

4.0 IMPACT OVERVIEW

This chapter provides an overview of the environmental effects of the proposed project, including significant unavoidable adverse impacts, impacts not found to be significant, cumulative impacts, significant irreversible environmental changes, and growth-inducing impacts. Cross-references are made throughout this chapter to other chapters of the EIR where more detailed discussions of the impacts of the proposed project can be found.

4.1 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

This chapter is prepared in accordance with Section 15126.2(b) of the CEQA Guidelines, which requires the discussion of any significant environmental effects that cannot be avoided if a project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level. An analysis of environmental impacts caused by the proposed project has been conducted and is contained in this EIR. Five issue areas were analyzed in detail in Chapter 3.0. According to the environmental impact analysis presented in Chapter 3.0, the proposed project would result in significant unavoidable adverse impacts connected to construction noise and vibration (Chapter 3.4).

As discussed in Chapter 3.4, the construction of the proposed project would expose persons to or generate noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standard of other agencies. The construction of the proposed project would also result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The implementation of mitigation measures NOISE-A through NOISE-F would be required to minimize significant construction noise impacts. However, even after the implementation of mitigation measures, construction noise levels may continue to exceed applicable thresholds, and a significant and unavoidable impact would occur. In addition, the construction of the proposed project would expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The implementation of mitigation measures NOISE-G through NOISE-I would be required to reduce this significant impact. However, even after the implementation of mitigation measures, construction groundborne vibration may continue to exceed the threshold. Significant and unavoidable impacts would occur.

4.2 EFFECTS NOT FOUND TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires the identification of impacts of a project that were determined not to be significant and that were not discussed in detail in an impact chapter of the EIR. These issues were eliminated from further review during the Initial Study process (see Appendix A). Therefore, the following subsection presents a brief discussion of environmental issues that were not found to be significant for the proposed project, including agriculture and forestry resources; biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; population and housing; public services; recreation, and utilities and service systems.

4.0 Impact Overview

4.2.1 AGRICULTURE AND FORESTRY RESOURCES

The project site is designated as Institutional and School District under the City of Long Beach General Plan, and zoned I (Institutional).¹ Additionally, the project site is located within an area designated as Urban and Built-Up Land by the California Division of Land Resource Protection Farmland Mapping and Monitoring Program.² No farmland, timberland, or forest land is located within the vicinity of the project site. Further, no Williamson Act contracts apply to the project site.³ Thus, no impacts to involving conversion of farmland or forest land to another use would occur. Additionally, the proposed project would not result in impacts to farmland, timberland, or forest land.

4.2.2 BIOLOGICAL RESOURCES

The project site is located in an urbanized area and is completely developed with school facilities. No native vegetation is present on the project site; as such, candidate and special status species are not expected to occur. Additionally, no riparian habitat or other sensitive natural community or wetlands exist on the project site. The project site does not contain any watercourse, greenbelt, or open space for wildlife movement. Implementation of the proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species, or native wildlife nursery sites. As discussed in Chapter 2.0, Project Description, construction of the proposed project would comply with the Migratory Bird Treaty Act. Compliance with the Migratory Bird Treaty Act would ensure a less than significant impact to protected and migratory wildlife species. There are no known sensitive biological resources in the project vicinity, and the project site is not located within the boundaries of a Habitat Conservation Plan or Natural Community Conservation Plan. As such, implementation of the proposed project would not conflict with the provisions of such plans.

4.2.3 CULTURAL RESOURCES

Jordan High School does not possess sufficient historical or architectural significance for listing under any of the applicable federal, state, or local eligibility criteria. The property does not exemplify the broad patterns of economic and development history in the City of Long Beach or the LBUSD. Jordan High School is not identified with historic personages or with important events. As it is not an exceptional or architecturally important example of the period revival or postwar modern styles, and is not a good example of Kenneth Wing's architecture, Jordan High School does not appear eligible for listing in the national or state registers as an exceptional, distinctive, outstanding, or singular example of its type or style. As such, through the historic resources investigation, Jordan High School has been assigned a

¹ City of Long Beach Department of Planning, Zoning Map, Quadrant 29. August 2009. Website: <http://www.longbeach.gov/civica/filebank/blobload.asp?BlobID=11078>. Accessed: March 4, 2013.

