project (After Mitigation)</b>	<b>Alternative 1: No Project/No Development</b>	<b>Alternative 2: No Project/Reasonable Development</b>	<b>Alternative 3: Reduced Project</b>
<b>Air Quality</b>				
Conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	Less, No Impact	Similar	Similar
Violate any air quality standard or contribute substantially to an existing or project air quality violation?	Less than significant	Less, No Impact	Less	Similar
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?	Less than significant	Less, No Impact	Less	Similar

Environmental Issue Area	Proposed Project (After Mitigation)	Alternative 1: No Project/No Development	Alternative 2: No Project/Reasonable Development	Alternative 3: Reduced Project
<b>Air Quality (continued)</b>				
Expose sensitive receptors to substantial pollutant concentrations?	Less than significant	Less, No Impact	Less	Similar
<b>Geology</b>				
Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving:				
Strong seismic ground shaking?	Less than significant	Less, No Impact	Similar	Similar
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than significant	Less, No Impact	Less	Similar
<b>Hazards &amp; Hazardous Materials</b>				
be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood?	Less than significant	Less, No Impact	Similar	Similar
be located on a site where the property line less than the following distance from the edge of respective power line easement: 100 feet of a 50-133 kV line 150 feet of a 220-230 kV line, or 350 feet of a 500-550 kV line?	Less than significant	Less, No Impact	Similar	Similar
be located within 1,500 feet of a pipeline that may pose a safety hazard?	Less than significant	Less, No Impact	Similar	Similar
be located on a site that is within 2,000 feet of a significant disposal of hazardous waste?	Less than significant	Less, No Impact	Similar	Similar

<b>Environmental Issue Area</b>	<b>Proposed Project (After Mitigation)</b>	<b>Alternative 1: No Project/No Development</b>	<b>Alternative 2: No Project/Reasonable Development</b>	<b>Alternative 3: Reduced Project</b>
<b>Noise</b>				
Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant and unavoidable	Less, No Impact	Similar, S/U	Similar, S/U
Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	Significant and unavoidable	Less, No Impact	Similar, S/U	Similar, S/U
Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant	Less, No Impact	Similar	Similar
Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Significant and unavoidable	Less, No Impact	Similar, S/U	Similar, S/U
<b>Traffic</b>				
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)?	Less than significant	Less, No Impact	Less	Similar
Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	Significant and unavoidable	Less, No Impact	Less, Less than significant	Similar, S/U
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than significant	Less, No Impact	Similar	Similar
Result in inadequate emergency access?	Less than significant	Less, No Impact	Similar	Similar
<b>Pedestrian Safety</b>				
Substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses?	Less than significant	Less, No Impact	Less	Less
Create unsafe routes to schools for students walking from local neighborhoods?	Less than significant	Less, No Impact	Less	Similar
Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard?	Less than significant	Less, No Impact	Similar	Similar

<b>Environmental Issue Area</b>	<b>Proposed Project (After Mitigation)</b>	<b>Alternative 1: No Project/No Development</b>	<b>Alternative 2: No Project/Reasonable Development</b>	<b>Alternative 3: Reduced Project</b>
<b>Energy</b>				
Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the project.	Less than significant	Less, No Impact	Less	Similar

Source: Impact Sciences, 2016

## 5.0 OTHER CEQA CONSIDERATIONS

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Section 15126.2 of the *State CEQA Guidelines* requires that the EIR include a discussion of significant environmental effects of the proposed project; significant environmental effects which cannot be avoided if the proposed Project is implemented; significant irreversible changes which would be involved in the proposed project should it be implemented; and growth-inducing impacts of the proposed Project. Sections 15126.4 and 15126.6 of the *State CEQA Guidelines* require that mitigation measures be proposed to minimize significant effects and alternatives to the proposed Project are considered and discussed. Cumulative impacts are discussed under each environmental issue area in **Section 3.0** pursuant to Section 15130 of the *State CEQA Guidelines*. Alternatives are also analyzed in **Section 4.0** of this document. **Section 3.0** also includes an analysis of the energy usage associated with the Project.

