



Fire Station No. 9 Replacement Project

Draft Environmental Impact Report

prepared by

City of Long Beach

Long Beach Development Services, Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, California 90802
Contact: Maryanne Cronin, Planner

prepared with the assistance of

Rincon Consultants, Inc.

250 E 1st Street, Suite 1400
Los Angeles, California 90012

July 2020



RINCON CONSULTANTS, INC.

Environmental Scientists | Planners | Engineers

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Table of Contents

Executive Summary	ES-1
Project Synopsis.....	ES-1
Project Objectives and Benefits.....	ES-2
Project Benefits.....	ES-3
Required Project Approvals	ES-3
Summary of Impacts and Mitigation Measures	ES-4
Areas of Known Controversy and Issues to be Resolved.....	ES-14
Project Alternatives	ES-15
1 Introduction	1-1
1.1 Overview of the Proposed Project.....	1-1
1.2 Purpose of the Environmental Impact Report (EIR)	1-1
1.3 Agency Roles and Intended Uses of this EIR	1-2
1.4 Scope and Content of this EIR.....	1-2
1.5 Notice of Preparation.....	1-4
1.6 EIR Processing	1-6
1.7 Draft EIR Comments.....	1-6
2 Project Description	2-1
2.1 Project Proponent.....	2-1
2.2 Lead Agency Contact Person.....	2-1
2.3 Project Location	2-1
2.4 Site Characteristics.....	2-4
2.4.1 Land Use Designation and Zoning	2-4
2.4.2 Surrounding Land Uses	2-4
2.4.3 Existing Conditions and Historic Use	2-4
2.4.4 Site Investigations.....	2-6
2.5 Project Characteristics	2-10
2.5.1 Proposed Project Activities.....	2-10
2.5.2 Project Objectives.....	2-14
2.5.3 Project Benefits.....	2-14
2.6 Required Approvals.....	2-14
2.7 Regulatory Compliance Measures	2-15
3 Environmental Setting	3-1
3.1 Regional Setting	3-1
3.2 Project Site Setting.....	3-1
3.3 Cumulative Development	3-3
4 Environmental Impact Analysis	4-1
4.1 Air Quality	4.1-1
4.1.1 Setting.....	4.1-1
4.1.2 Regulatory Setting	4.1-3
4.1.3 Impact Analysis	4.1-6
4.2 Cultural, Paleontological, and Tribal Cultural Resources.....	4.2-1
4.2.1 Setting.....	4.2-1

4.2.2	Regulatory Setting	4.2-7
4.2.3	Impact Analysis	4.2-11
4.3	Greenhouse Gas Emissions and Energy	4.3-1
4.3.1	Setting.....	4.3-1
4.3.2	Regulatory Setting	4.3-3
4.3.3	Impact Analysis	4.3-11
4.4	Hazards and Hazardous Materials	4.4-1
4.4.1	Setting.....	4.4-1
4.4.2	Regulatory Setting	4.4-8
4.4.3	Impact Analysis	4.4-13
4.5	Noise	4.5-1
4.5.1	Setting.....	4.5-1
4.5.1	Regulatory Setting	4.5-7
4.5.2	Impact Analysis	4.5-8
5	Effects Found Not to be Significant	5-1
5.1	Aesthetics.....	5-1
5.2	Agriculture and Forestry Resources.....	5-2
5.3	Biological Resources.....	5-3
5.4	Geology and Soils	5-4
5.5	Hydrology and Water Quality	5-5
5.6	Land Use and Planning.....	5-7
5.7	Mineral Resources	5-7
5.8	Population and Housing.....	5-8
5.9	Public Services.....	5-8
5.10	Recreation	5-9
5.11	Transportation	5-10
5.12	Utilities and Service Systems	5-11
5.13	Wildfire	5-12
6	Other CEQA Required Discussions.....	6-1
6.1	Growth Inducement.....	6-1
6.1.1	Population and Employment Growth.....	6-1
6.1.2	Economic Growth	6-2
6.1.3	Removal of Obstacles to Growth.....	6-2
6.2	Irreversible Environmental Effects.....	6-2
6.3	Significant and Unavoidable Environmental Effects	6-3
7	Alternatives.....	7-1
7.1	Introduction	7-1
7.2	Criteria for Alternatives Analysis.....	7-1
7.3	Evaluation of Alternatives	7-2
7.3.1	Alternative One: No Project Alternative.....	7-6
7.3.2	Alternative Two: Demolish Building and Replace with New Permanent Fire Station.....	7-7
7.3.3	Alternative Three: Demolish Building and Replace with Commercial Retail Development	7-9
7.3.4	Alternative Four: Preservation and Adaptive Reuse	7-11
7.4	Alternatives Considered but Rejected	7-13

7.5 Environmentally Superior Alternative 7-14

8 References 8-1

8.1 Bibliography 8-1

8.2 List of Preparers 8-13

Tables

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts ES-4

Table ES-2 Alternatives and Proposed Project Impacts Comparison ES-18

Table 1-1 Notice of Preparation Comments..... 1-5

Table 2-1 Timeline of Site Investigations 2-8

Table 2-2 Project Regulatory Compliance Measures 2-15

Table 3-1 Cumulative Projects List 3-3

Table 4.1-1 Ambient Air Quality 4.1-2

Table 4.1-2 Federal and State Ambient Air Quality Standards..... 4.1-3

Table 4.1-3 SCAQMD Regional Significance Thresholds..... 4.1-8

Table 4.1-4 SCAQMD LSTs for Construction Emissions in SRA-4..... 4.1-9

Table 4.1-5 Option A: Estimated Maximum Daily Construction Emissions..... 4.1-12

Table 4.1-6 Option B: Estimated Maximum Daily Construction Emissions..... 4.1-13

Table 4.1-7 Option A: Estimated Operational Emissions 4.1-14

Table 4.3-1 Electricity Consumption in the SCE Service Area in 2018..... 4.3-2

Table 4.3-2 Natural Gas Consumption in the Long Beach Energy Resources Department Service Area in 2018 4.3-3

Table 4.3-3 2030 GHG Efficiency Thresholds by Land Use for the City of Long Beach 4.3-15

Table 4.3-4 Option A: Estimated GHG Emissions during Construction 4.3-16

Table 4.3-5 Option A: Combined Annual GHG Emissions..... 4.3-17

Table 4.3-6 Option B: Estimated GHG Emissions during Construction 4.3-18

Table 4.3-7 Option A: Estimated Fuel Consumption During Construction..... 4.3-20

Table 4.3-8 Option B Estimated Fuel Consumption During Construction..... 4.3-22

Table 4.4-1 EDR Listing Summary of Select Sites within One-Eighth Mile of the Subject Property..... 4.4-6

Table 4.5-1 Caltrans Vibration Damage Potential 4.5-4

Table 4.5-2 Caltrans Vibration Annoyance Potential 4.5-4

City of Long Beach
Fire Station No. 9 Replacement Project

Table 4.5-4	Exterior Noise Limits – District One.....	4.5-7
Table 4.5-5	Interior Noise Limits	4.5-8
Table 4.5-6	Option A and Option B: Estimated Hourly Construction Noise Levels	4.5-12
Table 4.5-7	Option A and Option B: Estimated Vibration Levels for Construction Equipment	4.5-16
Table 5-1	Estimated Onsite Employment Associated with the Proposed Project	5-2
Table 7-1	Comparison of Project Alternatives’ Buildout Characteristics	7-5
Table 7-2	Alternatives and Proposed Project Impacts Comparison.....	7-15

Figures

Figure 2-1	Regional Location	2-2
Figure 2-2	Project Location.....	2-3
Figure 2-3	Site Photos of Existing Structure	2-5
Figure 2-4	Site Plan of Proposed Modular Structure.....	2-13
Figure 3-1	Cumulative Projects Map	3-4
Figure 4.5-1	Noise Measurement Location	4.5-6
Figure 6-1	Alternative Market Analysis Land Use Distribution.....	6-8

Appendices

Appendix A	Notice of Preparation and Responses
Appendix B	Site Investigations
Appendix C	Air Quality, Greenhouse Gas Emissions, and Energy
Appendix D	Cultural and Tribal Resources
Appendix E	Hazards and Hazardous Materials
Appendix F	Noise

Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the demolition of the existing Fire Station No. 9 and two options for the project site (collectively referred to as “proposed project” or “project”): (1) the replacement of the existing building with a temporary modular structure (Option A), or (2) preparation of the site for a future civic use with the site remaining vacant until a future use is determined (Option B). This section summarizes the characteristics of the proposed project, alternatives to the proposed project, and the environmental impacts and mitigation measures associated with the proposed project.

Project Synopsis

Project Applicant/ Lead Agency Contact Person

City of Long Beach
Long Beach Development Services
411 West Ocean Boulevard, 3rd Floor
Long Beach, California 90802
Contact: Maryanne Cronin, Planner
Long Beach Development Services, Planning Bureau
(562) 570-5683
LBDS-EIR-Comments@longbeach.gov

Project Location

The project site is located at 3917 Long Beach Boulevard in the City of Long Beach and is identified as Assessor Parcel Number (APN) 7139-013-900. The site is owned by the City of Long Beach and encompasses approximately 5,800 square-feet, or 0.13-acre. The site is bound by Long Beach Boulevard on the east and North Virginia Road to the west and is regionally accessible from Long Beach Freeway (Interstate 710, or I-710) and San Diego Freeway (Interstate 405, or I-405).

Project Description

This EIR has been prepared to examine the potential environmental effects of the Fire Station No. 9 Project. The following is a summary of the full project description, which can be found in Section 2.0, *Project Description*.

The proposed project involves demolition of the 5,548-square foot City-owned Fire Station No. 9, and development of a temporary fire station. Due to the age and architecture of the building, the station appears to be eligible for designation as a Long Beach Historic Landmark and listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR). Therefore, Fire Station No. 9 is considered a historic resource pursuant to CEQA. The station has been closed since July 2019 due to the recurrence of toxic mold in the building, discussed further in Section 2.4.4, *Site Investigations*. Therefore, the station is uninhabitable by the Long Beach Fire Department.

To accommodate staff/operations of Fire Station No. 9, at the time of preparation and circulation of the Notice of Preparation (NOP), the City temporarily relocated Fire Station No. 9 operations to Fire

Station Nos. 13 and 16, located at 2475 Adriatic Avenue and 2890 E Wardlow Road, respectively. Since the relocation of Fire Station No. 9 crew, response times to calls for help in Fire Service Area 9 have increased on average by 16 percent, and by as much as 55 percent in certain neighborhoods of the service area.

Since circulation of the NOP in November 2019, an Administrative Use Permit (AUP) was filed for an interim location for Fire Station No. 9. The AUP request would include the reuse of an existing structure at the former Boeing Fitness Center at 2019 East Wardlow Road. The application includes the reuse of an existing building for Fire Station No. 9 fire personnel occupation and the construction of two freestanding canopies (approximately 1,400-square-foot and 450-square-foot) for use as fire apparatus bays. While the subject site is just outside of Fire Service Area 9, it remains within Battalion 3 command and is able to serve the fire service area. This interim location would permit fire personnel to occupy an independent facility rather than co-locating at existing Fire Station Nos. 13 and 16. The 2019 East Wardlow location fulfills the immediate need for a temporary fire station while interim and long-term plans and approval process including the future of the current Fire Station 9 project site are completed.

The proposed project includes two potential courses of action, Option A and Option B, both involving the demolition of the 5,548-square foot City-owned Fire Station No. 9 and eventual development of a permanent fire station. Due to the hazardous conditions of the building, the City has determined there are two potential options for site:

- Option A would remove the existing structurally impaired and deteriorated building due to the hazardous conditions created by the mold and building moisture and install a temporary modular structure to accommodate the station crew.
- Option B would also remove the existing structurally impaired and deteriorated building. However, under Option B, the site would remain undeveloped until a future civic use for the site is determined.

Due to the age and architecture of the building, the station appears to be eligible for designation as a Long Beach Historic Landmark and listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR). Therefore, Fire Station No. 9 is considered a historic resource pursuant to CEQA. The station has been closed since July 2019 due to the recurrence of toxic mold in the building, as discussed in Section 2.4.4, *Site Investigations*, in the EIR. Therefore, the station is uninhabitable by the Long Beach Fire Department.

Project Objectives and Benefits

The proposed project includes five objectives and three benefits. Project objectives include:

- Removal of structurally impaired and deteriorated Fire Station No. 9, located at 3917 Long Beach Boulevard, City of Long Beach
- Return Fire Station No. 9 equipment and personnel to its service area in order to help meet the Long Beach Fire Department response time goal of six minutes and 20 seconds for structure fires and six minutes for Advance Life Support
- Provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design, including the provision of facilities for all genders

- Removal of a potential threat to public health and safety issue, which includes, but is not limited to, mold spores associated with substantial structural water damage that require invasive remediation techniques
- Removal of a vacant building that could attract criminal activity and other nuisances
- Ensure that the City’s historic and cultural heritage values are considered regarding the removal and/or remediation of the Fire Station No. 9 building

Project Benefits

The proposed project would have the following benefits:

- Removal of a vacant structure that could attract nuisance/criminal behavior to the area
- Provision of a safe and healthy workplace for the Fire Station No. 9 crewmembers
- Restore operation of Fire Station No. 9 within the Fire Service Area No. 9 service area in order to help meet Long Beach Fire Department response time goals

Required Project Approvals

In conformance with Section 15050 and 15367 of the CEQA Guidelines, the City of Long Beach has been designated as the “lead agency,” which is defined as “the public agency which has the principal responsibility for carrying out or approving a project.” Approvals by the lead agency required for development of the project include, but may not be limited to the following:

The proposed project would require adoption by the Long Beach Planning Commission/City Council and the following discretionary approvals:

- Site Plan Review for design review of the temporary modular structure (Option A)
- Administrative Use Permit for the operation of an institutional use in the CCA Zoning District (Option A)
- Standards Variance for development standards for the temporary modular structure (Option A)
- Demolition Permit to allow for the demolition the existing on-site Fire Station No. 9 building (Option A and Option B)
- CEQA Approval and certification of EIR (Option A and Option B)

In addition, ministerial permits, including grading permits, building permits, and public works permits, would be issued by the City to allow site preparation and construction of the proposed project (Options A and B) and off-site project infrastructure connections. The proposed project would require the following ministerial approvals:

- Demolition Permit to allow for removal of the existing on-site Fire Station No. 9 building
- Public Works Permits to allow for the modification of driveways, sidewalks, and other site improvements within the public right-of-way
- Building Permits to allow for the construction of the temporary modular structure

No approvals by responsible or trustee agencies have been identified for the proposed project.