² California Department of Conservation, Division of Land Resource Protection. Farmland Mapping and Monitoring Program, Important Farmland in California Map. 2008. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_08_11.pdf. Accessed: March 4, 2013.

³ California Department of Conservation, Division of Land Resource Protection. Williamson Act Program, Williamson Act Maps in PDF Format. Los Angeles County Williamson Act FY 2011/2012 Map. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_11_12_WA.pdf. Accessed March 4, 2013.

California Historic Resources Status Code of 6Z and is “found ineligible for the National Register, California Register, or Local designations through survey evaluation.” Therefore, no impacts to historic resources would occur with implementation of the proposed project.

There are no known archaeological or paleontological resources, or formal cemeteries or other places of human internment existing on the project site. The project site is completely developed and, thus, it is not expected that archaeological or paleontological resources, or human remains would be encountered during construction activities. However, in the event that subsurface resources are discovered during the course of grading and/or excavation, they would be handled pursuant to California Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and 5097.98. Adherence to existing regulations would ensure that impacts to archaeological and paleontological resources, and human remains would be less than significant.

4.2.4 GEOLOGY AND SOILS

The proposed project is located in the seismically active region of southern California and has the potential to be subjected to ground shaking hazards associated with earthquake events on active faults throughout the region. However, the project site is not located within an Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zone is the Newport-Inglewood Fault Zone, located approximately 2.4 miles southwest of the project site. Additionally, the Puente Hills Fault is located approximately 4 miles northeast of the project site. No evidence of active or potentially active faulting was observed on the project site during the geotechnical investigation. As such, surface rupture is not considered to a potential hazard to the project site. Nonetheless, due to the proximity of these faults, seismic ground shaking effects at the project site may occur during a strong earthquake along these faults. However, the proposed project would be designed and constructed in accordance with the recommendations in the Geotechnical and Geological Engineering Investigation Reports prepared for the proposed project (see Appendix A Initial Study and Appendices). Additionally, construction activities would adhere to the latest version of the California Building Code, the Uniform Building Code, and all other applicable federal, state, and local codes relative to seismic criteria.

The project site is located in an area identified as a generalized liquefaction susceptibility zone on the State of California Seismic Hazard Zones Map. Due to the depth of historic groundwater and the soil types underlying the project site, the potential for liquefaction at the project site is considered to be moderate to high. As discussed previously, the proposed project would be designed and constructed in accordance with the recommendations in the geotechnical investigation and geological engineering reports, the latest version of the California Building Code, the Uniform Building Code, and all other applicable federal, state, and local codes. The geotechnical investigation and geological engineering report for the northern portion of the campus, which includes the areas that are expected to experience the highest degree of seismic settlement due to liquefaction during an earthquake, recommends ground improvement measures to be implemented in conjunction with building foundations. In accordance with recommendations made in the geotechnical report, the ground improvement used in the northern portion of the project site would include the installation of stone columns. The stone columns would be installed in Phases 1B, 1C, and 2B of the proposed project, and would be designed to limit seismic settlement to no

4.0 Impact Overview

more than one inch with differential settlement of less than 0.75 inches within the upper 35 feet and static settlement no greater than 0.5 inches.

Construction activities associated with the proposed project would expose soil for a limited time, allowing for possible erosion. The proposed project would be required to implement dust control measures pursuant to SCAQMD Rule 403. Additionally, the construction contractor would develop and implement an erosion control plan and a SWPPP for construction activities, in compliance with the latest NPDES requirements for storm water discharges. During project operation, no large areas of exposed soils subject to erosion would be created or affected.

The project site is not located within an area identified as a Landslide Hazard Zone on the State of California Seismic Hazard Zones Map containing the project site. Due to the upper surface of liquefaction at a depth of approximately 23 feet, and discontinuity of the liquefiable layers, the potential for lateral spreading at the project site is considered low. Additionally, the on-site soil material has a low susceptibility to expansion. The project site is connected to the municipal sewer and storm drains, and septic tanks or alternative wastewater disposal systems would not be used.