### SIGNIFICANT, IRREVERSIBLE ENVIRONMENTAL CHANGES

The EIR must examine irreversible changes to the environment. More specifically, the *State CEQA Guidelines* require the EIR to consider whether “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely” (*State CEQA Guidelines* section 15126.2(c)). “Nonrenewable resource” refers to the physical features of the natural environment, such as land, waterways, mineral resources, etc.

The proposed Project involves the addition of an educational facility to the existing LHSC on a vacant 4.9 acre site. The site mainly consists of vacant dirt lot with an existing concrete parking lot occupying the northern boundary of the site along Tweedy Boulevard. Several electrical poles traverse the site with ruderal vegetation located intermittently throughout the site.

The proposed Project is comprised of the following components: (1) an addition to the existing LHSC campus for ISLC middle school students; and (2) removal of portable buildings from the South Gate Middle School campus. The ISLC Addition would develop 4.9 acres of currently undeveloped land on the existing LHSC campus with 16 permanent classrooms, an administration building, a lunch shelter, staff and student restrooms, outdoor basketball/volleyball courts, a surface parking lot with 40 parking spaces, and a MPR/gym. Buildings constructed under the proposed Project would be a maximum of two stories tall and up to 27 feet in height. Subsequent to the construction of the ISLC Addition, approximately 17 classrooms in aging and deteriorating portable buildings located on the South Gate Middle School campus will be removed.



Nonrenewable resources used during the construction of the Project include construction materials and fossil fuels to power construction equipment. During operation of the Project, water and energy resources in the form of natural gas and electricity would be required. Impacts would also result from the incremental increase in vehicular traffic, and the associated air pollution. However, as discussed in the analysis within this EIR, impacts associated with increased resource use and consumption would not be significant. Nonetheless, the resources utilized for the proposed Project would be permanently committed to the Project and therefore considered irreversible.

## SIGNIFICANT UNAVOIDABLE IMPACTS

### *Noise*

- NOI-2:** Construction of the proposed project would exceed vibration standards set by the FTA and the SGMC at Legacy High School, Aldrich Road Residences and the commercial/industrial land uses west of the Project Site. Implementation of **SC-NOI-4** and **MM NOI-5** would ensure that the project's construction activities do not interfere with operations of LHSC. However, construction vibration impacts would still be significant and unavoidable for Aldrich Road Residences and the commercial/industrial land uses.
- NOI-4:** Implementation of the proposed project would result in a substantial temporary increase in ambient noise levels in the project vicinity. **MM NOI-1** through **MM-NOI-5** would incrementally reduce the Project's contribution to temporary increases in ambient noise level. However, even with these measures in place, Project's construction noise and vibration impacts would remain significant and unavoidable.

### *Traffic*

- Cumulative:** Construction of the proposed Project would contribute to a cumulative impact at the intersection on Atlantic Avenue/Chakemco Street. With build out of the proposed Project and the Related Projects, the specified intersection would operate at LOS F during PM peak hours. Implementation of Mitigation Measure MM-TRA-1 would reduce the cumulative traffic impact to less than significant.

However, the identified cumulative impact would remain significant unless the installation signalization program identified in Mitigation Measure MM-TRA-1 occurs prior to the opening of the proposed school. The traffic signals and associated improvements, including installation of signage and curb ramps, require approval by the

City of South Gate. Because LAUSD cannot ensure that the signalization plan improvements would be completed prior to the opening of the proposed school, the absence of signalization as an existing condition would result in a significant and unavoidable cumulative traffic impact.

Therefore, due to the uncertainty of LAUSD to implement the proposed mitigation in the necessary timeframe, the cumulative impact at the intersection of Atlantic Avenue and Chakemco Street is found to remain significant and unavoidable.

## GROWTH INDUCING IMPACTS

Section 15126(d) of the *State CEQA Guidelines* requires that this section discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. In general terms, a project may foster spatial, economic, or population growth in a geographic area if it meets any one of the following criteria:

- The project removes an impediment to growth (e.g., the establishment of an essential public service or the provision of new access to an area)
- The project results in the urbanization of land in a remote location (i.e., leapfrog development)
- Economic expansion or growth occurs in an area in response to a project (e.g., changes in revenue base, employment expansion, etc.)
- The project establishes a precedent-setting action (e.g., a change in zoning or general plan amendment approval)

Should a project meet any of these criteria, it can be considered growth inducing under CEQA. An evaluation of this project compared against these growth-inducing criteria is provided below.