Summary of Impacts and Mitigation Measures

Table ES-1, *Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts*, summarizes the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

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

Impact	Mitigation Measures	Residual Impact
Air Quality		
Impact AQ-1 Neither Option A nor Option B would result in new employees or housing and would therefore not generate direct or indirect population growth. The proposed project would be consistent with the 2016 SCAQMD AQMP and impacts would be less than significant.	Mitigation is not required	Less than significant impact without mitigation
Impact AQ-2 Construction of Options A and B would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAQMD region is in nonattainment under applicable federal or state ambient air quality standards. Therefore, air quality impacts related to construction would be less than significant.	Mitigation is not required	Less than significant impact without mitigation
Impact AQ-3 Operation of Option A would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAQMD region is in nonattainment under applicable federal or state ambient air quality standard. Option B would not include operational emissions and would not result in a cumulatively considerable increase in any criteria pollutant. Therefore, impacts related to operation would be less than significant.	Mitigation is not required	Less than significant impact without mitigation
Impact AQ-4 Option A would result in a minor increase in traffic along local roadways. This increase would not result in the creation of CO hotspots. Option B would not include any operation traffic and would not result in CO	Mitigation is not required	Less than significant impact without mitigation

Impact	Mitigation Measures	Residual Impact
<p>hotspots. Additionally, neither Option A nor Option B would site sensitive receptors near sources of TACs or contain substantial TAC sources. Impacts related to exposure of sensitive receptors to pollutants would be less than significant.</p>		
<p>Impact AQ-5 Implementation of Option A or Option B would not create objectionable odors affecting a substantial number of people. Impacts related to odors would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Cultural, Paleontological, and Tribal Resources</p>		
<p>Impact CR-1 Both Options A and B would involve demolition of a building is eligible for listing as a historic resource. Due to this irreversible loss of a historic resource, this impact would be significant and unavoidable.</p>	<p>CR-1 Building Recordation Archival documentation of as-built and as-found condition shall be prepared for Fire Station No. 9 building at 3917 Long Beach Boulevard prior to demolition. Prior to issuance of demolition permits, the lead agency shall ensure that documentation of the buildings and structures proposed for demolition is completed that follows the general guidelines of Historic American Building Survey (HABS) documentation. The documentation shall include high resolution digital photographic recordation, a historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards for History and/or Architectural History. The original archival-quality documentation shall be offered as donated material to repositories that will make it available for current and future generations. Archival copies of the documentation also would be submitted to the City of Long Beach, where it would be available to local researchers.</p> <p>CR-2 Interpretive Plaque An interpretive plaque discussing the history of the building, its significance, and important details and features shall be installed at the site of Fire Station No. 9. The plaque can be installed on a publicly accessible outdoor location. The plaque shall include images and details from the Historic American Building Survey documentation and any collected research pertaining to the historic property. The content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards for History and/or Architectural History (36</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measures	Residual Impact
	<p>CFR, Part 61). Installation of the plaque shall be completed within one year of the date of completion of the proposed project.</p> <p>CR-3 Salvage Plan Historic architectural features and materials from Fire Station No. 9 shall be offered to architectural salvaging organizations. The Department of Public Works shall seek the guidance of Long Beach Heritage to identify the appropriate organizations and provide guidance on the salvaging process. An inventory with brief descriptions of salvageable items shall be created to provide to architectural salvaging organizations.</p>	
<p>Impact CR-2 Construction of Options A and B would involve ground-disturbing activities such as site preparation and minor excavation, which have the potential to unearth or adversely impact previously unidentified archaeological resources. Impacts would be less than significant with mitigation incorporated.</p>	<p>CR-4 Unanticipated Discovery of Archaeological Resources If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery, excavation, Native American consultation, and archaeological monitoring may be warranted to mitigate any significant impacts to cultural resources.</p> <p>CR-7 Professional Standards Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.</p>	<p>Less than Significant</p>

Impact	Mitigation Measures	Residual Impact
<p>Impact CR-3 Construction of Options A and B would involve ground-disturbing activities such as site preparation and minor excavation, which have the potential to unearth or adversely impact previously unidentified paleontological resources. Impacts would be less than significant with mitigation incorporated.</p>	<p>CR-5 Unanticipated Discovery of Paleontological Resources</p> <p>In the event an unanticipated fossil discovery is made during the course of project development, then in accordance with SVP (2010) guidelines, it is the responsibility of any worker who observes fossils within the project site to stop work in the immediate vicinity of the find and notify a qualified professional paleontologist who shall be retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted (SVP 2010). Work in the area of the discovery will resume once the find is properly documented and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring will be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.</p>	<p>Less than Significant</p>
<p>Impact CR-4 Construction of Options A and B would involve ground-disturbing activities such as site preparation and minor excavation, which have the potential to unearth or adversely impact previously unidentified tribal cultural resources. Impacts would be less than significant with mitigation incorporated.</p>	<p>CR-6 Retain a Native American Monitor</p> <p>The lead agency shall retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.</p> <p>CR-7 Professional Standards</p>	<p>Less than Significant</p>

Impact	Mitigation Measures	Residual Impact
	<p>Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.</p> <p>CR-8 Unanticipated Discovery of Tribal Cultural Resources</p> <p>Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource”, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.</p> <p>Pursuant to Public Resources Code Sections 21083.2(b), preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is</p>	

Impact	Mitigation Measures	Residual Impact
	<p>not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe.</p> <p>Any historic archaeological material that is not Native American in origin shall be curated at a public, nonprofit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.</p>	
<p>Impact CR-5 Construction of Options A and B would involve ground-disturbing activities such as site preparation and minor excavation, which have the potential to unearth human remains. Impacts would be less than significant with mitigation incorporated.</p>	<p>CR-9 Unanticipated Discovery of Human Remains and Associated Funerary Objects</p> <p>Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.</p> <p>CR-10 Resource Assessment and Continuation of Work Protocol</p> <p>Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted</p>	<p>Less than Significant</p>

Impact	Mitigation Measures	Residual Impact
	<p>while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).</p> <p>CR-11 Kizh-Gabrieleno Procedures for Burials and Funerary Remains</p> <p>If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.</p> <p>CR-12 Treatment Measures</p> <p>Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that</p>	

Impact	Mitigation Measures	Residual Impact
	<p>the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.</p> <p>Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.</p>	
Greenhouse Gas Emissions and Energy		
<p>Impact GHG-1 Construction Options A and B and operation of Option A would generate GHG emissions associated with construction equipment use, mobile source emissions, and energy consumption. Such emissions would be below the locally appropriate, project-specific efficiency threshold. Thus, the proposed project’s impact would be less than significant.</p>	<p>Mitigation is not required.</p>	<p>Less than significant impact without mitigation</p>
<p>Impact GHG-2 Options A and B would be consistent with statewide plans, policies and regulations, and major goals of SCAG’s 2016-2040 RTP/SCS aimed at reducing GHG emissions. As such, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This impact would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>

City of Long Beach
Fire Station No. 9 Replacement Project

Impact	Mitigation Measures	Residual Impact
<p>Impact E-1 Neither construction nor operation of Options A and B would result in a significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.</p>	<p>Mitigation is not required.</p>	<p>Less than significant impact without mitigation</p>
<p>Impact E-2 Options A and B would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Hazards and Hazardous Materials</p>		
<p>Impact HAZ-1 Options A and B would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. With adherence to existing regulations, impacts would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact HAZ-2 Options A and B would not 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. The proposed project would involve the demolition of a structure that could contain asbestos and lead-based paint. However, implementation of mitigation measures HAZ-1 and HAZ-2 and adherence to all applicable SCAQMD and state regulations regarding the handling and disposal of these materials would reduce these potential impacts to a less than significant level.</p>	<p>HAZ-1 Lead-based Paint (LBP) Project work with materials that could contain Lead Based Paint (LBP) shall be monitored under the direction of a Certified Industrial Hygienist (CIH) who a Certified Lead Project Designer. The CIH shall confirm workers on site have received appropriate training and adhere to safety requirements during construction activities. All contractors shall be provided with and be responsible for following the required if suspect hazardous materials are identified during demolition (e.g. stop work, remove workers onsite, and notify the CIH). If LBP is found to be present, standard handling and disposal practices for LBP shall be implemented pursuant to Occupational Safety and Health Administration (OSHA) regulations.</p> <p>HAZ-2 Suspect Asbestos Containing Materials (ACMs) Prior to the issuance of a demolition permit, the City shall obtain a letter from a qualified asbestos abatement consultant that no ACMs are present in the building. If ACMs are found to be present, the materials shall be abated in compliance with South Coast Air Quality Management District (SCAQMD) Rule 1403, as well as other applicable State and Federal rules and regulations. Only asbestos trained and certified abatement personnel shall be allowed to perform asbestos abatement activities onsite. All ACMs removed from the onsite structure shall be hauled and disposed offsite by a transportation company certified to handle asbestos and hazardous materials.</p>	<p>Less than significant impact</p>

Impact	Mitigation Measures	Residual Impact
<p>Impact HAZ-3 Options A and B would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Impacts would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact HAZ-4 The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 (Cortese List). City of Long Beach Fire Prevention Bureau records indicate that there may be a cement-filled historical UST present onsite. With implementation of Mitigation Measures HAZ-3 and HAZ-4, impacts would be less than significant.</p>	<p>HAZ-3 Underground Storage Tank (UST) Investigation and Closure A potholing investigation in the vicinity of the historical UST shall be conducted and/or a geophysical survey of the site shall be conducted. If a UST is found onsite, the City shall apply for a permit for tank removal at least one month prior to demolition activities. UST(s) found onsite shall be removed under regulatory oversight of the Long Beach Fire Prevention Bureau. Additionally, the City may require that the tank also be permitted for its prior installation. During tank removal activities, a minimum of two excavation sidewall and bottom soil matrix confirmation samples shall be collected to evaluate potential onsite impacts associated with the UST(s).</p> <p>HAZ-4 Soil Management Plan (SMP) If soil contamination is found onsite at actionable levels, a SMP shall be prepared and, if required, approved by the Los Angeles Regional Water Quality Control Board. Soil brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with applicable provisions of state and federal law. The SMP shall include health and safety information for workers and posted on-site for the general public and would inform the various contractors and workers of the presence of soil impacted with petroleum hydrocarbons and the appropriate measures to safely deal with the soil.</p>	<p>Less than significant impact</p>
<p>Impact HAZ-5 The project site is located approximately 1.5 miles west of the Long Beach Airport. The project site is not located in an airport land use plan or, where such a plan has not been adopted, and would not result in a safety hazard or excessive noise for people residing or working in the project area. Therefore, impacts would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact HAZ-6 Options A and B would not involve the development of structures, infrastructure, or roads that could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>

Impact	Mitigation Measures	Residual Impact
<p>Impact HAZ-7 The project site is located in an urbanized area with minimal risk of wildland fires. Options A and B would not risk exposing people or structures to a significant risk of loss, injury, or death involving wildland fires. There would be no impact.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
Noise		
<p>Impact N-1 Temporary construction activities under Options A and B would not exceed FTA daytime or nighttime noise limits for construction noise at residential receivers near the project site and construction activities would be restricted to the hours specified by the City’s Noise Ordinance. Therefore, temporary construction-related noise impacts at existing sensitive receivers near the project site would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact N-2 Operation of Option A would generate on-site noise that may periodically be audible to existing noise-sensitive receivers in the vicinity. However, with adherence to the City’s Noise Ordinance, impacts would be less than significant. Option B would not include on-site uses or operational sources of noise and impacts would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact N-3 Operation of Options A and B would not generate a doubling in traffic volumes on area roadways and, therefore, would not increase existing traffic noise by 3 dba or more. Therefore, the increase in noise would be imperceptible and less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact N-4 Construction vibration generated by Options A and B would not create excessive vibration levels that would cause physical damage to nearby structures. This impact would be less than significant.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>
<p>Impact N-5 The project site is located approximately 1.5 miles west of the Long Beach Airport. Workers at the project site would be subject to temporary and intermittent noise from aircraft overflights; however, the proposed project is not located within the airport’s noise contours and would not be affected by substantial noise from aircraft operations.</p>	<p>Mitigation is not required</p>	<p>Less than significant impact without mitigation</p>

Areas of Known Controversy and Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines require that an EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public.

During the public comment period for the Notice of Preparation (NOP), several comment letters were received regarding the project. The comments submitted on the NOP during the public review and comment period are included in Appendix A of this EIR. In general, areas of potential controversy known to the City of Long Beach include cultural and tribal resources. These issues were

considered in the preparation of this EIR, where appropriate, and are addressed in the environmental impact analysis presented in Section 4.2, *Cultural, Paleontological, and Tribal Resources*, of this EIR.

Project Alternatives

The environmental analysis for the proposed project evaluated the potential environmental impacts resulting from implementation of the proposed project, as well as alternatives to the proposed project. The alternatives are summarized below. A detailed discussion of the alternatives to the proposed project is provided in Section 7, *Alternatives*, of this EIR.

- **Alternative One: No Project**

This Alternative assumes that the proposed project would not occur, and the existing Fire Station No. 9 located at 3917 Long Beach Boulevard would remain on-site. The existing fire station building would remain vacant and no ground disturbance or demolition would occur. The existing Fire Station No. 9 located at 3917 Long Beach Boulevard would continue to be spot treated/remediated as mold becomes detectable throughout the building in order to maintain the integrity of the structure. In accordance with LBMC Chapter 18.21, Maintenance of Long-Term Boarded and Vacated Buildings, the site and building would be maintained, including landscaping, exterior paint, and mold. Under this alternative, significant impacts to historic resources would be avoided. Mold and potentially hazardous building materials are expected to remain, and implementation of Mitigation Measures HAZ-1 and HAZ-2 would be required in order to protect the health of contractors engaging in spot remediation activities at the site. In addition, Mitigation Measures HAZ-3 and HAZ-4 would be required in order to determine whether an abandoned UST exists on the project site and provide for the proper handling of the potential UST and any contamination as needed. Alternative One would not fulfill the Project Objectives because the building would remain uninhabitable, the vacant structure could attract criminal activities, and the Fire Service Area 9 response times would not be restored.

- **Alternative Two: Demotion of Fire Station No. 9 and Construction of New Permanent Fire Station Onsite**

Under Alternative Two, Fire Station No. 9 would be demolished, and a permanent replacement fire station would be constructed. Demolition and construction of this alternative would take approximately three years to complete, during which time Fire Station No. 9 would be required to operate out of a temporary, offsite facility. Implementation of the same mitigation measures for cultural resources (i.e., Mitigation Measures CR-1 through CR-12) would be required under this alternative; however, significant impacts to a historic resource would remain. Hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would also be required during construction activities under this Alternative. Alternative Two would fulfill most of the project objectives such as removing a building with structurally impaired and deteriorated conditions; however, due to the size constraints of the project site, it is infeasible to construct a fire station at this location that complies with NFPA standards for fire station design. Therefore, Alternative Two would have similar impacts to the proposed project but would not meet all of the project objectives.

- **Alternative Three: Demolish the Structure and Develop with Commercial Retail Development**

Under Alternative Three, the Fire Station No. 9 building located at 3917 Long Beach Boulevard would be demolished and the project site would be developed with commercial retail uses of similar scale to the existing retail surrounding the project site. Demolition and construction of

this alternative would take approximately one year, during which time Fire Station No. 9 would continue to operate at an interim location while a new permanent location for Fire Station No. 9 is identified. Implementation of the same mitigation measures for cultural resources (i.e., Mitigation Measures CR-1 through CR-12) and hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would be required during construction activities. This Alternative would achieve some project objectives, such as removal of a structurally impaired and vacant building which could attract nuisance activities and pose a health threat but would not achieve the other project objectives as discussed under Section 7.2, *Criteria for Alternatives Analysis*.

- **Alternative Four: Preservation and Adaptive Reuse Alternative**

Under Alternative Four the City would complete a rehabilitation and adaptive reuse of Fire Station No. 9. It is assumed that under Alternative Four the building would be repurposed with a use that is permitted under the site land use and zoning designations, such as small-scale office or retail. A new Fire Station was deemed necessary due to the needs of the crew, the ability to meet NFPA standards, and the potential for mold to reoccur as the building continues to age. The Preservation and Adaptive Reuse Alternative would include the necessary repairs to remediate the existing mold issues as well as other repairs to bring the structure up to Building Code standards for historic properties pursuant to LBMC Chapter 18.50, including the appropriate occupancy for the new use. The additional scope of improvements, beyond mold remediation, that would occur include modifications for the new use as well as the repair of any potential structural issues and abatement of any lead and ACMs within the structure and any potential contamination present in nearby soil due to the historic UST on the site.

Rehabilitation would be completed in conformance with the Secretary of the Interior Standards for Treatment of Historic Properties (U.S. Department of the Interior 2017) and in accordance with the California Historic Building Code (2016), including fire protection, structural integrity, ingress/egress, methods of construction and plumbing, equipment and ventilation, which allows for more flexible application of building regulations when rehabilitating a historic resource. It is assumed that all identified character-defining features of the building would be repaired and maintained in-situ to the highest degree feasible. Construction under this alternative would last for approximately eight months. Under Alternative Four, significant impacts to historic resources would be reduced or avoided. However, due to the unknown extent of mold within the building and the potentially extensive construction activities required for remediation, Alternative Four still has the potential for significant impacts on a historic resource, if remediation compromises the integrity of character-defining features.

Implementation of mitigation measures related to Tribal Cultural Resources and Paleontological Resources (i.e., Mitigation Measures CR-4 through CR-12) would be required during any ground disturbing activities. In addition, mitigation measures related to hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would be required during construction activities. This Alternative would reduce significant impacts and would achieve some project objectives by repairing and adaptively reusing a structurally impaired and vacant building which could attract nuisance activities and pose a health threat but would not achieve the rest of the project objectives including returning Fire Station No. 9 to its service area and providing a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards.

As with the proposed project, the four Alternatives would have less than significant impacts on aesthetics, agriculture and forestry resources, biological resources, geology and soils, hydrology and

water quality, land use, mineral resources, public services, population and housing, recreation, transportation, utilities and services systems, and wildfire. Table ES-2, *Alternatives Impact Comparison*, provides a comparison of environmental impacts of the proposed project and the four alternatives.

The No Project Alternative is considered the environmentally superior alternative to the proposed project as it would avoid significant environmental impacts and preserve the integrity of the historic Fire Station No. 9 building, though it would not meet the project objectives. However, CEQA Guidelines Section 15126.6(e)(2) states that “if the environmentally-superior alternative is the No Project Alternative, the EIR shall also identify an environmentally-superior alternative among the other alternatives.” As shown in Table ES-2, *Alternatives Impact Comparison*, Alternative Four would be the environmentally superior option because it reduces significant impacts to cultural resources to the greatest extent feasible. However, due to the unknown extent of mold within the building and the potentially extensive construction activities required for remediation, Alternative Four still has the potential for significant impacts on a historic resource, if remediation compromises the integrity of character-defining features. Though Alternative Four is considered environmentally superior, it would not meet the basic project objectives. Therefore, the proposed project remains the City’s preferred option.