Compliance with the recommendations in the geotechnical investigation and geological engineering reports, including the installation of stone columns to limit seismic settlement, and with existing regulations would ensure that geology and soils impacts would be less than significant.

4.2.5 HAZARDS AND HAZARDOUS MATERIALS

Due to the age of existing structures on the project site, several environmental assessments have been conducted to identify the potential for hazardous materials to be present on-site. A Removal Action Workplan (RAW) was prepared for the project site outlining measures for the remediation of contaminated soils. The RAW was approved by California Department of Toxic Substances Control (DTSC) on March 12, 2013. The No Further Action determination from DTSC would be required before building construction could begin. Following implementation of the RAW and removal of the impacted soil in accordance with state and federal standards, and application of the procedures outlined in the Abatement Specifications report, impacts related to hazardous conditions at the site would be less than significant.

Construction of the proposed project would involve the use of those hazardous materials that are typically necessary for construction (i.e., paints, building materials, cleaners, fuel for construction equipment, etc.). However, the transport, use, and disposal of construction-related hazardous materials would occur in conformance with all applicable regulations governing such activities. Additionally, the proposed project is not located within two miles of a public airport or airport land use plan or a private airstrip; the construction and operation of the proposed project would not interfere with any adopted emergency response plan or emergency evacuation plan; and no wildlands exist within or adjacent to the project site. Therefore, impacts related to hazards and hazardous materials would be less than significant.

4.2.6 HYDROLOGY AND WATER QUALITY

During construction, water used to control dust during grading and construction, as well as storm water, could carry construction debris, spilled fluids (including petroleum products from construction vehicles), and disturbed soils into local and regional waterways. During construction, adherence to all applicable water quality requirements would be required. The project site is currently developed with impervious surfaces and the proposed project would replace the existing uses with identical uses. Project design would direct storm water runoff to infiltration areas and use permeable pavement where feasible, which would promote and increase the amount of recharge at the project site. Drainage patterns within the project area are well established resulting in low potential for drainage alteration in most areas. The LBUSD would comply with all applicable requirements regulating drainage improvements and grading as they relate to construction of on-site improvements that affect off-site drainage. The proposed project would not generate substantial additional sources of polluted runoff. Storm water quality would also be addressed through compliance with regulatory permit requirements and BMPs. The proposed project would not discharge storm water runoff onto a state highway facility. The project site is not located within a 100-year flood zone as shown on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.⁴ Implementation of the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Tsunamis and seiches are not considered to be potential hazards to the project site, and the proposed project would not be susceptible to mudflows. Implementation of all applicable water quality requirements, including preparation of a SWPPP, as well as obtaining a Stormwater Construction Activities General Permit and NPDES permit would ensure that impacts to hydrology and water quality, during construction and operation would be less than significant.

4.2.7 LAND USE AND PLANNING

The project site is designated as LUD 10, Institutional and School District under the general plan, and is developed with school facilities.⁵ Additionally, the project site is zoned I (Institutional) under the zoning code.⁶ The proposed project would implement the campus master plan, which involves modernization of the existing school campus through construction of new and renovation of existing structures. The proposed project would not include an expansion of uses. Although the total square footage of structures would increase, the proposed project would not increase the capacity or enrollment of the school. Additionally, the proposed project would be located entirely within the existing boundaries of the Jordan High School campus. Thus, the proposed project would not physically divide and established community. The proposed uses would be consistent with the current land use and zoning designations for the project site. Additionally, as discussed in Chapter 2.0, Project Description, the proposed project is identified in the FMP and is designated as a high priority project by the Internal Executive Committee.

⁴ Koury Geotechnical Services, Inc. Draft Geotechnical and Geological Engineering Investigation Report. July 27, 2012.

⁵ City of Long Beach Department of Planning. *Land Use Element of the Long Beach General Plan*. April 1997. Website: <http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=2815>. Accessed: March 4, 2013.