### Removal of an Impediment to Growth

Growth in an area may result from the removal of physical impediments or restrictions to growth, as well as the removal of planning impediments resulting from land use plans and policies. In this context, physical growth impediments may include nonexistent or inadequate access to an area or the lack of essential public services (e.g., water service), while planning impediments may include restrictive zoning and/or general plan designations.

The Project site is within a highly urbanized area in the City of South Gate. The construction of proposed uses would require modifications and/or improvements to existing infrastructure as the site is currently vacant. Such modifications and improvements to infrastructure are discussed in further detail below.

However, the Project site is an infill site bordered by the Los Angeles River to the east. Given the urban nature of the site and surroundings, and the existence of established infrastructure, no growth-inducing impacts would result from Project development.

An established transportation network exists in the surrounding area that offers local and regional access to the Project site. Improvements to sidewalks along Tweedy Boulevard include reconstruction of the pedestrian walkway along the existing LHSC and the addition of a sidewalk on the southern portion of the street.

The water and energy (electricity and natural gas) infrastructure required to support the proposed Project would be available to the Project site from surrounding streets. No new water lines other than those required to connect the proposed uses to the existing water conveyance network would be constructed. As such, the development of on-site water infrastructure to serve the Project would not induce growth within the area.

Electricity and natural gas transmission infrastructure presently exists in the vicinity of the Project site. Development of the Project would necessitate the construction of an on-site connection system to convey this energy to uses on the site. This system would be designed to accommodate the uses proposed within the project, and would not extend beyond the requirements or boundary of the Project. The on-site service lines would be sized to meet the demands of the proposed Project. No growth-inducing impacts, due to the extension of electrical or natural gas service lines, would occur with the development of the Project.

In summary, the design and construction of roadway, water, and energy infrastructure needed to accommodate the Project would not induce growth within undeveloped areas surrounding the project area.

### **Urbanization of Land in Remote Locations (Leapfrog Development)**

Under this criterion, the Project would be considered growth inducing if it would result in the urbanization of land in a remote location. This means that the development would not be contiguous to existing urban development and would “leap” over large areas of undeveloped land. The Project site is an infill site located within a highly urbanized area of the City adjacent to other institutional, industrial, and residential uses. Because the Project is contiguous to existing development, it is not growth inducing under this criterion.

## Economic Growth

Under this criterion, the Project would be considered growth inducing if it would cause economic expansion or economic growth to occur in the Project area. Examples of economic expansion or growth would include changes in revenue base, employment expansion, etc.

Buildout of the Project could result in temporary increases in construction-related job opportunities. Potential employees would likely be drawn from the existing labor force in the Los Angeles Metropolitan area.

Long-term growth, should it occur, would be primarily in the form of an economic response for the operation of the site. The increase of employees (i.e. teachers, maintenance, administration) associated with proposed Project would not result in any noticeable increase in demand for City goods and services. Given the small size of the project in relation to City population, the economic contribution of this Project alone would not be considered growth inducing.

## Precedent-setting Action

Changes from a project that could be precedent setting include (among others) approval of zone change that could have implications for other properties, or that could make it easier for other properties to develop.

The project site is currently designated as “Residential Neighborhood Zone Civic” on the general plan land use map. The civic zone is intended to provide for public civic and recreational uses near residential neighborhoods and existing or planned transit. This zone captures the existing public and quasi-public uses within South Gate, including government buildings, public assembly, public offices, and schools. The Project would be constructed on an infill site - an addition to an existing school and would improve overall land use consistency in the Project area. Consequently, the project is not considered to be growth inducing under this criterion.