Table ES-2 Alternatives and Proposed Project Impacts Comparison

Environmental Issue Area	Proposed Project	Alternative 1: No Project	Alternative 2: Demolish Building and Replace with New Permanent Fire Station	Alternative 3: Demolish Building and Replace with Commercial and Retail Development	Alternative Four: Preservation and Adaptive Reuse
Air Quality	Less Than Significant	Avoid. The existing baseline air emissions would remain the same, as no new development would occur.	Similar. Emissions for construction activities and operation would be similar compared to the proposed project.	Similar. Emissions for construction activities would be similar compared to the proposed project. Operational emissions would be higher due to increased vehicle trips associated with a new commercial use but would not be anticipated to cause a significant impact.	Similar. Emissions for construction activities would be similar compared to the proposed project. Operational emissions would be higher due to increased vehicle trips associated with a new use at the project site but would not be anticipated to cause a significant impact.
Cultural, Paleontological, and Tribal Cultural Resources	Significant and Unavoidable	Avoid. No demolition or ground disturbance would occur and therefore there would be no impacts.	Similar. The existing building would be demolished, which would result in a significant and unavoidable impact to historic resources.	Similar. The existing building would be demolished, which would result in a significant and unavoidable impact to historic resources.	Reduce. The existing building would be rehabilitated and preserved in accordance with the applicable guidelines, reducing significant impacts to historic resources. Impacts could potentially be significant and would require the removal of interior walls and flooring to determine the full extent of mold and remediation activities required.
Greenhouse Gas Emissions and Energy	Less Than Significant	Avoid. The existing baseline GHG emissions and energy use would remain the same, as no new development would occur.	Similar. Emissions and energy use for construction activities would be similar to the proposed project. GHG Emissions and energy use for operation would be similar to Option A and higher than Option B.	Worsen. Introduction of a new commercial use on the project site would increase area vehicle trips and GHG emissions compared to Options A and B.	Worsen. Introduction of a new commercial use on the project site would increase area vehicle trips and GHG emissions compared to Options A and B.

Environmental Issue Area	Proposed Project	Alternative 1: No Project	Alternative 2: Demolish Building and Replace with New Permanent Fire Station	Alternative 3: Demolish Building and Replace with Commercial Retail Development	Alternative Four: Preservation and Adaptive Reuse
Hazards and Hazardous Materials	Less Than Significant with Mitigation	<p>Similar. The existing building would be maintained pursuant to the LBMC to ensure that the structure does not fall into disrepair. Maintenance activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required to investigate the potential UST presence.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>
Noise	Less Than Significant	<p>Avoid. No demolition would occur, and the site would remain vacant; therefore, there would be no impacts.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as Fire Station No. 9 would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as the site would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as the site would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>

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1 Introduction

1.1 Overview of the Proposed Project

The proposed project includes two potential courses of action, Option A and Option B, both involving the demolition and eventual replacement of City of Long Beach (City) Fire Station No. 9 located at 3917 Long Beach Boulevard (also referred to as the “proposed project” or “project”). Due to the hazardous conditions of the building, the City has determined there are two potential options for site until an adequate replacement structure (permanent) or alternate location can be identified:

- Option A would remove the existing structurally impaired and deteriorated building due to the hazardous conditions created by the mold and building moisture and install a temporary modular structure to accommodate the station crew.
- Option B would also remove the existing structurally impaired and deteriorated building. However, under Option B, the site would remain undeveloped.

1.2 Purpose of the Environmental Impact Report (EIR)

The proposed project requires the discretionary approval of the City of Long Beach Department of Development Services; therefore, the project is subject to the environmental review requirements of CEQA. In accordance with Section 15121(a) of the *CEQA Guidelines* (California Code of Regulations, Title 14), the purpose of this Draft EIR is to serve as an informational document that:

“...will inform public agency decisionmakers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.”

This EIR has been prepared as a project EIR pursuant to Section 15161 of the *CEQA Guidelines*. A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines*:

“This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.”

Pursuant to CEQA, the discussion of potential effects on the physical environment is focused on those impacts that may be significant or potentially significant. CEQA allows a lead agency to limit the detail of discussion of the environmental effects that are not considered potentially significant (PRC Section 21100, CCR Sections 15126.2[a] and 15128). CEQA requires that the discussion of any significant effect on the environment be limited to substantial, or potentially substantial, adverse changes in physical conditions that exist within the affected area, as defined in PRC Section 21060.5 (statutory definition of “environment”).

Effects that are clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding in the Initial Study (CCR Section 15143). Environmental issue areas scoped out of the focused EIR will include an explanation of why these issues would not result in significant environmental effects and are not required to be evaluated further. Environmental issue areas that would be scoped out of the focused EIR are listed below:

- Agriculture and Forestry Resources
- Biological Resources
- Geology and Soils (with the exception of Paleontological Resources)
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities
- Wildfire

This Draft EIR is to serve as an informational document for the public and City of Long Beach decisionmakers. The process will include a public hearing before the Planning Commission and/or City Council to consider certification of a Final EIR and approval of the proposed project.

1.3 Agency Roles and Intended Uses of this EIR

The City is the lead agency under CEQA for this EIR because it holds principal responsibility for approving the project. As the lead agency, the City also has primary responsibility for complying with CEQA. As such, the City has analyzed the environmental effects of the proposed project; the results of that analysis are presented in this Draft EIR.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. Responsible agencies include the Native American Heritage Commission, Office of Historic Preservation, and Regional Water Quality Control Board 4. The EIR will be submitted to these agencies for review and comment.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. No trustee agencies have been identified for the proposed project.

1.4 Scope and Content of this EIR

The content and format of this Draft EIR meet the current requirements of CEQA and the CEQA Guidelines. This EIR is organized into sections with supporting technical appendices. The contents of this Draft EIR are as follows:

- Section 1, *Introduction*, provides a discussion of the purpose and use of the EIR and its organization, as well as the NOP process and comments received.
- Section 2, *Project Description*, provides a detailed discussion of Options A and B of the proposed project.
- Section 3, *Environmental Setting*, describes the general environmental setting for the proposed project.

- Section 4, *Environmental Impact Analysis*, describes the potential environmental effects of the proposed project.
- Section 5, *Effects Found Not to be Significant*, provides a discussion of the impact areas which this EIR has determined would have less than significant impacts.
- Section 6, *Other CEQA Requirements*, discusses issues such as growth inducement and significant irreversible environmental effects.
- Section 7, *Alternatives*, discusses alternatives to the proposed project, including the CEQA-required “No Project” alternative and the environmentally superior alternative.
- Section 8, *References and Preparers*, lists informational sources for the EIR and persons involved in the preparation of the document.
- Appendices include NOP comment letters received, technical reports prepared for the project, and other pertinent background or technical detail.

This Draft EIR focuses on impacts identified to be potentially significant. The following issues were found to include potentially significant impacts and have been studied in-depth in this EIR:

- Section 4.1, *Air Quality*
- Section 4.2, *Cultural, Paleontological, and Tribal Resources*
- Section 4.3, *Greenhouse Gas Emissions and Energy*
- Section 4.4, *Hazards and Hazardous Materials*
- Section 4.5, *Noise*

Other issue areas are discussed in Section 5, *Effects Found Not to be Significant*. The proposed project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated in Section 4.1, *Air Quality*, through Section 5, *Effects Found Not to be Significant*.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Energy
<input checked="" type="checkbox"/> Geology/Soils (Paleontological Resources only)	<input type="checkbox"/> Greenhouse Gas Emissions	<input checked="" type="checkbox"/> Hazards and Hazardous Materials
<input type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Land Use/Planning	<input type="checkbox"/> Mineral Resources
<input type="checkbox"/> Noise	<input type="checkbox"/> Population/Housing	<input type="checkbox"/> Public Services
<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation	<input checked="" type="checkbox"/> Tribal Cultural Resources
<input type="checkbox"/> Utilities/Service Systems	<input type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Mandatory Findings of Significance

1.5 Notice of Preparation

Development of the proposed project is subject to the requirements of CEQA, because it is an action subject to discretionary approval by a public agency (in this case, the City of Long Beach) that has the potential to result in a physical change in the environment. The City began the environmental review process pursuant to CEQA by distributing a Notice of Preparation (NOP) of the EIR for a 30-day agency and public review period starting on November 12, 2019 and ending on December 12, 2019. The NOP was filed with the Los Angeles County Clerk-Recorder and submitted to the State Clearinghouse (SCH No. 2019110206), as well as provided on the City's website. The NOP provided information about the proposed project to members of public agencies, interested stakeholders and residents/community members.

The City received letters from three agencies in response to the NOP during the public review period. The City also received email correspondence from one Native American Tribe and three residents. Written comments are addressed, as appropriate, in the analysis contained in the various subsections of Section 4, *Environmental Impact Analysis*, and Section 5, *Effects Found Not to be Significant*. The NOP is presented in Appendix A, *Notice of Preparation and Responses*, of this EIR, along with the NOP responses received. Table 1-1, *Notice of Preparation Comments*, below summarizes the content of the letters and verbal comments and where the issues raised are addressed in the EIR.

Table 1-1 Notice of Preparation Comments

Commenter	Comments/Requests	Response or EIR Section where Comment is Addressed
Agency Comments		
Long Beach Heritage	Demolition of the building at 3917 Long Beach Boulevard will cause a significant and irreversible impact on a cultural resource.	Section 4.2, <i>Cultural, Paleontological, and Tribal Resources</i>
	Preservation alternatives should be explored.	Section 7, <i>Alternatives</i>
	A mold-remediation alternative should be explored.	Section 2, <i>Project Description</i> , and Section 7, <i>Alternatives</i>
Native American Heritage Commission (NAHC)	The proposed project is subject to the requirements and provisions under Assembly Bill (AB 52) for tribal cultural resources.	Section 4.2, <i>Cultural, Paleontological, and Tribal Resources</i> Appendix D, <i>Cultural Resources Assessment</i>
South Coast Air Quality Management District (SCAQMD)	Use SCAQMD's CEQA Air Quality Handbook (1993) and CalEEMod land use emissions software to assist in air quality analyses.	Section 4.1, <i>Air Quality</i>
	Quantify criteria pollutant emissions and compare results to significance thresholds.	
	If the proposed project generates toxic air contaminants, a health risk assessment should be completed.	
	All feasible mitigation measures should be used to minimize air quality impacts.	
	Discuss a reasonable range of potentially feasible alternatives.	Section 7, <i>Alternatives</i>
	If the proposed project requires a permit from SCAQMD, SCAQMD should be identified as a responsible agency.	The proposed project does not require a permit from SCAQMD
California Native American Tribes		
Gabrieleno Band of Mission Indians- Kizh Nation	If there will be any ground disturbing activities, the Gabrieleno Band of Mission Indians- Kizh Nation would like to consult.	Section 4.2, <i>Cultural, Paleontological, and Tribal Resources</i>
Public Comments		
Alvin Williams, Homeowner	Respondent feels disconnected from City Councilmember and is concerned about neighborhood issues such as trash in the streets and curb repainting.	The comment is not directed towards the environmental analysis regarding the project.
Carlos Ovalle, Architect, LEED AP	Requests information about the project timeline and any studies and reports regarding the property and health risks.	Section 2, <i>Project Description</i> , and Appendix B, <i>Site Investigations</i>
Louise Ivers, Former Cultural Heritage Commissioner and Emeritus Professor of Art, CSU Dominguez Hills	Opposes the demolition of Fire Station No. 9 due to its historical value.	Section 4.2, <i>Cultural, Paleontological, and Tribal Resources</i>
	Requests that the City consider adaptive reuse and alternative sites for the temporary Fire Station No. 9 structure	Section 7, <i>Alternatives</i>

1.6 EIR Processing

This Draft EIR was distributed to various federal, state, regional, county, city agencies, and interested parties for a 45-day public review period in accordance with Section 15087 of the CEQA Guidelines. Due to the State of Emergency declared by local, state and federal authorities, the EIR is being made available only in mailed and electronic form. Physical copies are not available at libraries or offices due to those facilities currently being closed to the public. The EIR is publicly available on the City's Department of the Development Services – Planning Bureau website at: <http://www.longbeach.gov/lbds/planning/environmental/reports/>

1.7 Draft EIR Comments

Interested parties may provide written comments on the Draft EIR before the end of the 45-day public review and comment period. Written comments on the Draft EIR must be received by 4:30 PM on the last day of the public review and comment period indicated in the Notice of Availability (NOA) of Draft EIR and submitted to: Department of Development Services, Planning Bureau ATTN: Maryanne Cronin, Planner 411 West Ocean Blvd, 3rd Floor Long Beach, CA 90802. Comments may also be emailed to LBDS-EIR-Comments@longbeach.gov. Only written comments sent to the Planning Bureau contact information listed on the NOA will be responded to.

Following the 45-day public review and comment period for the Draft EIR, the City will prepare a written response for each written comment received on the Draft EIR. The written comments and City's responses to those comments, as well as EIR changes (as applicable), will be incorporated into a Final EIR. The Final EIR will be reviewed by the City at the time the proposed project is considered for approval.

2 Project Description

This section describes the proposed project, including the project proponent, project location, site characteristics, project characteristics, project objectives, and required approvals needed for implementation of the project.

2.1 Project Proponent

City of Long Beach
Long Beach Department of Public Works
411 West Ocean Boulevard, 5th Floor
Long Beach, California 90802

2.2 Lead Agency Contact Person

Consistent with CEQA Guidelines Section 15050, the City is the Lead Agency under CEQA, and is responsible for adoption of the environmental document and approval of the project.

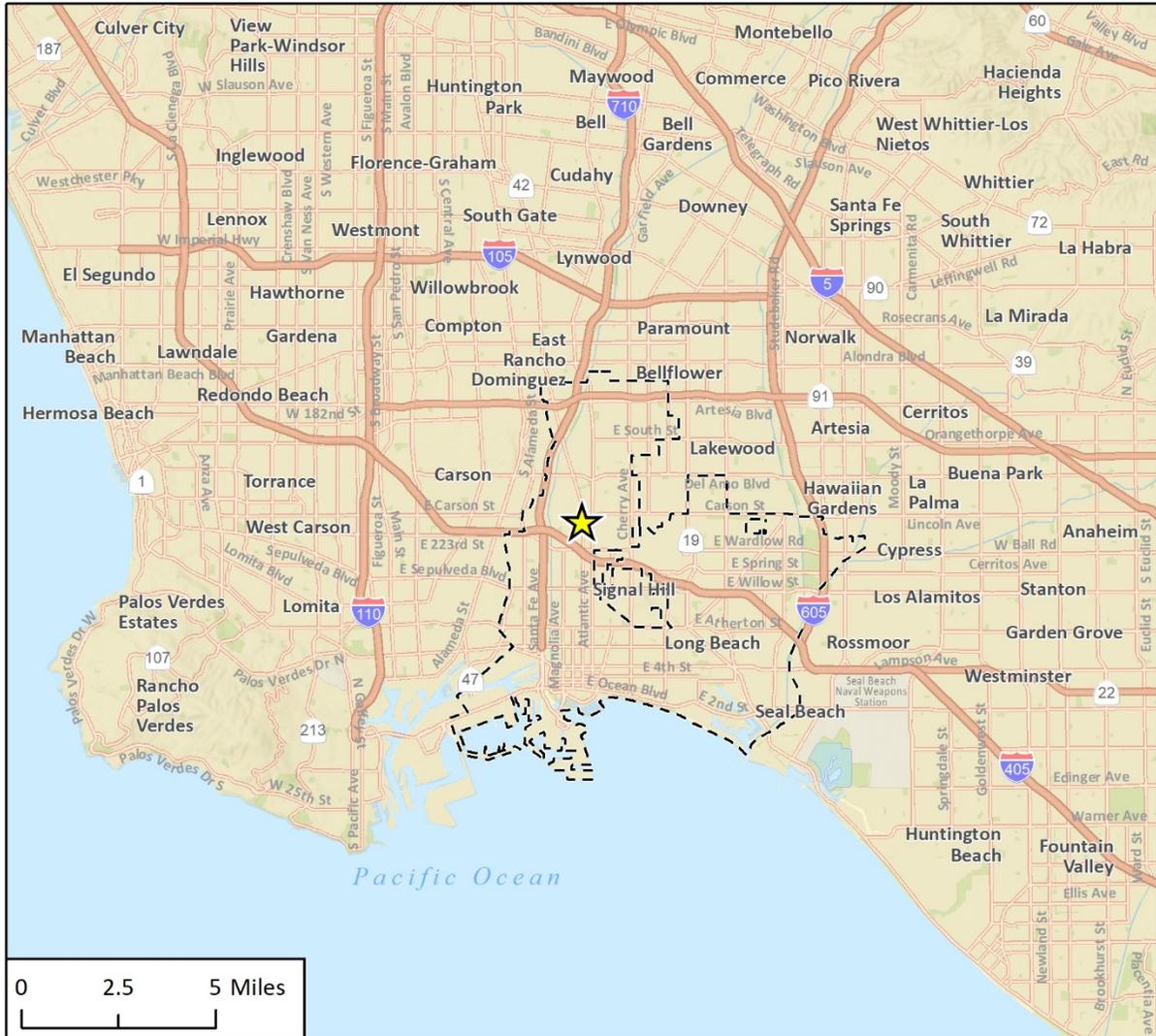
Maryanne Cronin, Planner
Long Beach Development Services, Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, California 90802
(562) 570-5683
LBDS-EIR-Comments@longbeach.gov

2.3 Project Location

The project site is located at 3917 Long Beach Boulevard in the City of Long Beach and is identified as Assessor Parcel Number (APN) 7139-013-900. The site is owned by the City of Long Beach and encompasses approximately 5,800 square-feet, or 0.13-acre. The site is bound by Long Beach Boulevard on the east and North Virginia Road to the west and is regionally accessible from Long Beach Freeway (Interstate 710, or I-710) and San Diego Freeway (Interstate 405, or I-405). Figure 2-1, *Regional Location*, shows the location of the project site in the region and Figure 2-2, *Project Location*, shows the site in its neighborhood context.