⁶ City of Long Beach Department of Planning. *Zoning Map, Quadrant 29*. August 2009. Website: <http://www.longbeach.gov/civica/filebank/blobdload.asp?BlobID=11078>. Accessed: March 4, 2013.

4.0 Impact Overview

As such, implementation of the proposed project is designed to be consistent with the FMP and its goals. Finally, as discussed previously, no Habitat Conservation or Natural Community Conservation Plans are applicable to the project site. Therefore, no impacts to land use and planning would occur.

4.2.8 MINERAL RESOURCES

There are no known mineral deposits of regional or local importance underlying the project site.^{7,8} Implementation of the proposed project would not result in the loss of availability of any known mineral resource, and no impacts would occur.

4.2.9 POPULATION AND HOUSING

The proposed project does not include any residential or commercial land uses and, therefore, would not result in a direct population increase from construction of new homes or businesses. Implementation of the proposed project is not intended to increase the capacity of the existing school; thus, no increase in enrollment would occur with implementation of the proposed project. Additionally, the proposed project would not require the extension or the increase in capacity of existing off-site infrastructure. As such, the proposed project would not induce substantial population growth in the area, either directly or indirectly. No residential uses exist on the project site; thus, the development of the proposed project would not result in the displacement of existing housing, and no persons would be displaced. Construction of replacement housing would not be necessary. No impacts to population and housing would occur.

4.2.10 PUBLIC SERVICES

The proposed project would not increase the capacity of the existing school and, as such, would not generate population growth. Thus, construction and operation of the proposed project would not require additional fire facilities. The proposed project would provide emergency access to the project site in accordance with the applicable fire code, which includes adequate fire flows, fire alarms, and emergency access routes. Police units are continuously mobile and service calls are responded to from the nearest available mobile unit. Accordingly, the location of the proposed project would not affect police response times. The officer-to-population ratio would remain the same as under existing conditions without the expansion of or construction of new police protection facilities. No impacts to fire or police protection services would occur.

The proposed project would physically alter existing school facilities by modernizing the existing high school campus through the construction of new buildings and renovation of existing buildings. However, development of the proposed project would not increase the capacity of the existing school; thus, no increase in enrollment would occur with implementation of the proposed project. Development of the

⁷ Los Angeles County Department of Regional Planning. Los Angeles County General Plan, Special Management Areas Map. November 1980. Website: http://planning.lacounty.gov/assets/upl/project/gp_web80-special-management-areas-map-4.pdf. Accessed: March 4, 2013.

⁸ City of Long Beach Department of Planning. Land Use Element of the Long Beach General Plan. April 1997. Website: <http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=2815>. Accessed: March 4, 2013.

proposed project would benefit the existing campus by providing new and renovated facilities. Impacts to schools would be less than significant.

The proposed project would not generate any new permanent residents that would increase the demand for local and regional park facilities. The proposed project would increase the number and quality of athletic facilities provided on the campus, and the baseball and athletic practice facilities would be restored once the use of the interim housing is complete, in approximately fall of 2020. Further, other athletic facilities within the school district would be available for use temporarily while new facilities are constructed on the campus. Therefore, impacts to park facilities would be less than significant, and no further study of this issue is required.

As discussed previously, the proposed project would not increase the capacity of the existing school and would not generate any new permanent residents. Therefore, the proposed project would not increase the demand for other public facilities. No impacts would occur.

4.2.11 RECREATION

Under existing conditions, the school uses some of the facilities at the adjacent 26.4-acre Houghton Park to hold practice for various athletic teams. However, the proposed project would not increase the capacity of the existing school and would not generate any new permanent residents that would increase the demand for local and regional park facilities. The proposed project would increase the number and quality of athletic facilities provided on the campus, and the baseball and athletic practice facilities would be restored once the use of the interim housing is complete, in approximately fall of 2020. Further, other athletic facilities within the school district would be available for use temporarily while new facilities are constructed on the campus. Therefore, impacts to parks and recreational facilities would be less than significant.