## Conclusion

It must be emphasized that the *State CEQA Guidelines* require an EIR to “discuss the ways” a project could be growth inducing and “discuss the characteristics of some projects that may encourage...activities that could significantly affect the environment.” However, the *State CEQA Guidelines* do not require an EIR to predict or speculate where such growth would occur, in what form it would occur, or when it would occur. Attempting to determine the environmental impacts created by growth that might be induced by the proposed project is speculative because the size, type, and location of specific future projects that may

be induced by this project are unknown at the present time. Therefore, such impacts are too speculative to evaluate (see *CEQA Guidelines* Section 15145). To the extent that specific projects are known (as discussed in **Section 3.0, Impact Analysis**, of this EIR), those projects have already been or would be subjected to their own environmental analysis. Additionally, due to the variables that must be considered when examining the mechanics of urban growth (e.g., market forces, demographic trends, etc.), it would be speculative to state conclusively that implementation of the project alone would induce growth in the surrounding area. Further analysis of impacts associated with growth in the City, and corresponding cumulative impact assessment methodology, can be found in the cumulative analyses for each individual topic addressed in **Section 3.0**.

## 6.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

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In accordance with Section 15128 of the *State CEQA Guidelines*, an Environmental Impact Report (EIR) must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. Based on the Initial Study prepared for the proposed Project, and included in **Appendix 1.0**, the District has determined that the proposed Project would not have the potential to cause significant adverse effects associated with the issues identified below. These topics have not, therefore, been addressed in detail in this EIR.

### AESTHETICS AND VIEWS

The proposed Project would not substantially impact aesthetics and views in the Project vicinity. The Project would change existing views by adding new structures on a vacant site. However, there are no scenic views, highways, roads, or freeways adjacent or proximate to the Project site. Furthermore, the Project site is currently vacant and exhibits low visual quality. The construction of a middle school campus would not be considered adverse on this site. Implementation of the proposed Project would increase the nighttime illumination and glare from current levels. All new outdoor lightings would be subject to LAUSD standard conditions **AES-4**, **AES-7** and **AES-8** (see **Section 2.0 Project Description**) to minimize glare and nuisance. Therefore, impacts regarding aesthetics and views are considered less than significant.

### AGRICULTURAL RESOURCES

The project site is located within a highly urbanized area within the City of South Gate and contains no agricultural lands, forestlands, or timberland. Therefore, no impact is identified for this issue.

### AIR QUALITY

The proposed Project would not include any odor-producing uses; odors associated with Project operation will be limited to on-site waste generation and disposal and occasional minor odors generated during food preparation activities for the on-site food service operations. Furthermore, all trash receptacles would be covered and properly maintained in a manner as to minimize odors, as required by the City of South Gate and Los Angeles County Health Department regulations, and be emptied on a regular basis. Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the Project site. Development of the proposed Project would utilize typical construction techniques, and the odors will be typical of most construction sites. Additionally, the odors would be temporary, and

construction activity will be required to comply with Program EIR **SC-AQ-2** through **SC-AQ-4**, and SCAQMD Rules 402 and 1113.<sup>1</sup> A less than significant impact relative to an odor nuisance would occur during construction associated with the proposed Project.

## **BIOLOGICAL RESOURCES**

The Project site is located in an urban area of the City of South Gate. Although the Project site is currently vacant, the site has been previously developed with commercial and light industrial uses. No threatened, endangered, or rare species or their habitats, locally designated species, locally designated natural communities, riparian or wetland habitats, or wildlife corridors exist on this Project site. Additionally, No trees, watercourses, and/or greenbelts are located on the Project site. No impact would occur to biological resources.

## **CULTURAL RESOURCES**

Past uses on the site include commercial and light industrial uses. As no buildings are currently located on the site, the proposed Project would not result in any substantial adverse change in the immediate surroundings such that the significance of a historical resource on the Project site would be materially impaired. The Project site has been subject to past subsurface disturbance associated with grading, foundations, and most recently ground disturbing remedial actions needed to remove groundwater and soil contaminants.

It is unlikely that undisturbed unique archaeological resources exist on the Project site. In addition, a 2008 Native American Heritage Commission (NAHC) Sacred Lands File (SLF) for the LHSC project determined that no Native American cultural resources were within LHSC project area. No known tribal cultural resources are located on the Project site. Although the unanticipated discovery of unique archeological resources is possible during soil excavation activities (e.g., during installation of utilities), based on the lack of previous resources on the site, and the level of disturbance, the probability that archeological resources will be discovered is low. In addition, compliance with Program EIR **SC-CUL-13**, **SC-CUL-17**, and **SC-CUL-18** would require that upon discovery of an archeological resource (1) construction activities in the immediate area of the find shall cease and LAUSD shall retain a qualified archaeologist to determine the significance of the find, (2) LAUSD shall determine if a Phase III Data

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<sup>1</sup> SCAQMD Rule 402 states the following “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The purpose of SCAQMD Rule 1113 is to limit the VOC content of architectural coatings used in the SCAQMD.