City of Long Beach
 Fire Station No. 9 Replacement Project

Figure 2-1 Regional Location



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 Project Location

 City of Long Beach Boundary

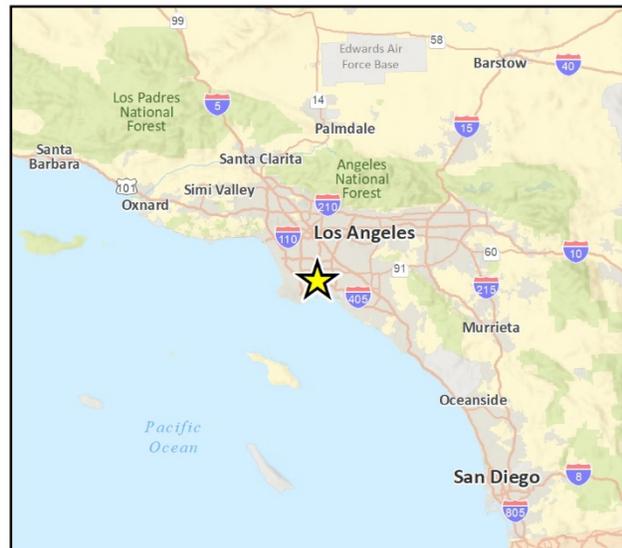
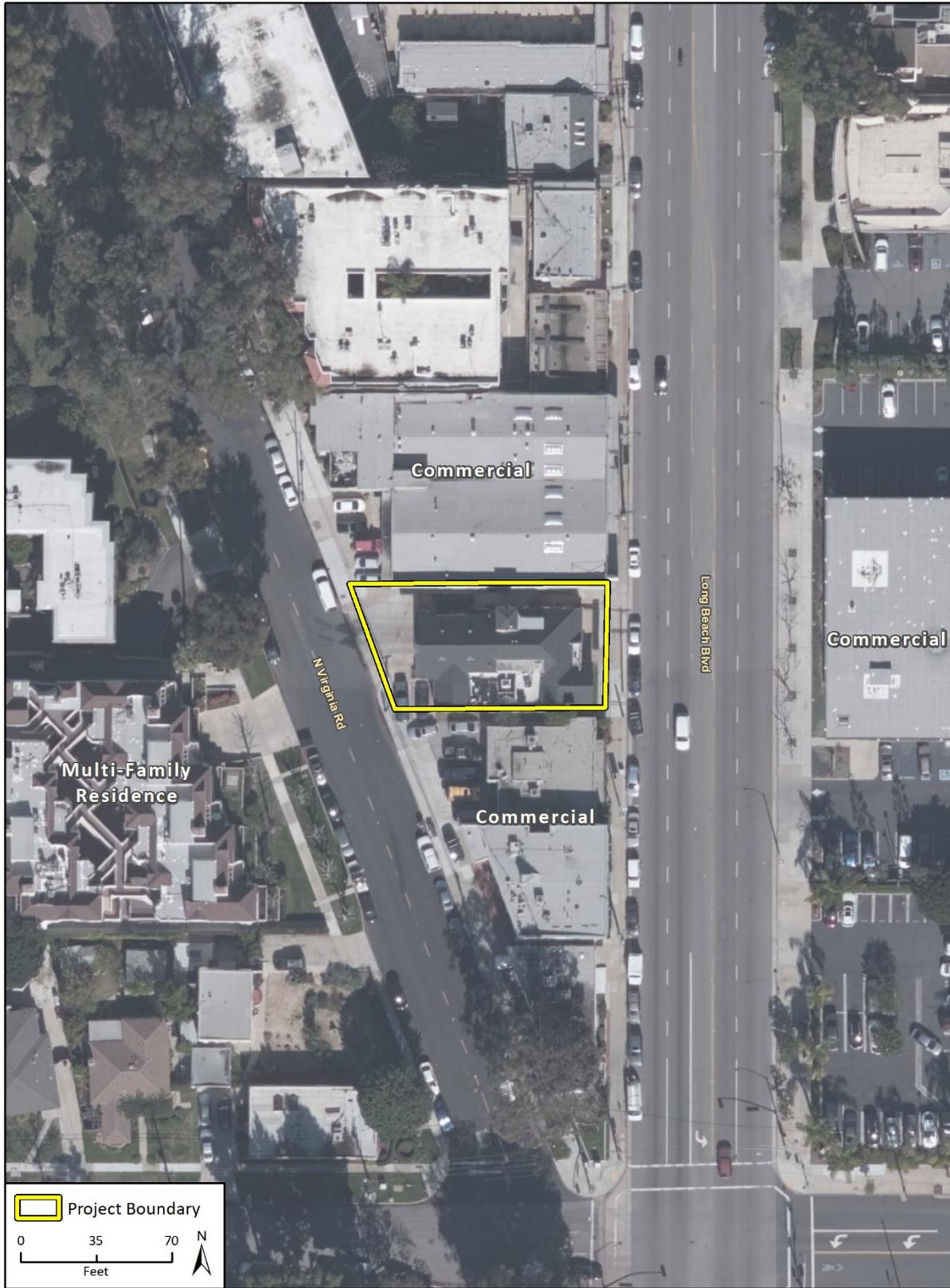


Fig 1 Regional Location

Figure 2-2 Project Location



2.4 Site Characteristics

2.4.1 Land Use Designation and Zoning

The project site is in the Community Automobile-Oriented (CCA) Zoning District and has a 2019 General Plan PlaceType Designation of Neighborhood Serving Center or Corridor – Low (NSC-L).¹

Uses permitted in the CCA Zoning District include retail and service uses for an entire community, including convenience and comparison shopping for goods and associated services. The project site contains the currently vacant City of Long Beach Fire Station No. 9 building, which services Fire Service Area 9.

2.4.2 Surrounding Land Uses

Surrounding land uses consist of commercial buildings to the north, east (across Long Beach Boulevard), and south, and single- and multi-family residences to the north, east (across Long Beach Boulevard), south, and west (across North Virginia Road). The Oakwood Academy private school is located approximately 450 feet southeast of the site, across Long Beach Boulevard.

2.4.3 Existing Conditions and Historic Use

The project site was developed in 1938 with the Fire Station No. 9 building, which is a 5,548-square foot, rectangular building of one-and-a-half stories in height with a three-story hose tower. Figure 2-3, Site Photos of Existing Structure, shows photos of the station's exterior facades along Long Beach Boulevard and North Virginia Road. Fire Station No. 9 was designed by W. Horace Austin (1881–1942) in the Tudor Revival style as a Works Progress Administration (WPA) project for the City of Long Beach (GPA 2019). The building operated as Fire Station No. 9 from 1938 until summer 2019 when it was vacated due to the presence of toxic mold in the building.

¹At the time the Notice of Preparation (NOP) for this EIR was published and circulated for review (November 12, 2019), the 1989 General Plan Land Use Element was in effect and the site was designated as Major Commercial Corridor. Subsequent to the NOP, the 2019 General Plan Land Use Element was approved by City Council on December 3, 2019.

Figure 2-3 Site Photos of Existing Structure



Figure 2-3a: View of existing Fire Station No. 9 frontage along Long Beach Boulevard.



Figure 2-3b: View of existing Fire Station No. 9 garage entrance along North Virginia Road.

2.4.4 Site Investigations

In 2000, a Fire Station No. 9 crew member issued a complaint about visible mold being located throughout the existing building at 3917 Long Beach Boulevard. Since then, station crew members have documented various mold and health-related complaints about the conditions of the building. In response, a number of investigations have taken place including mold, fungal, asbestos, lead-based paint, and indoor air quality assessments. Table 2-1, *Timeline of Site Investigations*, below provides a timeline of site investigations that have taken place. The first assessment took place in 2003, when an industrial hygiene report was prepared concerning the conditions of the project site and building to investigate reports of fainting and other health-related concerns. Although no specific environmental factors were identified to alert the City Safety Officer and Occupational Health Officer/physician (testing authorities) to links regarding the health concerns, the concerns were addressed through ductwork cleaning in the existing building (Long Beach 2003).

In 2008, an Indoor Environmental Quality Evaluation Report was prepared for the project site. The report noted water incursion and signs of past water damage (Bureau Veritas 2008). In early 2015, an Asbestos, Lead, and Microbiological Survey Findings report was prepared to document a hot water pipe leak in the building. The report noted a number of locations where water intrusion was apparent, but the investigation did not find evidence of lead or asbestos (Pacific EH&S Services, Inc. 2015). It was noted in a 2017 survey of crew members, conducted by the Long Beach City Safety Officer, that the station showed visible water damage and mold in the roof, stairwells, kitchen and gym portions of the building (Long Beach 2017). In fall 2017, an Indoor Air Quality Investigation was prepared for the site; the investigation did not find contaminants at concentrations that would pose increased exposure potentials or cause any measurable health risks to occupants of the building (Pacific EH&S Services, Inc. 2017). A separate fungal investigation and deep cleaning protocol report was prepared later, in the winter of 2017. This report found evidence of mold/fungal spores and growth throughout the entire testing area. Areas with suspect mold growth included the kitchen ceiling, the attic, the exercise room, and Room 3. In addition, a borescope investigation was completed, which determined that there was an area of visible suspect fungal growth present inside the north wall of room three, located on the second floor of the station. The report recommended fungal remediation and a deep cleaning to remove the thick layers of dust in the building (Health Science Associates [HSA] 2017a, 2017b, and 2017c).

Additional asbestos and lead testing were performed in the winter of 2017 and it was determined that there were no traces of asbestos, but lead-based paint was detected in the kitchen. The report concluded that due to the age of the structure, hidden or unknown asbestos-containing materials/asbestos-containing construction materials (ACM/ACCM), lead or other hazardous materials may be uncovered during renovation/maintenance activities (HSA 2017d). Spore sampling was conducted in January 2018 and the results indicated fungal spores throughout the building. The surface and air samples collected in the kitchen and exercise room met Health Science Associates' (HSA's), the environmental consulting company, post-fungal remediation criterion, but room three failed these criteria and required additional cleaning (HSA 2018a). A follow-up report in summer 2018 found that there were four areas which showed an elevated moisture level using the Tramex moisture meter. These areas were the first-floor bathroom, Captain's office, and second-floor bedroom three and bathroom. The report concluded the findings may have been false positives and recommended to follow-up with a different meter which penetrates inside the wood or plaster for confirmation (HSA 2018b). The report also found that surfaces in the exercise room, kitchen, and second floor TV room and bedrooms were excessively dirty and required additional cleaning and that the kitchen, Captain's office, and second-floor bedroom #3 showed elevated levels of particle

count compared to other sampled areas (HSA 2018b). In fall 2018, a follow-up quarterly report found the elevated moisture levels to be false positive for the four areas reported above, and generally high levels dust/grime on top of the vending machine, file cabinet, sills and TV inside the exercise room. The report also found excessive dust/grime in the Captain's office, first-floor bathroom, kitchen, garage, and the second-floor TV room and bedrooms (HSA 2018c).

In February 2019, another follow-up report concluded that Fire Station No. 9 continued to exhibit dust and cleanliness, mold, and water leakage issues despite prior remediation activities. The report indicated that two indoor areas had serious water leakage with water visibly dripping inside: the first floor sleeping quarters in bedroom one and the second floor sleeping quarters in bedroom three. The south wall footing of the crawlspace was also leaking due to rainwater intrusion. Blistering paint areas around the windows was noted. Particulate matter levels indoors were elevated as compared to outdoors. The report recommended additional cleaning of the indoor environment, repair of the windows in bedrooms one and three, repair of the leaking crawlspace, gutter cleaning in order to prevent future leaks, and the replacement of a deteriorated wooden shelf that was showing false positives for moisture readings (HSA 2019a). A final round of fungal/mold sampling was conducted by HSA in spring 2019, which fungal/mold spores in the sleeping quarters in room three (HSA 2019b). Despite several attempts to remediate the indoor environmental quality issues in the existing Fire Station No. 9 building, fungal/mold and water leakage issues persist and the source of these issues cannot be identified without a full-scope structural inspection that would involve removing the walls, flooring, and roof of the building. The persistent mold and fungal issues have led the City to cease operations at the site and temporarily move the Fire Station No. 9 crew to other stations throughout the City.

A Facility Condition Assessment was completed for the building in December 2019 and found that the existing Fire Station No. 9 is in poor condition and nearing the end of its useful or serviceable life (Faithful + Gould, Inc. 2019). Thirty Priority 1 (Currently Critical) and 2 (Potentially Critical) improvements were identified in the report requiring immediate action in order to prevent further deterioration of structure and return it to habitable conditions. The report found that significant structural improvements would be required in order to bring the building to habitable standards, including replacing the roof, the traditional wood beams and rafters, and many of the interior walls. The remediation required would impact the building's historic character and would cost an estimated \$1,031,093 (Faithful + Gould, Inc. 2019). A more detailed follow up assessment was completed in June 2020, which concluded that there is substantial evidence of mold growth throughout the building, including *Stachybotrys*, a type of mold known to produce mycotoxins that can cause human mycotoxicosis and sick building syndrome (Tetra Tech and SCS Engineers 2020). The report found that in order to remediate mold in the building, the following improvements would be required:

- Remove the existing roofing materials and install a new roof
- Repair/replace the wood underlayment for the roof wherever dry rot or damage is present
- Repair/replace roof drains and overflow drains and associated piping
- Remove exterior wall penetrations that are no longer necessary or functional
- Remove/replace windows and associated framing throughout the building
- Install drainage structures around the exterior perimeter of the building, such as culverts or French drains
- Remove/redesign/replace existing ground level vents providing air beneath the floor, to avoid stormwater intrusion beneath the building

- Remove wallboard and internal insulation throughout the interior of the building
- Seal each exterior wall penetration on both the interior and exterior of the penetrations
- Replace wood framing where damaged or where visible mold growth is present
- Encapsulate the building frame elements
- Replace insulation and interior walls
- Remove and replace flooring throughout the interior of the building
- Repair/replace subfloor and joists where damaged
- Remove floor penetrations if no longer necessary or non-functional
- Seal floor penetrations both above and below the floor

In addition, the following changes would be required in order to meet the NFPA standards for fire station design:

- Convert second story attic into usable living and working quarters
- New shower rooms separated by gender
- Seismic retrofits
- Addition of an exterior elevator for American’s with Disabilities Act (ADA) accessibility
- New heating ventilation and air conditioning (HVAC) system
- New kitchen and furnishings

The estimated cost for these activities is \$12,685,100.25 (Tetra Tech and SCS Engineers 2020).

Modern fire station design would eliminate this site from consideration based on the size of the parcel alone. In order to accommodate the attic conversion, the existing pitched roof feature and wooden beams in the apparatus bay will need to be demolished to make way for the additional space required. All flooring, stucco, and wall panels (interior and exterior) would need to be removed to fully abate mold. Furthermore, parking on the project site is limited to two spaces. As it stands, employee parking poses an obstruction to the function of a fire station. Parking in the immediate neighborhood is considered impacted. Creating surface parking at the site is not possible due to the limited undeveloped area. Given these considerations, the City has determined the building is not suitable for occupancy, the potential to remediate is cost-prohibitive, and the building may be subject to ongoing environmental problems.

Table 2-1 Timeline of Site Investigations

Report Date	Report Title	Description
3/31/2003 ¹	Industrial Hygiene Report Fire Station #9	Inspections were conducted on 11/19/2003 and 12/29/2003 following reported episodes of fainting and concerns over cancers developed by employees working at the station. Conclusion was that no clear connection existed between environmental factors in the station and the cancer/fainting episodes.
1/27/2004	California Division of Occupational Safety and Health Letter	Directed the City to investigate alleged conditions and employee fainting case at the station.