4.2.12 UTILITIES AND SERVICE SYSTEMS

Construction activities could degrade water quality; however, the proposed project would be required to obtain coverage under a General Construction Activity Stormwater Permit, which requires the development and implementation of a SWPPP, which would include erosion control measures and construction BMPs pursuant to NPDES permit requirements. Compliance with existing regulations would ensure no construction impacts to wastewater treatment requirements. Newly constructed buildings would replace existing facilities with similar uses. Additionally, new structures would be designed to improve water efficiency. As such, a net increase in the generation of wastewater is not anticipated during project operation. Therefore, no operational impacts to wastewater treatment requirements would occur, and no further study of this issue is required.

With implementation of the proposed project, new structures would be designed to improve water efficiency, which would decrease water consumption and wastewater generation at the project site during project operation. Therefore, no impacts to water and wastewater treatment facilities would occur.

4.0 Impact Overview

New structures would occupy generally the same building footprints as existing facilities. As such, the amount of impervious surfaces on the project site would be similar to existing conditions, and the amount of runoff from the site would not be expected to increase. Therefore, no impacts to storm water drainage facilities would be occur.

Although total building square footage would increase, new structures would be designed to improve water efficiency. As such, the amount of water consumed and wastewater generated at the project site is not expected to increase with operation of the proposed project. The proposed project would not require new or expanded water supply entitlements. Therefore, no impacts to water supply would occur and impacts to wastewater treatment capacity would be less than significant.

Demolition and construction debris would be recycled per the City's Construction and Demolition Debris Recycling Ordinance, or transferred to local landfills. The nearest landfill at which construction debris and operational solid waste would be disposed is Sunshine Canyon Landfill in the San Fernando Valley. As of July 2007, the remaining capacity at this landfill is 112,300,000 cubic yards.⁹ The City's Construction and Demolition Debris Recycling Ordinance requires certain construction and demolition projects to recycle at least 60 percent of the waste generated during such activities.¹⁰ As such, the amount of construction and demolition waste that would need to be disposed of in an area landfill would be minimized. However, conservatively assuming that none of the construction debris is recycled, the existing remaining landfill capacity would be adequate to accommodate the proposed project. The proposed project would not increase the capacity or enrollment of the existing school facilities. Thus, the amount of solid waste generated at the project site during project operation would be similar to existing conditions. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. All materials would be handled and disposed of in accordance with existing local, state, and federal regulations. Compliance with existing regulations would ensure that impacts to solid waste disposal would be less than significant.

4.3 CUMULATIVE IMPACTS

According to Section 15355 of the CEQA Guidelines, cumulative impacts refer to:

“Two or more individual effects which, when considered together are considerable or which compound or increase other environmental effects. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

⁹ CalRecycle, Solid Waste Information System. Website: <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-2000/Detail/>. Accessed: March 18, 2013.

¹⁰ City of Long Beach Office of Sustainability, Waste Reduction. Website: http://www.longbeach.gov/citymanager/sustainability/waste_reduction.asp. Accessed: March 14, 2013.

Section 15130(a) of the CEQA Guidelines states that:

“An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.... When the combined cumulative impact associated with the project’s incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.... An EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project’s contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.”

Pursuant to CEQA Guidelines Section 15130(b)(1)(A), a list of past, present, and probable future projects producing related to cumulative impacts may be used as the basis of cumulative impacts analysis. The “list” approach was used for the cumulative impacts discussion in this EIR. The scale or geographic scope of related projects varies for each impact category. For instance, cumulative aesthetics impacts are considered localized, while cumulative air quality and transportation and traffic impacts are considered regional. Table 4-1 includes all of the approved, under construction, or proposed development projects within the vicinity of the project site. The list of development projects is derived from lists compiled by Iteris, Inc. and provided by the Cities of Long Beach and Compton.