Recovery/Mitigation Program is necessary, and (3) if the archaeological resource is a Native American resource work shall stop within a 30-foot radius of the discovery.

It is also unlikely that undisturbed paleontological resources exist on the Project site. Compliance with Program EIR **SC-CUL-19** and **SC-CUL-20** would require the District to contract with a paleontological monitor for on-call purposes when developing sites sensitive to paleontological resources, and if a site is deemed to be highly sensitive for paleontological resources, an approved paleontological monitor shall be on the site during ground-disturbing activities.

Lastly, no formal cemetery exists on the Project site or in the vicinity of the proposed Project. In the event that human remains are uncovered during ground-disturbing activities, construction will cease until a coroner has conducted an investigation into the circumstances, manner, and cause of any death. Thus, impacts related to cultural resources would be less than significant.

## **GEOLOGY AND SOILS**

The Project site is located in the Los Angeles Basin within the Transverse Ranges Geomorphic Province in Southern California. The closest known active fault to the site is the Newport-Inglewood fault, located approximately 5.5 miles to the west. The Project site is not located within an Alquist-Priolo Fault-Rupture Hazard Zone.<sup>2</sup> Thus, the potential for surface ground rupture at the Project site is considered low.<sup>3</sup> Further, the Geotechnical Report prepared for the proposed Project analyzed the potential for liquefaction to occur. Based on tests that took into account the existing site conditions, including the peak ground acceleration, average shear wave velocity, and groundwater depth of 10 feet, the Geotechnical Report findings determined that impacts from liquefaction (including loss of bearing capacity) would be less than significant and the settlement of soil layers would not be detectable at the surface layer.<sup>4</sup>

The Project site is comprised of flat terrain and no significant ground slopes exist in the vicinity of the Project. The Project site is not susceptible to landslides.<sup>5,6</sup> Therefore, the likelihood of seismically induced

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<sup>2</sup> California Geological Survey Alquist-Priolo Earthquake Fault Zones, Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.

<sup>3</sup> Comprehensive Geotechnical Report Proposed International Learning Center, prepared by Group Delta, October 2015.

<sup>4</sup> Comprehensive Geotechnical Report Proposed International Learning Center, prepared by Group Delta, October 2015.

<sup>5</sup> California Department of Conservation, South Gate Quadrangle, Landslide and/or Liquefaction Map, [http://gmw.consrv.ca.gov/shmp/download/quad/SOUTH\\_GATE/maps/ozn\\_sgate.pdf](http://gmw.consrv.ca.gov/shmp/download/quad/SOUTH_GATE/maps/ozn_sgate.pdf), accessed October 12, 2015.

<sup>6</sup> Comprehensive Geotechnical Report Proposed International Learning Center, prepared by Group Delta, October 2015.



landslides affecting the Project is considered to be remote. In addition, the proposed Project would be subject to local and state codes and requirements for erosion control and grading during construction, including, but not limited to, grading permits and haul route approval from the City and LAUSD, which include requirements and standards designed to limit potential impacts to acceptable levels. The proposed Project would be required to comply with standard regulations, including SCAQMD Rule 402, which will reduce construction erosion impacts. Rule 402 requires dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance off-site.

Lastly, Project implementation would not use septic tanks or alternative wastewater disposal systems. The proposed Project would connect to the existing water system. Impacts related to geology and soils would therefore be less than significant.

## **GREENHOUSE GAS EMISSIONS**

The Project will generate greenhouse gases (GHG) from additional vehicle trips as well as from onsite area sources. However, the proposed Project would not increase total capacity as ISLC middle school students would be relocated from Southeast Middle School to the Project site. As such, no new trips would be generated; rather trips would be transferred from one site to a different site. The Project also includes removal of less energy efficient portables from the South Gate Middle School campus allowing for zone choice in the South Gate area. The proposed Project would be subject to Program EIR **SC-GHG-1** through **SC-GHG-5**, which would require water and energy efficient features and measures are included prior to operation of the proposed Project.