Report Date	Report Title	Description
2/9/2004	Summary of Employee Health Complaints	Summarizes health complaints from employees at the station. Results of medical testing conclude that none of the minor abnormalities seen on the blood tests would be associated with symptoms the station employees complained of.
1/29/2008	Indoor Environmental Quality Evaluation with Sampling	Indoor humidity readings suggest that conditions could be conducive to fungal growth on building materials. Visible signs of water damage and incursion noted.
4/30/2015	Hot Water Pipe Leak: Asbestos, Lead, and Microbiological Survey Findings	No detection of asbestos, lead, or visible mold. Elevated levels of moisture found in the wood flooring and evidence of past leaks noted.
9/5/2017	Indoor Air Quality Investigation	Testing performed on 7/28/2017 revealed that no unusual contaminants were present.
11/3/2017	Indoor Air Quality Questionnaire	The City Safety Officer conducted an air quality questionnaire with 15 participants. Complaints of mold, water ingress, bad air quality, and numerous symptoms developed by employees were noted.
12/13/2017	Limited Preliminary Fungal Investigation and Deep Cleaning Protocol	Fungal spores and/or growth was found at almost all sampled locations. Suspect mold was found in the attic, kitchen, exercise room, and Room 3.
12/18/2017	Addendum #1 to the Fungal Remediation Guideline Related to the City of Long Beach, Fire Station No. 9	Includes two additional tasks for the fungal remediation and deep cleaning protocol.
12/21/2017	Limited bulk asbestos and lead-based paint survey of specific ceiling and walls of the City of Long Beach Fire Station No. 9	No asbestos was detected in the samples. Lead was detected in paint samples from the kitchen ceiling. Due to the age of the building, it is possible that additional areas and materials may contain asbestos and lead.
12/27/2017	Executive Summary: Results of the limited preliminary fungal investigation at Fire Station No. 9	The City Safety Officer notes fungal growth or elevated spore counts were found at almost all sampled locations. States that deep cleaning throughout, evaluation of HVAC system, and fungal remediation are required.
2/16/2018	Limited Post-Fungal Remediation Investigation	Based on tests taken on 1/19/18, the kitchen and exercise room met remediation criterion. Room 3 failed and required additional cleaning. A follow up test conducted on 2/2/2018 and Room 3 showed remediation criterion was met.
7/12/2018	Quarterly Industrial Hygiene Inspection	Inspection performed on 6/4/2018 and found that the exercise room, kitchen, and second-floor TV room and required cleaning. The first-floor bathroom, Captain's office, and second floor bedroom #3 and bathroom showed elevated moisture levels. The kitchen, Captain's office, and second-floor bedroom #3 showed elevated levels of particle count compared to other sampled areas. VOC levels were within normal range.

Report Date	Report Title	Description
11/5/2018	Quarterly Industrial Hygiene Inspection	Elevated moisture levels identified in last inspection were found to be false positives. Generally high levels dust/grime on top of the vending machine, file cabinet, and sills and TV inside the exercise room. The report also found excessive dust/grime in the Captain’s office, first-floor bathroom, kitchen, garage, and the second-floor TV room and bedrooms. Particle count levels in the kitchen and second-floor TV room were higher than other areas. VOC levels were within normal range.
2/22/2019	Quarterly Industrial Hygiene Inspection	Found that the following areas showed more dirt/grime than other areas: exercise room, main hallway picture frames, Captain’s office, and the second-floor bedroom 1 and bedroom 3. The first-floor bathroom showed elevated levels of particles compared to outdoors. VOC levels were within normal range. Visible, dripping leaks were noted in the first-floor bedrooms #1 and #3. Blistering paint was noted in the second-floor bedroom #3. The south wall footing of the crawlspace was also observed to be leaking rainwater.
6/4/2019	Quarterly Industrial Hygiene Inspection	The locker room and second-floor bedrooms showed more dirt/grime than others. The first-floor bathroom and kitchen showed elevated levels of particles compared to outdoors. Overall, particle counts were 1.7 times higher this quarter than last quarter. The first-floor bedroom #1 and second-floor bedroom #1 were sampled for mold and no mold was detected. VOC indoor levels were 8.5 times higher than the last quarterly report. Water was found under the rug in laundry room, possibly due to a leaking washing machine.
12/19/2019	Facility Condition Assessment	The building is in poor condition and nearing the end of its useful or serviceable life. Priority 1 (Currently Critical) and Priority 2 (Potentially Critical) improvements were identified in the report. It would cost an estimated \$1,031,093 to fix the building’s issues.
06/17/2020	Mold Assessment Report and Engineer’s Cost Estimate	There is a persistent and serious mold issue in the building that requires major renovation and restoration of the building under supervision of a licensed mold remediation contractor. The estimated cost for repairs is \$12,685,100.25.

¹There is an inconsistency with the date of this report. It is dated in March 2003 but discusses investigations that occurred later in 2003.

Note: full site inspection reports are available in Appendix B of this document

2.5 Project Characteristics

2.5.1 Proposed Project Activities

The proposed project includes two potential courses of action, Option A and Option B, both involving the demolition of the 5,548-square foot City-owned Fire Station No. 9 and eventual development of a permanent fire station. Due to the hazardous conditions of the building, the City has determined there are two potential options for site:

- Option A would remove the existing structurally impaired and deteriorated building due to the hazardous conditions created by the mold and building moisture and install a temporary modular structure to accommodate the station crew.

- Option B would also remove the existing structurally impaired and deteriorated building. However, under Option B, the site would be cleared and prepared for future development of a civic use but would remain undeveloped.

Due to the age and architecture of the building, the station appears to be eligible for designation as a Long Beach Historic Landmark and listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR). Therefore, Fire Station No. 9 is considered a historic resource pursuant to CEQA. The station has been closed since July 2019 due to the recurrence of toxic mold in the building, as discussed in Section 2.4.4, *Site Investigations*, above. Therefore, the station is uninhabitable by the Long Beach Fire Department.

To accommodate staff/operations of Fire Station No. 9, at the time of preparation and circulation of the Notice of Preparation (NOP), the City temporarily relocated Fire Station No. 9 operations to Fire Station Nos. 13 and 16, located at 2475 Adriatic Avenue and 2890 E Wardlow Road, respectively. Since the relocation of Fire Station No. 9 crew, response times to calls for help in Fire Service Area 9 have increased on average by 16 percent, and by as much as 55 percent in certain neighborhoods of the service area.

Since circulation of the NOP in November 2019, an Administrative Use Permit (AUP) was filed for an interim location for Fire Station No. 9. The AUP request would include the reuse of an existing structure at the former Boeing Fitness Center at 2019 East Wardlow Road. The application includes the reuse of an existing building for Fire Station No. 9 fire personnel occupation and the construction of two freestanding canopies (approximately 1,400-square-foot and 450-square-foot) for use as fire apparatus bays. This interim location would permit fire personnel to occupy an independent facility rather than co-locating at existing Fire Station Nos. 13 and 16. The 2019 East Wardlow location fulfills the immediate need for a temporary fire station while interim and long-term plans and approval process including the future of the current Fire Station 9 project site are completed. The two options under consideration for the proposed project are described below.

Option A: Demolition of Fire Station and Replacement with Modular Structure

Under Option A, after the removal of the existing Fire Station No. 9, the City would construct a temporary modular structure on the site to accommodate Fire Station No. 9 operations. The temporary structure would house the existing six-person Fire Station No. 9 crew. No additional crewmembers would be added as part of the proposed project. As shown in Figure 2-4, *Site Plan of Proposed Modular Structure*, the new modular structure would be single-story and approximately 70 feet in width and 80 feet in length and 4,080 square feet. Two off-site parking spaces are currently available for use by station employees, and an additional three on-site parking spaces would be provided as part of the project. The modular structure would include an apparatus bay where response vehicles would be stored. The new structure would house operations for up to five years while a larger permanent replacement structure is built off-site (the site of the replacement structure has not yet been identified and is not a part of this project).

Fire Station No. 9 would be removed and implementation of the new temporary modular would occur over approximately six months. Removal of Fire Station No. 9 would include demolition and removal of 480 tons of building material, excavation to a depth of approximately four feet, and 703 cubic yards (CY) of soil export, which would be hauled from the project site over a four-day period using haul trucks with a 16 CY capacity. Construction activities would be limited to weekdays between 7:00 a.m. and 7:00 p.m. in accordance with the City of Long Beach Municipal Code. All construction equipment would be staged on-site and would include backhoes, concrete/industrial

saws, excavators, and a crane to install the modular structure. Construction is anticipated to commence in mid-November 2020 and last for approximately six months.

Option B: Demolition of Fire Station for a Future Use

Under Option B, the existing Fire Station No. 9 facility would be removed, and the project site would be cleared and remain undeveloped, with the site prepared for a future civic use. The potential future use of the project site has not been identified and is not part of this EIR. The project site would receive a two-inch mulch covering to inhibit grass growth and minimize maintenance. Under Option B, demolition and grading activities would be the similar to Option A, including the removal of 480 tons of building material. However, under Option B, construction would disturb soil to a maximum depth of one foot below grade. Similar to Option A, materials would be hauled from the project site. Demolition and grading activities would be limited to weekdays between 7:00 a.m. and 7:00 p.m. in accordance with the City of Long Beach Municipal Code. All equipment would be staged on-site. Construction is anticipated to commence in mid-November 2020 and would be completed by the end of November 2020.

Figure 2-4 Site Plan of Proposed Modular Structure



2.5.2 Project Objectives

The proposed project includes the following objectives:

- Removal of structurally impaired and deteriorated Fire Station No. 9, located at 3917 Long Beach Boulevard, City of Long Beach
- Return Fire Station No. 9 equipment and personnel to its service area in order to help meet the Long Beach Fire Department response time goal of six minutes and 20 seconds for structure fires and six minutes for Advance Life Support
- Provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design, including the provision of facilities for all genders
- Removal of a potential threat to public health and safety issue, which includes, but is not limited to, mold spores associated with substantial structural water damage that require invasive remediation techniques
- Removal of a vacant building that could attract criminal activity and other nuisances
- Ensure that the City's historic and cultural heritage values are considered regarding the removal and/or remediation of the Fire Station No. 9 building

2.5.3 Project Benefits

Pursuant to Section 21082.4 of the State CEQA Guidelines statute, "In describing and evaluating a project in an environmental review document prepared pursuant to this division, the lead agency may consider specific economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of a proposed project and the negative impacts of denying the project." The proposed project would provide the following benefits:

- Removal of a vacant structure that could attract nuisance/criminal behavior to the area
- Provision of a safe and healthy workplace for the Fire Station No. 9 crewmembers
- Restore operation of Fire Station No. 9 within the Fire Service Area No. 9 service area in order to help meet Long Beach Fire Department response time goals

2.6 Required Approvals

In accordance with Sections 15050 and 15367 of the State CEQA Guidelines, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for CEQA actions and project approval. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.

The proposed project would require adoption by the Long Beach Planning Commission/City Council and the following discretionary approvals:

- Site Plan Review for design review of the temporary modular structure (Option A)
- Administrative Use Permit for the operation of an institutional use in the CCA Zoning District (Option A)
- Standards Variance for development standards for the temporary modular structure (Option A)

- Demolition Permit to allow for the demolition the existing on-site Fire Station No. 9 building (Option A and Option B)
- CEQA Approval and certification of EIR (Option A and Option B)

In addition, ministerial permits, including grading permits, building permits, and public works permits, would be issued by the City to allow site preparation and construction of the proposed project (Options A and B) and off-site project infrastructure connections. The proposed project would require the following ministerial approvals:

- Demolition Permit to allow for removal of the existing on-site Fire Station No. 9 building
- Public Works Permits to allow for the modification of driveways, sidewalks, and other site improvements within the public right-of-way
- Building Permits to allow for the construction of the temporary modular structure

No approvals by responsible or trustee agencies have been identified for the proposed project.

2.7 Regulatory Compliance Measures

Under both Options A and B, the proposed project would incorporate a number of regulatory compliance measures (RCMs) in order to avoid or minimize project impacts. RCMs that the proposed project would be required to comply with are detailed in Table 2-2, *Project Regulatory Compliance Measures*, below.

Table 2-2 Project Regulatory Compliance Measures

RCM No.	Measure Title	Description
Aesthetics		
AES-1	Light and Glare	Pursuant to the Long Beach Municipal Code (LBMC) Section 21.33.090(e), all lighting, reflective surfaces, or any other source of illumination shall not produce adverse effects on public streets or on any other parcel. Lights shall be shielded at lot lines so as not to be directly visible from any adjoining residential district.
Air Quality		
AQ-1	Demolition, Grading, and Construction Activities	<p>Pursuant to South Coast Air Quality Management District (SCAQMD) Rule 403, the proposed project shall:</p> <ul style="list-style-type: none"> ▪ All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403. Wetting could reduce fugitive dust by as much as 50 percent. ▪ The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind. ▪ All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 miles per hour), so as to prevent excessive amounts of dust. ▪ All dirt/soil shall be secured by trimming, watering, or other appropriate means to prevent spillage and dust. ▪ All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

RCM No.	Measure Title	Description
AQ-2	Odors	<ul style="list-style-type: none"> ▪ General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. ▪ Trucks having no current hauling activity shall not idle but be turned off. <p>Pursuant to SCAQMD Rule 402, the proposed project shall: 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.</p>
AQ-3	Engine Idling	Pursuant to Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
AQ-4	Emissions Standards	In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.
Biological Resources		
BIO-1	Nesting Bird Avoidance	If construction activities are initiated during the nesting bird season (February 1-August 31 for passerines, January 1 – August 31 for raptors), a preconstruction nesting bird survey shall be conducted by a qualified biologist to determine the presence/absence, location, and status of any active nests on-site or within 100 feet of the site for nesting passerines, or within 250 feet of the site for nesting raptors. Nesting bird surveys shall be completed not more than 14 days before the start of construction activities. If active nests are discovered within 250 feet project site, a qualified biologist will establish a species-specific avoidance buffer around the nest where no construction activity is allowed until a qualified biologist has determined that the nest is no longer active. Encroachment into the buffer can occur at the discretion of the qualified biologist with the City's consent.
Geology and Soils		
GEO-1	Seismic Hazards	The proposed project shall comply with all requirements established in LBMC Chapter 18.68, <i>Earthquake Hazard Regulations</i> , which adopts the provisions of Uniform Building Code Section 2303(b) with modifications.
Greenhouse Gas Emissions and Energy		
GHG-1	Green Building Standards	The proposed project shall comply with the 2019 standards for nonresidential structures pursuant to the California Code of Regulations, Title 24 Part 11, California Green Building Standards Code.
Hazards and Hazardous Materials		
HHM-1	Hazardous Materials Release Response Plans and Inventory	The proposed project shall comply with the requirements established in the California Health and Safety Code Chapter 6.95, Article 1, pertaining to the storage of hazardous materials on site, as further discussed in Section 4.4, <i>Hazards and Hazardous Materials</i> , of this report.

RCM No.	Measure Title	Description
Hydrology and Water Quality		
HYDRO-1	Low-Impact Development (LID)	<p>Pursuant to LBMC Chapter 18.74, a LID plan shall be prepared to demonstrate the following:</p> <p>Stormwater runoff will be infiltrated, evapotranspired, and/or captured and used through stormwater management techniques as identified in Section 4.1. The onsite stormwater management techniques must be properly sized, at a minimum, to infiltrate, evapotranspire, store for use, without any stormwater runoff leaving the site to the maximum extent feasible, for at least the volume of water produced by the water quality design storm event that results from:</p> <ol style="list-style-type: none"> The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area using a 48- to 72-hour drawdown time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook –Industrial/Commercial, (2003); or The volume of runoff produced from a 0.75-inch storm event.
HYDRO-2	National Pollutant Discharge Elimination System (NPDES)	Pursuant to the Clean Water Act Section 402 and LBMC Section 8.96.110, the proposed project shall obtain and adhere to all requirements of the Long Beach NPDES MS-4 permit.
Noise		
N-1	Construction Noise	The proposed project shall comply with the provisions of LBMC Section 8.80.202A. through 80.202C., which prohibit construction activities between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and Federal holidays, between the hours of 7:00 p.m. on Friday and 9:00 a.m. on Saturday and after 6:00 p.m. on Saturday, and any time on Sunday.
N-2	Operational Noise	The proposed project shall comply with all standards established in the City's Noise Ordinance (LBMC Chapter 8.80) for properties in Land Use District One, as further discussed in Section 4.5, <i>Noise</i> , of this document.
Transportation		
T-1	Construction Traffic Control Plan	Pursuant to LBMC Section 14.04.015, a construction traffic control plan (CTMP) that includes signage and flagging to alert motorists of any construction-related pending lane or road closures would be included in the proposed project.
Utilities		
U-1	Construction Debris Recycling	Pursuant to LBMC Chapter 18.74, the proposed project shall create a waste management plan for construction activities, divert at least sixty-five percent of construction debris, and provide documentation to the City to prove compliance.

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3 Environmental Setting

This section describes the current environmental conditions at and in the vicinity of the proposed project. More detailed descriptions of the setting for each environmental issue can be found in Section 4, *Environmental Impact Analysis*.