TABLE 4-1 RELATED PROJECTS

Project No.	Project Name	Location	Size (sf)	Description
1	North Branch Library	5870 Atlantic Avenue, Long Beach	24,500	22,500 sf library 2,000 sf community center
2	Gateway Towne Center, Phase II	Alameda Street at South Auto Center Drive, Compton	90,000	Shopping center expansion

Source: Iteris, Inc. *Traffic Technical Memorandum*. August 12, 2013.
Notes: sf=square feet

AESTHETICS

There are two related projects located within the vicinity of the proposed project. These related projects would occur in an area that has already been impacted by urban development. The construction period of the proposed project would represent a temporary change to the visual character of the project site and area. However, as previously discussed, no new buildings constructed would be over two stories in height and no additional levels would be added to any existing buildings that would remain in place. Therefore, the new structures on the campus would be aesthetically consistent with the visual character and quality of the existing facilities and the surrounding area. Therefore, the proposed project, in conjunction with the related project, would not have a cumulative aesthetic impact.

4.0 Impact Overview

AIR QUALITY

The SCAQMD cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. Per CEQA Guidelines Section 15064(h)(4), the existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

As discussed in Chapter 3.2, Air Quality, construction-related emissions of criteria air pollutants would not exceed applicable mass emission thresholds established by SCAQMD, which are designed to assist the region in attaining the applicable state and national ambient air quality standards. Long-term operational emissions associated with the proposed project would also be below the applicable SCAQMD thresholds. Therefore, neither construction nor operation of the proposed project would contribute to a cumulatively considerable air quality impact.

GREENHOUSE GAS EMISSIONS

At the time of this analysis, the SCAQMD has only adopted a significance threshold of 10,000 metric tons of CO₂ per year for industrial projects. The SCAQMD has not adopted GHG thresholds of significance for residential, commercial, or mixed use projects. In 2009, the GHG CEQA Significance Threshold Stakeholder Working Group recommended options for evaluating non-industrial projects including thresholds for residential, commercial, and mixed use projects. The draft thresholds released by SCAQMD include possible thresholds of 3,000 MT CO₂e per year for all non-industrial projects and use an efficiency metric of 4.8 MT CO₂e per "service population" per year. The SCAQMD recommends that construction emissions associated with a project be amortized over the life of the project (typically 30 years) and added to the operational emissions. As discussed in Chapter 3.3, Greenhouse Gas Emissions, the project-related amortized construction and annual operational GHG emissions are below the proposed SCAQMD threshold. Furthermore, the analysis of GHG emissions is, by definition, based on the cumulative impacts of the proposed project. Therefore, the proposed project would not contribute to a cumulatively considerable impact to GHG emissions.

NOISE

The potential for cumulative noise effects is limited to temporary construction operations. Construction noise levels in the proposed project vicinity would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The nearest off-site noise-sensitive land uses in the project vicinity are single-family residences that abut the northern boundary of the project site. Typical construction activities would generate noise levels ranging from 74 to 90 dB at a distance of 50 feet. Continuous combined noise levels generated by the simultaneous operation of the loudest pieces of equipment would result in noise levels of 93 dB at 50 feet. Construction activities would result in a substantial (i.e., exceeding 3 dB to 5 dB) temporary increase in ambient noise levels at nearby noise-sensitive land uses.

Due to the localized nature of noise impacts, the analysis of cumulative noise impacts focuses on the related projects located within a quarter-mile radius of the project site. Neither of the related projects is located within a quarter-mile of the project site. Given the distance of the related projects from the project site, the presence of physical barriers (buildings, etc.) between the site, and the decrease in noise levels with distance, construction activities associated with the related projects when considered together with the proposed project would not be cumulatively significant. Simultaneous construction noise from related projects would not be discernible to sensitive receptors. The proposed project and related projects would include attenuation measures to reduce noise levels generated during construction. Further, the proposed project and related projects would be required to comply with the City of Long Beach noise standards. As described in subsection 3.4.4, mitigation measures NOISE-A through NOISE-F would be required to reduce significant short-term impacts related to construction-generated noise. However, even after the implementation of mitigation measures, there is a potential for project construction noise to continue to exceed the threshold, and the impact would be significant and unavoidable. Although the proposed project would result in significant and unavoidable construction noise impacts, because of the distance from the related projects and the temporary nature of the construction period, noise associated with the proposed project construction would not contribute to noise at related project sites. Based upon this assessment a combined cumulative noise effect would not occur.