The Project site is within the jurisdiction of the SCAQMD. As the net emissions associated with the proposed Project would be well below the SCAQMD thresholds, based on the analysis in the Program EIR, the proposed Project would not conflict with plans, policies, or regulations for reducing GHG emissions. As a result, the proposed Project would not conflict with the state's ability to meet its GHG goals under AB 32 and SB 375. Impacts related to greenhouse gas emissions would be less than significant.

## **HAZARDS AND HAZARDOUS MATERIALS**

Construction of the proposed Project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. However, all hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. The design and operation of the proposed Project would satisfy all legal requirements by providing for and maintaining appropriate storage areas for hazardous materials, installing or affixing appropriate warning signs and labels, using commercial services that specialize in

the recycling of used hazardous substances (i.e., collecting hazardous materials on a regular basis to minimize the quantity stored on campus), installing emergency wash areas for flushing irritating substances from eyes and exposed skin areas should such contact occur, providing well-ventilated areas in which to use paints and solvents, and maintaining adult supervision during student's use of hazardous materials. All hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations.

The Project site is listed as a hazardous materials site pursuant to Government Code Section 65962.5, which is the Hazardous Waste and Substances Sites (Cortese) List.<sup>7</sup> Prior to the 1980s, the Project site was used for light industrial and commercial operations. These historic uses resulted in contamination of the groundwater and soil on the Project site. Prior to construction of the proposed Project, in compliance with direction from the DTSC, the District was required to propose and carry out remedial activities necessary to remove the contaminated soil and remediate the groundwater beneath the site. The District received a "No Further Action" determination from the DTSC in 2013 that allows construction of the new middle school to proceed. The District will continue to monitor the groundwater and soil vapor until at least 2020.

The Project site is not located within an airport land use plan or within the vicinity of a public airport or private airstrip. The Project is located in a highly urbanized area of the City and is not subject to wildland fires. Impacts related to hazards and hazardous materials are therefore considered less than significant for these issues.

### ***California Department of Education Thresholds***

Title 5 of the California Code of Regulation Section 14010 incorporates health and safety factors provided in the California Department of Education's (CDE) *School Site Selection and Approval Guide*. In combination with the thresholds provided in the *State CEQA Guidelines*, this guide provides thresholds that ensure that schools provide a safe learning environment for students.

The Project site is located within 1,500 feet of a railroad track easement. The Los Angeles River and Union Pacific railroad tracks are located approximately 1,200 feet to the east of the Project site. The predicted number of total accidents/incidents per million train miles for Union Pacific in California is 1.12 per million train miles while in Los Angeles County the risk is 0.006 per million train miles. Since the

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<sup>7</sup> State Water Resources Control Board Geotracker website, <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=5225+Tweedy+Boulevard+South+Gate+CA+>, accessed November 12, 2015.

predicted number of total accidents/incidents is less than one in a million train miles, the risk is acceptable in accordance with the LAUSD criteria.

Furthermore, no infrastructure, including water storage tanks, reservoirs, and/or high pressure water lines are located near the Project site. Rules and regulations pertaining to the storage, transportation, and use of propane would ensure that all propane tanks would not pose a safety hazard to individuals on the Project site. The site is not unusually shaped and has a sufficient length to width ratio that is consistent with CDE standards for school sites, which state that the length-to-width should not exceed 2:1. As illustrated in the site plan (see **Section 2.0 Project Description**), the proposed structures, parking, and play areas could be accommodated within the site. No changes would occur to land use as the proposed Project would be sited on an existing school property. Impacts related to these hazards would be less than significant.

## **HYDROLOGY AND WATER QUALITY**

None of the proposed uses are point source generators of water pollutants, and thus, no quantifiable water quality standards apply to the project. Furthermore, implementation of a SWPPP and compliance with the NPDES and City discharge requirements will ensure that the construction of the proposed Project would not violate any water quality standards and discharge requirements, or otherwise substantially degrade water quality. In addition, the proposed Project would be subject to the Program EIR **SC-HWQ-1 Stormwater Technical Manual** and **SC-HWQ-2 Compliance Checklist for Stormwater Requirements at a Construction Site**.