3.1 Regional Setting

The proposed project is located in the City of Long Beach (City), an incorporated municipality in southwestern Los Angeles County. The City is located along the Pacific Coast approximately 20 miles south of downtown Los Angeles. Los Angeles County encompasses approximately 4,751 square miles and has an estimated population of 10,253,716 residents (California Department of Finance [DOF] 2019). Established in 1888, the City of Long Beach encompasses roughly 53 square miles and has an estimated population of 475,013 (California Department of Finance [DOF] 2019). Figure 2-1, *Regional Location*, in Section 2, *Project Description*, shows the location of the project site in the region. Figure 2-2, *Project Location*, shows the location of the project site in relationship to the surrounding neighborhood.

Five major transportation routes traverse the City: San Diego Freeway (Interstate-405 [I-405]), Artesia Freeway (State Highway-91 [SR-91]), Long Beach Freeway (Interstate-710 [I-710]), San Gabriel River Freeway (Interstate-605 [I-605]), and Pacific Coast Highway (State Route 1). Additionally, the City is home to the Port of Long Beach, with substantial goods movements leading to and from the port via truck and rail.

Regional topography includes the Peninsular Ranges, which encompass the southern portion of Los Angeles County, the southwest corner of San Bernardino County, all of Orange County, and the San Jacinto Mountains and the Coachella Valley in the central portion of Riverside County. The City of Long Beach is located in the South Coast hydrologic region, with a Mediterranean climate featuring moderate temperatures, rainy winters, and dry summers. Storm water runoff is primarily directed through a series of storm water drainage facilities to the Los Angeles River which eventually drains to the San Pedro Bay. The Newport-Inglewood fault runs through the City in a southwest to northeast manner and is 0.6 miles from the site. The City is also near several active faults including the Whittier, Palos Verdes, Santa Monica, and San Andreas Faults, thereby placing the project site in a seismically active region (Long Beach 1988).

The City is located within the South Coast Air Basin (Basin), where air quality is affected by various emission sources (e.g., motor vehicles and industry) as well as atmospheric conditions. Although air quality in the area has steadily improved in recent years, the combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States result in failure of the region to meet state and federal air quality standards for ozone, PM₁₀ (nonattainment for state standards only), PM_{2.5}, and lead (nonattainment for federal standards only) (California Air Resources Board [CARB] 2018).

3.2 Project Site Setting

As shown in Figure 2-2 in Section 2, *Project Description*, the project site is bordered by commercial development to the north; Long Beach Boulevard, medical offices and commercial uses to the east;

commercial buildings to the south; and North Virginia Road and multi-family housing to the west. In the immediate vicinity, there are commercial uses along Long Beach Boulevard and North Virginia Road and multi- and single-family housing in the surrounding neighborhoods.

The project site is in the Community Automobile-Oriented (CCA) Zoning District and has a 2019 General Plan Place Type Designation of Neighborhood Serving Center or Corridor – Low (NSC-L). Uses permitted in the CCA District include retail and service uses for an entire community, including convenience and comparison shopping for goods and associated services. Other institutional uses are permitted in the CCA Zoning District through the Administrative Use Permit (AUP) process when required findings are met. The site is developed with Fire Station No. 9, a one-and-a-half story building constructed in 1938. The station was vacated in summer 2019 due to the presence of toxic mold in the building.

3.3 Cumulative Development

In addition to the specific impacts of individual projects, CEQA requires EIRs to consider potential cumulative impacts of the proposed project. CEQA defines “cumulative impacts” as two or more individual impacts that, when considered together, are substantial or will compound other environmental impacts. Cumulative impacts are the combined changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be less than significant when analyzed separately but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

CEQA requires cumulative impact analysis in EIRs to consider either a list of planned and pending projects that may contribute to cumulative effects or a forecast of future development potential. Currently planned and pending projects in Long Beach, within 1.5 miles of the project site, are listed in Table 3-1, *Cumulative Projects List*, and shown in Figure 3-1, *Cumulative Projects Map*. These projects are considered in the cumulative analyses in Section 4, *Environmental Impact Analysis*.

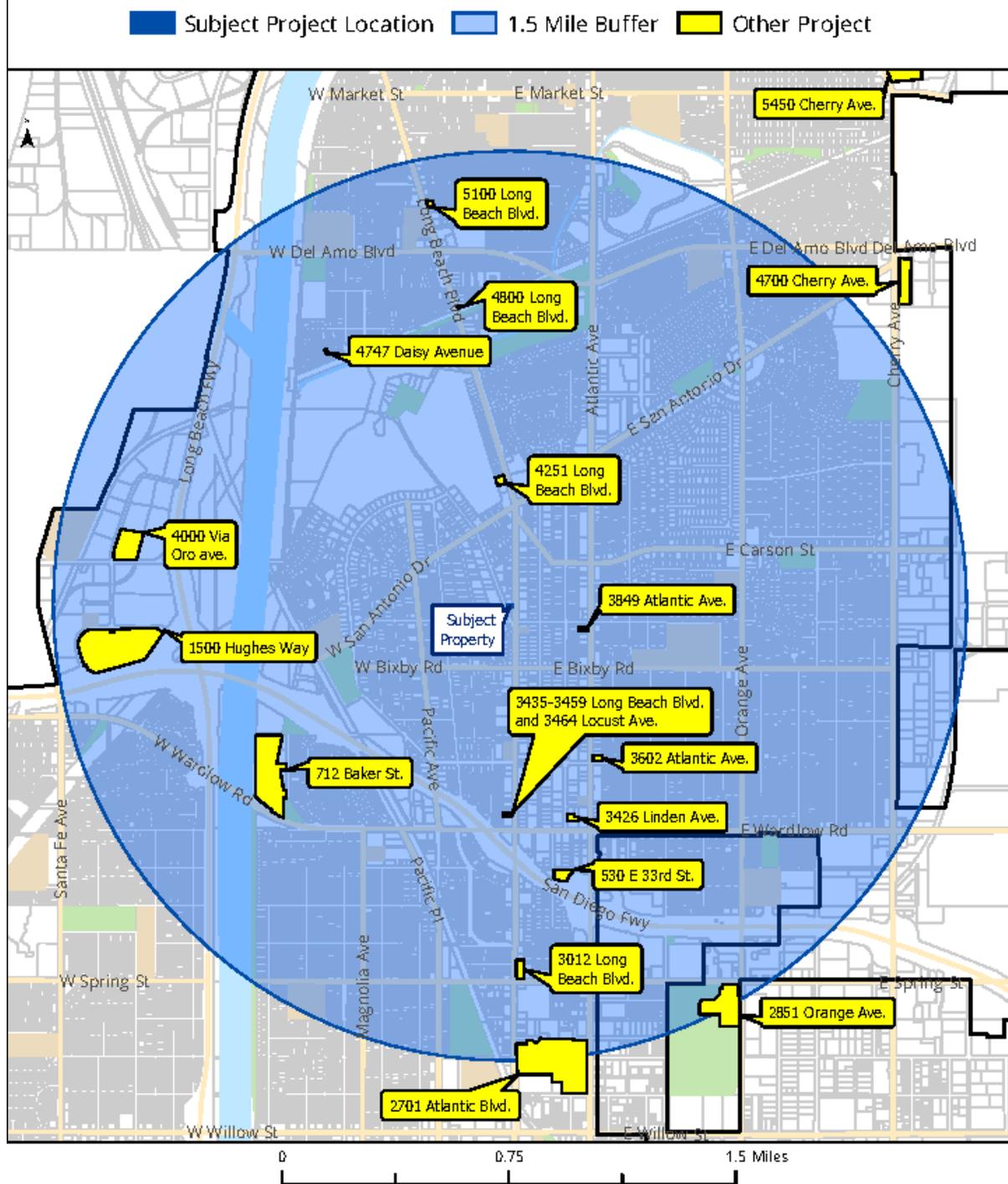
Table 3-1 Cumulative Projects List

Project No.	Project Location ¹	Land Use	Description ²
1	5100 Long Beach Blvd.	Multi-Family Residential	38 three-story townhomes
2	2851 Orange Ave.	Industrial	Three industrial warehouse buildings totaling 157,586 sf
3	4000 Via Oro Ave.	Industrial	Distribution center/warehouse
4	4800 Long Beach Blvd.	Multi-Family Residential	20 three-story townhomes
5	1500 Hughes Way	Commercial	Five level parking structure
6	3849 Atlantic Ave.	Commercial	5,000 sf retail building
7	3602 Atlantic Ave.	Commercial	18,000 sf restaurant
8	3435 Long Beach Blvd.	Commercial	Office building and parking structure
9	4251 Long Beach Blvd.	Commercial	8,559 sf commercial shell building
10	712 Baker St.	Single- and Multi-Family Residential	120 attached townhomes and 96 single-family detached homes
11	4747 Daisy Ave.	Multi-Family Residential	131 residential units
12	3426 Linden Ave.	Commercial	6,000 sf addition to existing preschool
13	2701 Atlantic Blvd.	Commercial	Office building and surface parking lot
14	3012 Long Beach Blvd.	Commercial	22,391 sf fitness center (Salvation Army Citadel)
15	530 E 33rd St.	Industrial	15,432 sf industrial development

^{1,2}Cumulative project details were sourced from the City of Long Beach in January 2020.

Sf = square feet

Figure 3-1 Cumulative Projects Map



Source: City of Long Beach

4 Environmental Impact Analysis

a. Introduction

This section discusses the possible environmental impacts of implementation of either Option A or Option B (or the “proposed project”) that were identified by the City and NOP responses as having the potential to result in significant impacts. Sections 4.1 through 4.5 of this Draft EIR contain discussions of the potential project-related environmental impacts resulting from implementation of the proposed project, including information related to existing project site conditions, criteria for determining significance of potential environmental impacts, analyses of the type and magnitude of environmental impacts, feasible mitigation measures that would reduce or avoid significant environmental impacts, and cumulative impacts.

This chapter provides an analysis of the following potential environmental impacts of the proposed project:

- Section 4.1, *Air Quality*
- Section 4.2, *Cultural, Paleontological, and Tribal Resources*
- Section 4.3, *Greenhouse Gas Emissions and Energy*
- Section 4.4, *Hazards and Hazardous Materials*
- Section 4.5, *Noise*

It was determined by the City and during the NOP process that the project would have either a less than significant impact or no impact associated with the following topics: aesthetics, agriculture and forestry resources, biological resources, geology and soils, hydrology and water quality, land use, mineral resources, public services, population and housing, recreation, transportation, utilities and services systems, and wildfire. These topics are summarized in Section 5, *Effects Found Not to be Significant*.

b. Format of the Environmental Impact Analysis

Each of the five environmental topic sections include the following subsections:

- Setting
- Regulatory Setting
- Impact Analysis
 - Methodology
 - Significance Thresholds
 - Project Impacts and Mitigation Measures
 - Cumulative Impacts

The assessment of each issue area begins with an italicized introduction that summarizes the environmental topics considered for that issue area. This is followed by the setting and impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds” or those criteria adopted by the City, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures

for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded effect also contains a statement of the significance determination for the environmental effect as follows:

- **Significant and Unavoidable:** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the State CEQA Guidelines
- **Less than Significant with Mitigation Incorporated:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made under §15091 of the State CEQA Guidelines
- **Less than Significant:** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable
- **Beneficial:** An effect that would reduce existing environmental problems or hazards

Following each environmental effect discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative effects that assesses the impacts associated with the proposed project in conjunction with other future development in the area.

4.1 Air Quality

This section analyzes the proposed project's temporary air quality impacts relating to construction activity and long-term air quality impacts associated with operation under Option A and Option B (or the "proposed project"). The analysis herein is based on estimates from the California Emissions Estimator Model (CalEEmod) Version 2016.3.2 (Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*).

The relevant regulatory requirements are also discussed, as are the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

4.1.1 Setting

a. Climate and Meteorology

The proposed project is in the South Coast Air Basin (Basin) and under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego County line to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as the San Geronio Pass area in Riverside County. The regional climate in the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles and other modes of transportation, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

b. Current Ambient Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the Basin. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the federal and State standards. The monitoring stations located closest to the proposed project are the North Long Beach (3650 Long Beach Boulevard) and Long Beach-2425 Webster Street Stations, approximately 2,000 feet south and 2.6 miles southwest of the project, respectively (CARB 2019). The Long Beach-2425 Webster Street Station monitors ozone, nitrogen dioxide, and PM₁₀. The North Long Beach Station measures PM_{2.5}. Table 4.1-1, *Ambient Air Quality*, indicates the number of days that each of the federal and state standards have been exceeded at these stations in each year from 2016 to 2018.

Table 4.1-1 Ambient Air Quality

Pollutant	2016	2017	2018
Ozone (ppm), 8-Hour Average ¹	0.057	0.064	0.057
Number of days of State exceedances (>0.070 ppm)	0	0	0
Number of days of federal exceedances (>0.070 ppm)	0	0	0
Ozone (ppm), Worst Hour ¹	0.072	0.078	0.069
Number of days of State exceedances (>0.09 ppm)	0	0	0
Nitrogen Dioxide (ppm), Worst Hour ¹	0.073	0.088	0.079
Number of days of State exceedances (>0.18 ppm)	0	0	0
Particulate Matter <10 microns (µg/m ³), Worst 24 Hours ¹	61.0	71.4	68.3
Number of days of State exceedances (>50 µg/m ³)	8	10	4
Number of days of federal exceedances (>150 µg/m ³)	0	0	0
Particulate Matter <2.5 microns (µg/m ³), Worst 24 Hours ²	27.9	51.0	53.8
Number of days of federal exceedances (>35 µg/m ³)	0	4	6

¹ Long Beach-2425 Webster Street Monitoring Station

²North Long Beach Monitoring Station

ppm = parts per million, µg/m = micrograms per cubic meter

Source: CARB 2019

The data indicate that the federal and State 8-hour ozone standards were not exceeded in any year, nor was the State worst hour ozone standard. While the federal 24-hour PM₁₀ standard was not exceeded between 2016 and 2018, the State 24-hour PM₁₀ standard was exceeded multiple times. In addition, the federal 24-hour PM_{2.5} standard was also exceeded in 2017 and 2018. As shown in Table 4.1-1, *Ambient Air Quality*, no other federal or State standards for which pollutant concentrations were measured were exceeded at these monitoring stations. No stations near the project have monitored CO in the last four years. In 2012, the Long Beach-2425 Webster Street monitoring station detected an 8-hour maximum CO concentration of 2.57 ppm, which is below the federal and State standard of 9.0 ppm (CARB 2019).

c. Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect the segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, the majority of sensitive receptor locations are schools, hospitals, and residences.

Sensitive receptors in the project vicinity include single- and multi-family residences to the north, east, south, and west and the Oakwood Academy private school, which is located approximately 450 feet southeast of the site across Long Beach Boulevard. The nearest sensitive receptors to the site are the multi-family residences located approximately 100 feet west of the site along North Virginia Road.

4.1.2 Regulatory Setting

The federal and State governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent within the California Environmental Protection Agency (CalEPA). County-level Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs/AQMDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 15 air basins statewide, including the Basin.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter with diameters of up to ten microns (PM₁₀) and up to 2.5 microns (PM_{2.5}), and lead. Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (known as the California ambient air quality standards [CAAQS]) for these and other pollutants, some of which are more stringent than the federal standards. Table 4.1-2, *Federal and State Ambient Air Quality Standards*, lists the current federal and State standards for regulated pollutants.

Table 4.1-2 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	N/A ¹	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	N/A
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	N/A	20 µg/m
	24-Hour	150 µg/m	50 µg/m
PM _{2.5}	Annual	12 µg/m	12 µg/m
	24-Hour	35 µg/m	N/A
Lead	30-Day Average	N/A ¹	1.5 µg/m
	3-Month Average	0.15 µg/m	N/A ¹

¹ N/A: Not applicable because no standard is currently established

ppm = parts per million, µg/m = micrograms per cubic meter, PM₁₀ = particulate matter 10 microns or less in diameter, PM_{2.5} = particulate matter 2.5 microns or less in diameter

Source: CARB 2016

The SCAQMD is the designated air quality control agency in the Basin, which is a non-attainment area for the federal standards for ozone and PM_{2.5} and the State standards for ozone, PM₁₀, and PM_{2.5}. The Los Angeles County portion of the Basin is also designated non-attainment for lead (SCAQMD 2016). The Basin is designated as a CO maintenance area and is unclassifiable or in attainment for all other federal and state standards.

Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants include CO, NO₂, PM₁₀, PM_{2.5}, SO₂, and lead. Ozone is considered a secondary criteria pollutant because it is created by atmospheric chemical and photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x). The following subsections describe the characteristics, sources, and health and atmospheric effects of critical air contaminants.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between NO_x and ROG.¹ Nitrogen oxides are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it usually occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide is a local pollutant that is found in high concentrations only near fuel combustion equipment and other sources of CO. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. Nitrogen dioxide is an acute irritant. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of ozone/smog and acid rain.