Vibration impacts associated with construction activities are extremely localized because they are groundborne. Ground vibration generated by construction equipment spreads through the ground and diminishes greatly in magnitude with increases in distance. The construction of the proposed project may result in groundborne noise and vibration levels from 71 VdB to 106 VdB, and .0014 in/sec PPV and 0.831 in/sec PPV for typical construction activities. Installation of the proposed stone columns may result in vibration levels of up to 3.19 in/sec PPV at a distance of 10 feet from the equipment. As a result, vibration-induced construction activities would exceed recommended Caltrans standard of 0.2 in/sec PPV regarding the prevention of structural damage for normal buildings, FTA's maximum acceptable vibration standard of 78 VdB regarding human response (i.e., annoyance) at nearby vibration-sensitive land uses (i.e., school), and would expose persons to or generate excessive groundborne vibration or groundborne noise levels. Although the proposed project would result in significant and unavoidable construction vibration impacts, because of the distance from the related projects, ground vibration associated with the proposed project would not contribute to vibration at related project sites. Consequently, no cumulative vibration impacts would occur.

As discussed in Chapter 3.5, Transportation and Traffic, the proposed project would not generate any new vehicle trips during operations. As such, an increase in noise levels from traffic sources would not occur with project operation. Operation of Jordan High School would remain the same with implementation of the proposed project and would not contribute to a cumulatively considerable increase in groundborne noise or groundborne vibration.

TRANSPORTATION AND TRAFFIC

Construction of the proposed project would increase the number of daily trips within the project vicinity. However, this increase in trips would be relatively minor and temporary in nature. Additionally, no road

4.0 Impact Overview

closures are anticipated during construction of the proposed project. The proposed project would include development of a traffic management plan in coordination with the City of Long Beach for any temporary road closures (see Chapter 2.0, Project Description). Thus, the proposed project would not contribute to a cumulatively considerable traffic impact during construction.

As discussed in Chapter 3.5, Transportation and Traffic, operation of the proposed project would not result in a change in the number of vehicle trips generated at the project site. Therefore, no cumulative operational traffic impacts would occur.

4.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

California Public Resources Code Section 21100(b)(2)(B) and Section 15126.2(c) of the CEQA Guidelines require that an EIR analyze the extent to which the proposed project's primary and secondary effects would impact the environment and commit nonrenewable resources to uses that future generations will not be able to reverse.

Construction and operation of the proposed project would result in the use of nonrenewable resources during construction, including fossil fuels, natural gas, and water and building materials, such as concrete and steel. In addition, the proposed project would be designed to incorporate energy and water efficiency features in accordance with Title 24 standards and CHPS requirements. The proposed project is not anticipated to consume substantial amounts of energy in a wasteful manner, and it would not result in significant impacts from consumption of utilities. Although irreversible environmental changes would result from the proposed project, such changes would not be significant.

4.5 GROWTH-INDUCING IMPACTS

Section 15126(d) of the CEQA Guidelines requires a discussion of the ways in which a project could induce growth. This includes ways in which a project would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Section 15126(d) of the CEQA Guidelines states that an EIR should:

“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. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without the implementation of the project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of a projected level.

The environmental effects of induced growth are secondary or indirect impacts of the project. Secondary effects of growth could result in significant, adverse environmental impacts, which could include increased demand on community or public services, increased traffic and noise, degradation of air and water quality, and conversion of agricultural land and open space to developed uses.

As discussed in Chapter 2.0, Project Description, the proposed project involves implementation of the proposed campus master plan by modernizing the existing high school campus through the construction of new buildings, and the renovation and interior remodeling of existing buildings. However, implementation of the proposed project is not intended to increase the capacity or enrollment of the existing school. Additionally, although the overall square footage on campus would increase, the additional square footage would account for laboratories and other ancillary facilities. Therefore, the proposed project would not be expected to induce growth in the project area, either directly or indirectly.

This page is intentionally left blank.