The proposed Project would not substantially deplete groundwater or interfere with groundwater recharge. As directed by the DTSC, the District is currently carrying out approved remedial activities to ensure the contaminants currently on the Project site are remediated, and do not continue to contaminate the groundwater beneath the site. Following site redevelopment, groundwater recharge on the Project site would continue to be negligible, similar to existing conditions.

No stream or river is present on the Project site. A concrete channelized portion of the Los Angeles River is located 0.2 miles east. Excluding the surface parking lot, the site is permeable and stormwater is retained on the Project site. Very little change would occur to drainage patterns with development of the proposed Project. As described above, the proposed Project would be required to prepare a SWPPP and implement BMPs to reduce runoff and preserve water quality during construction. Impacts related to hydrology and water quality would be less than significant.

## **LAND USE AND PLANNING**

The proposed Project is located in a highly urbanized area of the City, with the existing LHSC to the north. The site would be developed as an educational facility on a vacant, infill site. The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction as it is zoned for school use and in use as a school facility. Therefore, no impact is identified for this issue.

## **MINERAL RESOURCES**

Neither the Project site nor surrounding areas are utilized for mineral production. Implementation of the proposed Project would not result in the loss of an available known mineral resource with value to the region. Therefore, no impact is identified for this issue.

## **NOISE**

The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the Los Angeles International Airport, located approximately 17 miles to the west. The Commerce Business Park Heliport, a private airport, is located approximately four miles northeast of the Project site. No impacts would occur related to airport noise.

## **POPULATION AND HOUSING**

The proposed Project does not include uses such as new homes or business that may induce growth. There would be no overall increase in the number of students in the City of South Gate, as existing ISLC students would be relocated to the new campus. The portables on the South Gate Middle School campus will be removed once construction of the ISLC Addition project is complete. Implementation of the Project would not result in the displacement of existing housing or a substantial number of people as the site is currently vacant. No impact would occur.

## **PUBLIC SERVICES**

### **Fire**

The proposed Project would be served by Los Angeles County Fire Department Fire Station No. 54. The ISLC is projected to be operable in fall 2019. As discussed in the Program EIR, the District requires and implements a number of fire, emergency, and safety procedures including, emergency drills and procedures (REF-5803.2), emergency response protocol for LAUSD facilities (SAF.30), emergency operations plan, the District emergency response and preparedness (BUL-5433.1), school site

emergency/disaster supplies (REF-5451.1) and emergency communications and response actions (REF-5741.0), which would be required and implemented for the proposed Project.

In addition, LAUSD will coordinate with the Los Angeles County Fire Department regarding safety measures that should be incorporated into the design of the proposed Project, including installation of fire alarms, sprinklers, as well as the ability to meet the required water demand, and fire hydrant pressure. With the inclusion of any necessary safety features, the need for fire protection services would be minimal, and the impact on the need for new or expanded fire protection facilities would be less than significant.

## **Police**

Public police service needs are generally related to the size of the population and geographic area served, the number and type of calls for service, and other community and physical characteristics. The proposed Project would not increase the student population in the area. The ISLC high school program currently operates on the LHSC campus, while the ISLC middle school program currently operates on the Southeast Middle School campus, approximately 2.6 miles west of the campus. Both sites are served by the same police facilities. The relocation of the ISLC middle school program would not require an increase in demand for police protection services.

The proposed Project has been designed as a secure campus, with access to the site controlled by gates and fences. Drivers and pedestrians who are part of the public-at-large would not be permitted to park in the school's surface parking lot or access the ISLC campus. Persons with business on campus would be required to check in with the school's administration at the entry to the ISLC campus before being allowed on-site. The school would install electronic security and fire alarm systems. The impact related to the need for new or expanded police facilities would be less than significant.

## **School**

The relocation of the ISLC middle school students from the Southeast Middle School campus to the new ISLC facility (and the removal of the portable buildings from the South Gate Middle School) would allow for the realignment of middle school enrollment in the South Gate area, and provide relief for overcrowded LAUSD middle schools in the South Gate Area. As such the impact to existing schools would be beneficial.