¹ Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of concern are PM₁₀ (small particulate matter which measures 10 microns or less in diameter) and PM_{2.5} (fine particulate matter which measures 2.5 microns or less in diameter). The characteristics, sources, and potential health effects associated with PM₁₀ and PM_{2.5} can be different. Major man-made sources of PM₁₀ are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer PM_{2.5} particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. PM_{2.5} is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children.

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. Lead occurs in the atmosphere as particulate matter. The major sources of lead emissions historically have been mobile and industrial sources. In the early 1970s, the U.S. EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The U.S. EPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the U.S. EPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries in part due to national emissions standards for hazardous air pollutants (U.S. EPA 2013). As a result of phasing out leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. Lead may cause a range of health effects, including anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases). The proposed project does not include any stationary sources of lead emissions. Therefore, implementation of the project would not result in substantial emissions of lead, and this pollutant is not discussed further in this analysis.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel

particulate matter (DPM) (CARB 2011). TACs are different than the criteria pollutants previously discussed because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the Basin is in non-attainment under the NAAQS. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was adopted on March 3, 2017. It incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015.

The 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and meteorological air quality models. The Southern California Association of Governments' (SCAG) projections for socio-economic data (e.g., population, housing, employment by industry) and transportation activities from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) are integrated into the 2016 AQMP. The AQMP builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The AQMP also demonstrates strategies for attainment of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, pursuant to recent U.S. EPA requirements (SCAQMD 2017).

4.1.3 Impact Analysis

a. Methodology

In accordance with Appendix G of the State CEQA Guidelines, a project would result in a significant impact to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
3. Expose sensitive receptors to substantial pollutant concentrations; or
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Option A: Demolition of Fire Station and Replacement with Modular Structure

Construction Emissions

Construction and operational air quality emissions associated with the Option A were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. CalEEMod was developed for use throughout the state in estimating construction and operational emissions from land use development. CalEEMod uses project-specific information, including the existing uses on site, proposed project's land uses, square footages for different uses (i.e., mid-rise apartment building, retail, and office), and location, to estimate a project's construction and operational emissions. To be more conservative in the project-level analysis of air quality, greenhouse gas, and energy use impacts associated with the proposed project, CalEEMod land use inputs for existing conditions were not included in this analysis, as the existing fire station is currently not in use. Land use inputs for the proposed project included the 4,080-sf temporary modular structure, which was modeled in CalEEMod as a single-family home due to the presence of crew on-site 24-hours per day.

The construction activities associated with Option A would include demolition of the existing structure, site preparation, paving, and installation of the temporary modular structure. Construction equipment that would generate criteria pollutants includes excavators, backhoes, industrial saws, cranes, and haul trucks, amongst others. Some of this equipment would be used across all phases of the proposed project's construction. Construction activities will last approximately six months from summer 2020 to winter 2020. Construction equipment for each phase was based on information provided by Public Works. Furthermore, construction modeling assumed that the construction under the project would comply with RCM AQ-1, *Demolition, Grading, and Construction Activities*, which implements SCAQMD Rule 403 and identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin. SCAQMD Rule 1113, which requires the use of low-VOC paint (50 grams per liter (g/L) for non-flat coatings), does not apply to this project as no architectural coating is part of the construction.

Operational Emissions

Operational emissions, estimated using CalEEMod, would be comprised of mobile source emissions, energy emissions, and area source emissions. Mobile source emissions consist of emissions generated by vehicle trips to and from the project site. Emissions attributed to energy use include emissions from electricity and natural gas consumption for cooking, lighting, and space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coatings.

Since the temporary closure of Fire Station No. 9, the Fire Station No. 9 crewmembers and service vehicles have continued to operate within the City of Long Beach out of Fire Station Nos. 13 and 16. As a result, service trip lengths and response times within Fire Service Area 9 have increased. Option A would return the Fire Station No. 9 crew and service vehicles to their service area. Therefore, from a regional pollutant emissions perspective, there would be no net increase in emissions associated with mobile sources. Consequently, operational trips were eliminated from the CalEEMod model.

Option B: Demolition of Fire Station for a Future Use

Construction Emissions

As described above construction and operational air quality emissions associated with the Option B were also calculated using CalEEMod. The construction activities associated with Option B would

also include demolition of the existing structure and site preparation. Construction equipment that would generate criteria pollutants includes excavators, backhoes, industrial saws, cranes, and haul trucks, amongst others. Construction equipment for each phase was based on information provided by the Department of Public Works. Furthermore, construction modeling assumed that the construction under the project would comply with RCM AQ-1, *Demolition, Grading, and Construction Activities*, which implements SCAQMD Rule 403 and identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin.

Operational Emissions

Operational emissions associated with the Option B would be limited to area source emissions from occasional site maintenance activities, as the site would remain vacant after removal of the existing Fire Station No. 9 building.

b. Significance Thresholds

Air Quality Management Plan Consistency

The criteria for determining consistency with the SCAQMD’s AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD’s *CEQA Air Quality Handbook*, and includes the following:

- The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- The proposed project will not exceed the assumptions in the AQMP.

Regional Significance Thresholds

The SCAQMD recommends quantitative regional significance thresholds for temporary construction activities and long-term project operation in the Basin, shown in Table 4.1-3, *SCAQMD Regional Significance Thresholds*.

Table 4.1-3 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO _x	55 pounds per day of NO _x
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO _x	150 pounds per day of SO _x
150 pounds per day of PM ₁₀	150 pounds per day of PM ₁₀
55 pounds per day of PM _{2.5}	55 pounds per day of PM _{2.5}

ROG = reactive organic gases, NO_x = oxides of nitrogen, CO = carbon monoxide, SO_x = sulfur oxide, PM₁₀ = particulate matter 10 microns or less in diameter, PM_{2.5} = particulate matter 2.5 microns or less in diameter

Source: SCAQMD 2019

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board’s Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were

devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_x, CO, PM₁₀, and PM_{2.5}. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs have been developed for emissions generated in construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs are typically applied only to construction emissions because most operational emissions are associated with project-generated vehicle trips.

The 0.13-acre lot is located in Source Receptor Area 4 (SRA 4) (SCAQMD 2008). The SCAQMD provides LSTs for one-, two-, and five-acre project sites for receptors at 82 to 1,640 feet (25 to 500 meters) from construction activity. The SCAQMD provides lookup tables for sites that measure up to one, two, or five acres. Pursuant to SCAQMD guidance, the one-acre site thresholds were used for this project. As mentioned above, the sensitive receptors closest to the project site are the multi-family residential structures located approximately 150-feet from the site across North Virginia Road. LSTs for construction on a 0.13-acre site in SRA-4 at 82 feet are shown in Table 4.1-4, *SCAQMD LSTs for Construction Emissions in SRA-4*.

Table 4.1-4 SCAQMD LSTs for Construction Emissions in SRA-4

Pollutant	Allowable Emissions (lbs/day) from a 0.13-acre Site for a Receptor 82 Feet Away
Gradual conversion of NO _x to NO ₂	57
CO	585
PM ₁₀	4
PM _{2.5}	3

SRA= source receptor area, PM₁₀ = particulate matter 10 microns or less in diameter, PM_{2.5} = particulate matter 2.5 microns or less in diameter

Source: SCAQMD 2009

Carbon Monoxide (CO) Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal 1-hour standard of 35.0 parts per million (ppm) or the federal and State 8-hour standard of 9.0 ppm (CARB 2016). The SCAQMD recommends that screening for possible elevated CO levels should be conducted for severely congested intersections experiencing level of services (LOS) E or F with project traffic where a significant project traffic impact may occur.

Toxic Air Contaminants (TACs)

CARB's *Air Quality and Land Use Handbook* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). SCAQMD adopted similar recommendations in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (2005). Together, the CARB and SCAQMD

guidelines recommend siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses.

Objectionable Odors

According to the SCAQMD *CEQA Air Quality Handbook* (1993) land uses associated with odor complaints to be agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding.

c. Project Impacts and Mitigation Measures

Threshold 4.1.1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?
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Impact AQ-1 THE PROPOSED PROJECT IS NOT EXPECTED TO RESULT IN ANY POPULATION GROWTH AND, AS SUCH, WOULD BE WITHIN SCAG'S REGIONAL GROWTH PROJECTIONS. THEREFORE, THE PROPOSED PROJECT WOULD NOT CONFLICT WITH THE 2016 SCAQMD AQMP AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

A project may be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region's attainment of air quality standards specified in the AQMP, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP incorporates local city general plans and the SCAG 2016 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth. As discussed in Section 5.10, *Population and Housing*, and Section 6.1, *Growth Inducement*, the proposed project does not involve the construction of housing or commercial developments.

Option A

The proposed temporary modular structure under Option A would only accommodate the existing Fire Station No. 9 crew and would not create any new jobs. Therefore, Option A is not expected to result in increased population or employment in the area and will not conflict with the AQMP.

As discussed under Impact AQ-2, air pollutant emissions generated by construction of Option A would not exceed SCAQMD significance thresholds. Additionally, as discussed under Impact AQ-3, operational emissions associated with Option A would not exceed applicable SCAQMD thresholds for criteria pollutants. In summary, Option A would not conflict with the 2016 AQMP as no increases in population or jobs are predicted, and construction and operational emissions would not exceed significance thresholds. Therefore, impacts would be less than significant.

Option B

Under Option B, the project site would remain vacant after removal of the existing building. As with Option A, no new jobs or housing would be created that could increase population or employment within the area. Therefore, Option B would not conflict with the population and economic growth forecasts that the AQMP relies upon. In addition, as further detailed under Impacts AQ-2 and AQ-3, air pollutant emissions associated with construction and operation of Option B would not exceed the SCAQMD thresholds for criteria pollutants. Therefore, Option B would not conflict with the 2016 AQMP and impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Threshold 4.1.2: Would the project 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?

Impact AQ-2 CONSTRUCTION OF THE PROPOSED PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE SCAQMD REGION IS IN NONATTAINMENT UNDER APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARDS. THEREFORE, AIR QUALITY IMPACTS RELATED TO CONSTRUCTION WOULD BE LESS THAN SIGNIFICANT.

As discussed in Section 4.1.1, *Air Quality Regulation*, criteria pollutants include ozone, CO, NO₂, PM₁₀, PM_{2.5}, SO₂, and lead. The Basin is a non-attainment area for the federal standards for ozone and PM_{2.5} and the State standards for ozone, PM₁₀, and PM_{2.5}. The Basin is also a CO maintenance area. The Los Angeles County portion of the Basin is also designated non-attainment for lead (SCAQMD 2016). The Basin is designated unclassifiable or in attainment for all other federal and State standards. The proposed project does not include any stationary sources of lead emissions, and the sources involved in project construction and operations are not substantial sources of lead, therefore this pollutant is not discussed further in this analysis.

Option A

Construction activities under Option A that would produce criteria pollutants include the following: construction worker travel to and from the site, delivery and hauling of construction supplies and debris to and from the site, demolition, site preparation, foundations work, building placement and paving. These activities would generate emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. Table 4.1-5, *Option A: Estimated Maximum Daily Construction Emissions*, summarizes the worst case maximum daily emissions (lbs) of pollutants associated with construction of Option A. Emissions modeling accounts for compliance with RCM AQ-1, which regulates fugitive dust emissions during demolition, grading, and construction activities to minimize emissions of PM₁₀ and PM_{2.5}.

Table 4.1-5 Option A: Estimated Maximum Daily Construction Emissions

	Maximum Emissions (pounds per day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Total Construction Emissions	1.2	7.4	12.2	< 0.1	1.0	0.7
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
On-site Emissions (lbs/day)	1.2	6.7	11.6	< 0.1	0.8	0.6
SCAQMD Localized Significance Thresholds (LSTs) ¹	N/A	57	585	N/A	4	3
Threshold Exceeded?	N/A	No	No	N/A	No	No

N/A = not applicable

Notes: All emissions modeling was completed using CalEEMod Version 2016.3.2. See Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*, for modeling results. Some numbers may not add up precisely due to rounding. Emission data is pulled from CalEEMod's "mitigated" results, which account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

¹ LSTs are for a one-acre project site in SRA-4 within 82 feet from the site boundary.

As shown in Table 4.1-5, *Option A: Estimated Maximum Daily Construction Emissions*, ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} emissions would not exceed SCAQMD regional emissions thresholds or LSTs. Therefore, construction emissions under Option A would be adequately controlled by existing regulations, and the proposed project not result in substantial air pollutant emissions. Because air pollutant emissions generated by construction activities would not exceed SCAQMD's regional significance thresholds or LSTs, construction would not contribute substantially to an existing or projected air quality violation. Impacts to air quality associated with construction of the proposed project would be less than significant.

Option B

Construction activities under Option B that would produce criteria pollutants include the following: construction worker travel to and from the site, delivery and hauling of construction supplies and debris to and from the site, demolition, and site preparation. These activities would generate emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. Table 4.1-6, *Option B Estimated Maximum Daily Construction Emissions*, summarizes the worst case maximum daily emissions (lbs) of pollutants associated with construction of Option A. Emissions modeling accounts for compliance with RCM AQ-1, which regulates fugitive dust emissions during demolition and construction activities to minimize emissions of PM₁₀ and PM_{2.5}.

Table 4.1-6 Option B: Estimated Maximum Daily Construction Emissions

	Maximum Emissions (pounds per day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Total Construction Emissions	1.2	10.9	12.1	< 0.1	1.0	0.6
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
On-site Emissions (lbs/day)	1.2	10.2	11.2	< 0.1	0.8	0.6
SCAQMD Localized Significance Thresholds (LSTs) ¹	N/A	57	585	N/A	4	3
Threshold Exceeded?	N/A	No	No	N/A	No	No

N/A = not applicable

Notes: All emissions modeling was completed using CalEEMod Version 2016.3.2. See Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*, for modeling results. Some numbers may not add up precisely due to rounding. Emission data is pulled from CalEEMod's "mitigated" results, which account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

¹ LSTs are for a one-acre project site in SRA-4 within 82 feet from the site boundary.

As shown in Table 4.1-6, *Option B: Estimated Maximum Daily Construction Emissions*, ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} emissions would not exceed SCAQMD regional emissions thresholds or LSTs. Therefore, construction emissions under Option B would be adequately controlled by existing regulations, and the proposed project not result in substantial air pollutant emissions. Because air pollutant emissions generated by construction activities would not exceed SCAQMD's regional significance thresholds or LSTs, construction would not contribute substantially to an existing or projected air quality violation. Impacts to air quality associated with construction of Option B would be less than significant.

Regulatory Compliance Measures

AQ-1, Demolition, Grading, and Construction Activities

Mitigation Measures

Mitigation is not required.

Impact AQ-3 OPERATION OF THE PROPOSED PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE SCAQMD REGION IS IN NONATTAINMENT UNDER APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARDS. THEREFORE, IMPACTS RELATED TO OPERATION WOULD BE LESS THAN SIGNIFICANT.

Option A

Operational emissions for Option A would be comprised of, emissions associated with energy consumption and area source emissions. The emissions associated with operation of the proposed project are shown in Table 4.1-7, *Option A: Estimated Operational Emissions*. As discussed above under Section 4.1.3, *Impact Analysis*, LSTs only apply to emissions in a fixed stationary location, such as a smokestack or gas station (SCAQMD 2008). As such, LSTs do not apply to operation of the proposed project because project operation would not involve land uses that are typically associated with substantial stationary emissions.

Table 4.1-7 Option A: Estimated Operational Emissions

Emission Source	Maximum Daily Emissions (lbs/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Energy	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Mobile	0	0	0	0	0	0
Total Project Emissions	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: All emissions modeling was completed using CalEEMod Version 2016.3.2. See Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*, for modeling results. Some numbers may not add up precisely due to rounding. Emission data is pulled from CalEEMod’s “mitigated” results which is a term of art for the modeling output and is not equivalent to mitigation measures that may apply to the CEQA impact analysis. The CalEEMod “mitigated” results include compliance with regulations and project design features that will be included in the project. Emissions presented are the highest of the winter and summer modeled emissions.

As shown in Table 4.1-7, *Option A: Estimated Operational Emissions*, overall operational emissions associated with Option A would not exceed SCAQMD regional thresholds for criteria pollutants for which the region is in nonattainment. Therefore, Option A would not contribute substantially to an existing or projected air quality violation and would have a less than significant impact. In addition, because criteria pollutant emissions and regional thresholds are cumulative in nature, Option A would not result in a cumulatively considerable net increase of criteria pollutants.

Option B

Under Option B, the site would remain vacant after the removal of the existing building. Operational emissions would be limited to area source emissions from the occasional use of site maintenance equipment to maintain the vacant lot. Therefore, Option B would not contribute substantially to an existing or projected air quality violation and would have a less than significant impact. In addition, because criteria pollutant emissions and regional thresholds are cumulative in nature, Option B would not result in a cumulatively considerable net increase of criteria pollutants.