## **Parks**

The proposed Project would not include any residential uses that would result in a permanent population increase. The design includes active and passive areas located throughout the site, including basketball and volleyball courts, upgrades to existing field lighting, a courtyard, a tree grove and several other landscaped areas. In addition, as part of the original LHSC development plan, the District will be constructing new athletic fields in the southern portion of the site that will be available for use by ISLC middle school students. As such, the relocation of the ISLC middle school students would not result in the need for new or expanded recreational facilities. No impact would occur.

## **Library**

The County of Los Angeles operates two libraries in the City. The Leland R. Weaver Library, located at 4035 Tweedy Boulevard is approximately one mile west of the Project site. The proposed Project would include a library, which would reduce the potential for impacts to surrounding County libraries. In addition, no residential units are included as part of the proposed Project which would result in a permanent increase in population. Therefore, any impact as a result of increase in use of public libraries would be less than significant.

## **RECREATION**

The proposed Project would not result in the addition of any residential uses and would not increase demand on local parks. As part of the proposed Project, funding is expected to be available to upgrade field lighting at the athletic fields being developed in the southern portion of the LHSC site. It is anticipated that students would utilize the passive and active open spaces within the site, and not substantially increase the use of existing parks. Further, these facilities would be joint use facilities similar to other District properties. Therefore, the proposed Project would not substantially degrade the quality of existing parks, nor will it require new recreation facilities to be constructed or existing recreation facilities to be expanded. The inclusion of recreational facilities will be a beneficial effect on the community.

## **TRANSPORTATION AND TRAFFIC**

The proposed Project would not impact air traffic. The Project site is not located within an airport safety zone nor does the Project propose any structure that would conflict with air traffic patterns. The nearest public airport is the Los Angeles International Airport, located approximately 17 miles west of the Project site.

Additionally, construction and operation of the proposed Project would not interfere with bus stops or other alternative transportation. Bus lines, including the County of Los Angeles Metropolitan Transit Authority (Metro) and the City of South Gate Get Around Town Express lines run along Atlantic Avenue. These impacts would be less than significant.

## UTILITIES AND SERVICE SYSTEMS

### Wastewater, Water, Solid Waste

The proposed Project would not expand the District's total student capacity or increase student enrollment. Students attending Southeast Middle School campus would be relocated upon completion of the proposed Project. The proposed Project would not require construction of new or expanded wastewater treatment facilities, and would not exceed the Regional Water Quality Control Board's wastewater treatment regulations. The proposed Project would require the installation of on-site sewer lines which would connect to the existing adjacent sewer lines. Wastewater generated on the Project site would be transported to Los Angeles County Sanitation District facilities via the City's sewer lines.

The proposed Project would require the installation of on-site water lines which would connect to the existing adjacent water lines. Further, the Project plans would be reviewed by the City's Water Division to determine if any additional infrastructure is needed on- or off-site. Therefore, the proposed Project would not require the construction of new water facilities and/or expansion of existing water facilities.

During construction and operation of the proposed Project, the District would comply with all applicable City, County, and state solid waste diversion, reduction, and recycling mandates, including compliance with the City's Source Reduction and Recycling Element (SRRE). Compliance with these regulations and mandates would assist in reducing the amount of waste deposited in local landfills. Construction of the proposed Project would generate construction debris. The surface parking lot would be demolished during the 24 month construction period. Waste materials generated during construction are expected to be typical construction debris as well as green wastes. The District would be subject to the 2013 CAL Green Construction Waste Reduction Requirements that require 50 percent of the construction waste generated on the Project site be diverted from landfills<sup>8</sup>. Waste generated during demolition and construction that is not recycled would result in an incremental and intermittent increase in solid waste disposal at landfills and other waste disposal facilities generally within Los Angeles County. However construction would only be temporary and debris would cease once the construction phase is completed.

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8 CalRecycle, Frequently Asked Questions Website, <http://www.calrecycle.ca.gov/LGCentral/Library/canddmodel/instruction/faq.htm#CALGreen>, accessed June 1, 2016.

Operation of the proposed Project would not result in an increase in solid waste generation as the proposed Project would not expand the District's total student capacity or increase student enrollment. The District contracts with private waste haulers to dispose of solid waste generated on school campuses.

Thus, impacts related to public services would be less than significant.



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