Regulatory Compliance Measures

AQ-1, Demolition, Grading, and Construction Activities

Mitigation Measures

Mitigation is not required.

Threshold 4.1.3:	Would the project expose sensitive receptors to substantial pollutant concentrations?
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Impact AQ-4 THE PROPOSED PROJECT WOULD NOT INCREASE TRAFFIC ALONG LOCAL ROADWAYS AND, THEREFORE, WOULD NOT RESULT IN THE CREATION OF CO HOTSPOTS. ADDITIONALLY, THE PROJECT WOULD NOT SITE SENSITIVE RECEPTORS NEAR SOURCES OF TACs. IMPACTS RELATED TO EXPOSURE OF SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS WOULD BE LESS THAN SIGNIFICANT.

Carbon Monoxide (CO) Hotspots

Areas with high vehicle density, such as congested intersections, have the potential to create CO hot spots. A project's localized air quality impact is considered significant if CO emissions create a hot spot where either the California 1-hour standard of 20 ppm or the federal and State 8-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (Level of Service grade "E" or worse). However, the entire Basin is in conformance with State and federal CO standards, and most air quality monitoring stations no longer report CO levels. No stations in the vicinity of the project have monitored CO in the last four years. In 2012, the Long Beach-2425 Webster Street monitoring station detected an 8-hour maximum CO concentration of 2.57 ppm, which is below the federal and State standard of 9.0 ppm (CARB 2019).

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed in the vicinity of the project site was at the intersection of Wilshire Boulevard and Veteran Avenue, located on the west side of Los Angeles near the I-405 Freeway, which has an ADT of approximately 100,000 vehicles per day. The concentration of CO at this intersection was 4.6 ppm, which is below the State and federal standard of 9.0 ppm.

Major roads in the vicinity of the project site include Long Beach Boulevard, Atlantic Avenue, and Del Amo Boulevard. Of these, Del Amo Boulevard experiences the highest daily traffic volumes, which range between an average of 24,000 and 39,900 daily vehicles according to the most recent City of Long Beach Traffic Flow study (Long Beach Public Works Department 2014). Average daily vehicles on the other major roads in the vicinity of the project range between 17,600 and 28,700 (Long Beach Public Works Department 2014). Because ADT for these roadways is considerably lower than that of the identified Wilshire Boulevard/Veteran Avenue intersection, and CO concentrations at that intersection are below the state standard, the intersections in the vicinity would not have CO concentrations above the state standard.

Option A

As discussed in Section 5.11, *Transportation*, operation of the proposed project under Option A would increase the daily trips to and from the site to approximately 15 trips per day, which would

result in a minimal increase in daily trips and traffic volumes. Local mobile-source CO emissions would not result in or substantially contribute to concentrations that would exceed the 1-hour or 8-hour ambient air quality standards for CO. Option A localized air quality impacts related to CO hot spots would, therefore, be less than significant.

Option B

Under Option B, the project site would remain vacant after removal of the existing building. Therefore, there would be no daily trips to or from the site other than the occasional trip by Public Works personnel for site maintenance activities. Therefore, under Option B, local mobile-source CO emissions would be negligible and would not contribute to concentrations that would exceed the 1-hour or 8-hour ambient air quality standards for CO. Option B localized air quality impacts related to CO hot spots would, therefore, be less than significant.

Toxic Air Contaminants (TACs)

Construction of the project would result in the generation of diesel-exhaust particulate matter (DPM) emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities, and on-road diesel equipment used to bring materials to and from the project site.

Generation of DPM from construction projects typically occurs in a single area for a relatively short period. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015).

Option A

Under Option A, construction-related DPM emissions would occur over an approximately 6-month period during which demolition, grading, structural and site work, and paving phases would occur. Thus, the exposure to nearby sensitive receptors under Option A would be approximately one percent of the total exposure period (30 years) used for health risk calculation. As project construction would not be anticipated to persist for multiple years, DPM generated by project construction is not expected to create conditions where the probability is greater than ten in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels, off-road diesel engine retrofits, and new low-emission diesel engine types, the DPM emissions of individual equipment would be substantially reduced in future years. Therefore, project construction under Option A would not expose sensitive receptors to substantial pollutant concentrations.

The primary source of potential TACs associated with operation of Option A would include DPM from Fire Station trucks and the onsite emergency backup generator. However, these activities, and

the land uses associated with the project, are not considered land uses that generate substantial TAC emissions based on review of the air toxic sources listed in SCAQMD's and CARB's guidelines. The Fire Station No. 9 temporary modular structure would include an emergency backup generator on site. The emergency generator that would be used as part of the proposed project is the generator that was already in place at the station prior to its temporary closure. The generator is already permitted and would not constitute a change from previous conditions. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, etc.) for the proposed use would be below thresholds warranting further study under the California Accidental Release Program.

Option A is an in-kind replacement of an existing fire station and as with the existing use, would not contain substantial TAC sources and would remain consistent with CARB and SCAQMD guidelines. As such, the project would not result in the exposure of off-site sensitive receptors to significant amounts of carcinogenic or toxic air contaminants. Therefore, Option A would not expose sensitive receptors to substantial concentrations of TACs and impacts would be less than significant.

Option B

Under Option B, construction-related DPM emissions would occur over an approximately two-month period during which demolition and site preparation activities would take place. Thus, the exposure to nearby sensitive receptors under Option B would be approximately 0.6 percent of the total exposure period (30 years) used for health risk calculation. As project construction would not be anticipated to persist for multiple years, DPM generated by project construction is not expected to create conditions where the probability is greater than ten in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels, off-road diesel engine retrofits, and new low-emission diesel engine types, the DPM emissions of individual equipment would be substantially reduced in future years. Therefore, project construction under Option B would not expose sensitive receptors to substantial pollutant concentrations.

Under Option B, the project site would remain vacant and activities on the site would be limited to occasional landscape maintenance by Public Works. There would be no major sources of TAC emissions during operation of Option B. Therefore, Option B would not expose sensitive receptors to substantial concentrations of TACs and impacts would be less than significant.

Regulatory Compliance Measures

AQ-1, Demolition, Grading, and Construction Activities

AQ-2, Odors

AQ-3, Engine Idling

AQ-4, Emissions Standards

Mitigation Measures

Mitigation is not required.

Threshold 4.1.4:	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?
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Impact AQ-5 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.

Option A

Construction of Option A would generate diesel fuel odors from equipment. The odors would be limited to construction activities, which would be temporary and only occur for approximately 6 months. With respect to operation, the SCAQMD's *CEQA Air Quality Handbook* (1993) identifies land uses associated with odor complaints to be agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Office/government facility uses are not identified on this list. In addition, the proposed project would replace the existing use with the same use and thus does not represent a new source of odors. Therefore, impacts under Option A would be less than significant.

Option B

Similar to Option A, construction activities under Option B would generate diesel fuel odors from equipment use during the approximately two-month construction period. There is no activity associated with operation of Option B the site would remain vacant and no odors would be emitted. Therefore, any construction-related odors associated with Option B would be temporary and would not create long-term objectionable odors affecting a substantial number of people. Impacts under Option B would be less than significant.

Regulatory Compliance Measures

AQ-2, *Odors*

AQ-3, *Engine Idling*

Mitigation Measures

Mitigation is not required.

d. Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, the cumulative impacts analysis is based on currently planned and pending projects in Long Beach and surrounding areas. The following analysis discusses the potential cumulative impacts associated with the proposed project in conjunction with other projects in the vicinity.

The Basin is a nonattainment area for the federal and State standards for ozone and PM_{2.5} and the State standards for NO₂ and PM₁₀. Any projects in the Los Angeles metropolitan area could have the potential to contribute to the existing exceedances of ambient air quality standards when taken as a whole with current development. The SCAQMD's approach to determining whether a project's emissions of criteria air pollutants are cumulatively considerable is to first determine whether the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If a proposed project does not generate emissions exceeding SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects

only if the project is part of an ongoing regulatory program, such as SCAQMD's Air Toxics Control Plan and AB 2588 Program, aimed at reducing criteria pollutants from certain sources, or is considered in a Program EIR, and the related projects are within approximately one mile of the project. If there are related projects within a one-mile radius that are part of an ongoing regulatory program or are considered in a Program EIR, then the additive effect of the related projects should be considered.

The proposed project is not part of an ongoing regulatory program and is not being studied as part of an existing Program EIR. As discussed in Impact AQ-1, Option A and Option B would not conflict with implementation of the applicable AQMP. Furthermore, as discussed in Impacts AQ-2 and AQ-3, daily emissions of construction-related pollutants and operational emissions under both Option A and Option B would not exceed SCAQMD regional significance thresholds or LSTs. Therefore, the proposed project's contribution to cumulative levels of any criteria pollutant would not be cumulatively considerable.

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4.2 Cultural, Paleontological, and Tribal Cultural Resources

This section assesses potential impacts to cultural, paleontological, and tribal cultural resources from the Option A and Option B (or the proposed project). Rincon Consultants, Inc. (Rincon) and GPA Consulting (GPA) completed cultural resources assessments for the project which included a records search at the South Central Coastal Information Center (SCCIC), a Native American Heritage Commission (NAHC) Sacred Lands File search, a survey of the project site, archival research, a resource evaluation and preparation of a historic assessment report. The Historic Resource Evaluation Report, which documents the historic built-environment resources of the project site, is included as Appendix D, *Cultural and Tribal Cultural Resources*, of this EIR (GPA 2019). The results of the cultural resources study completed by Rincon is also included in Appendix D of this EIR (Rincon 2019). The analysis in this section is based on the results of these reports and background research about the paleontological sensitivity of the project area.

The relevant regulatory requirements are also discussed, as are the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

4.2.1 Setting

a. Historical Background

Prehistory

The project site is located within the City of Long Beach. The prehistoric chronological sequence that is applicable to near-coastal and many inland areas within southern California is generally divided into four periods: Early Man, Milling Stone, Intermediate, and Late Prehistoric (Byrd and Raab 2007). The Early Man - Horizon I period (ca. 10,000 – 6,000 B.C.) is represented by numerous pre-8,000 B.C. sites identified along the mainland coast and Channel Islands. Early Man - Horizon I sites are generally associated with a greater emphasis on hunting than in later periods, though recent data indicates that the economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources. The Milling Stone – Horizon II period (ca. 6,000 – 3,000 B.C.) is characterized by subsistence strategies centered on collecting plant foods and small animals, including an apparent importance of seed processing suggested by the appearance and abundance of stone grinding implements, namely milling stones and handstones. The Intermediate – Horizon III period (ca. 3,000 B.C. – A.D. 500) is characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. A pronounced trend occurred toward greater adaptation to regional or local resources including an increased variety and abundance of fish, land mammals, and sea mammals along the coast. Tool kits for hunting, fishing, and processing food and other resources reflect this increased diversity, with larger knives, flake scrapers, shell fishhooks, and drill-like implements, and various projectile points being more common than in the preceding period. An increase in mortars and pestles also became more common, indicating an increasing reliance on acorns. The Late Prehistoric – Horizon IV period (ca. A.D. 500 – Historic Contact) experienced further increase in the diversity of food resources demonstrated by more classes of artifacts, including finely sharpened projectile points associated with usage of the bow and arrow. Other items include steatite cooking vessels and containers, a variety of bone tools, and personal ornaments made from shell, bone, and stone. During this period, there was also an

increase in population size accompanied by the advent of larger, more permanent villages (Byrd and Raab 2007).

Ethnography

The project lies within an area traditionally occupied by the Native American group known as the Gabrieleño (Kroeber 1925: Plate 57; Bean and Smith 1978). The name Gabrieleño was applied by the Spanish to those natives that were attached to Mission San Gabriel. Today, most contemporary Gabrieleño prefer to identify themselves as Tongva. Tongva territory included the Los Angeles basin and southern Channel Islands as well as the coast from Aliso Creek in the south to Topanga Creek in the north. The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin region (Bean and Smith 1978).

The Tongva established large permanent villages and smaller satellite camps throughout their territory. Society was organized along patrilineal non-localized clans, a common Takic pattern. Tongva subsistence was oriented around acorns supplemented by roots, leaves, seeds, and fruits of a wide variety of plants. Meat sources included large and small mammals, freshwater and saltwater fish, shellfish, birds, reptiles, and insects. Tongva employed a wide variety of tools and implements to gather and hunt food. The digging stick, the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks were common tools. Like the Chumash, the Tongva made oceangoing plank canoes (known as *ti'at*) capable of holding 6 to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands (Bean and Smith 1978).

History

Unless otherwise noted, the following setting is summarized from the existing conditions report prepared for the Historic Preservation Element of the City's General Plan (Long Beach Development Services Department and HRG 2009) and from the historical resources report prepared for the current project (GPA 2019).

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment of a settlement at San Diego in 1769 and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements. In 1769 Captain Gaspar de Portolá led an expedition composed of soldiers, missionaries, Native Americans from Baja California, and Mexican civilians into what was then known as Alta California. The first Spanish settlements were founded at the presidio of San Diego (a military outpost) and Mission San Diego Alcalá. The expedition proceeded north and reached the present-day boundaries of Los Angeles two months later. On September 8, 1771, Fathers Pedro Benito Cambón and Angel Fernandez Somera y Balbuena established the Mission San Gabriel Arcángel east of present-day downtown Los Angeles. In addition to Mission San Gabriel, the Spanish also established a pueblo (town) in the Los Angeles Basin known as El Pueblo de la Reina de los Angeles de la Porciúncula in 1781. This was one of only

three pueblos established in Alta California and eventually became the City of Los Angeles. It was also during this period that the Spanish crown began to make land grants permitting soldiers and other prominent citizens to establish ranchos. To manage and expand their herds of cattle on these large ranchos, colonists enlisted the labor of the surrounding Native American population. Native populations were also negatively affected by the mission system which was put in place to administer them as well as convert them to Christianity. The increased European presence during this period led to the spread of diseases foreign to the Native Americans, contributing to the devastation of their population.

The Mexican Period commenced when news of the success of the Mexican War of Independence (1810-1821) against the Spanish crown reached California in 1822. This period saw the federalization and distribution of mission lands in California with the passage of the Secularization Act of 1833. This Act enabled Mexican governors in California to distribute former mission lands to individuals in the form of land grants. Successive Mexican governors made more than 700 land grants between 1834 and 1846, putting most of the state's lands into private ownership for the first time. During the supremacy of the ranchos, landowners largely focused on the cattle industry and devoted large tracts to grazing. The land within which the project site is located was once part of Rancho El Rodeo de las Aguas, initially claimed in 1822 by Mexican settlers Maria Rita Valdez Villa and her husband Vicente Valdez, a Spanish soldier.

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, and California was made a state with the Compromise of 1850. The Gold Rush began in 1848, resulting in an influx of people to California seeking gold. Cattle were no longer desired mainly for their hides but were important for their meat and to produce other goods. Eventually the cattle boom ended, and severe drought years reduced the productivity of the ranchos. Many ranchos in Los Angeles County were sold or otherwise acquired by Americans in the mid-1800s, and most were subdivided into agricultural parcels or towns. The County of Los Angeles was established on February 18, 1850, and the City of Los Angeles incorporated two months later. By 1876, the County had a population of 30,000.

The City of Long Beach is situated on the former 300,000-acre rancho lands granted in 1784 to Manuel Nieto, a Spanish Soldier. In 1834, the lands were divided into five smaller ranchos, including Rancho Los Alamitos and Rancho Los Cerritos, which encompassed the majority of land that now comprises the City of Long Beach (Long Beach Development Services Department and Historic Resources Group 2009). The Tongva village of Tibahangna formerly occupied a portion of Rancho Los Cerritos north of the present location of the ranch house (Engstrand 2000). Post-Contact settlement within the Long Beach area began as early as 1875, when Jotham Bixby began selling lots along the Los Angeles River in the area that is now west Long Beach. A second settlement period began in 1881, when William Erwin Willmore entered into an agreement with J. Bixby & Co. to develop the American Colony, a 4,000- acre piece of Rancho Los Cerritos with a 350-acre town site that was named Willmore City. In 1884, the American Colony was purchased by the San Francisco real estate firm Pomeroy and Mills, who reorganized as the Long Beach Land and Water Company. By 1885, the town contained approximately fifty-one residences, a church, and numerous businesses. On February 10, 1888, the City was incorporated, with 800 citizens and approximately 59 buildings (Long Beach Development Services Department and Historic Resources Group 2009).

By 1904, the area was served by the Pacific Electric Streetcar Company, local trolleys, and the Southern Pacific line and the San Pedro, Los Angeles, and Salt Lake Railroad (SPLA&SL) line, encouraging additional growth of both seasonal tourists and permanent residents from points east. During this time, the shipping industry also emerged in Long Beach; in 1911, the Port of Long Beach

opened and in 1918 Long Beach and the U.S. Army Corps of Engineers permanently established regular navigation between the Los Angeles and Long Beach Inner Harbors by improving the Cerritos Channel (Long Beach Development Services Department and Historic Resources Group 2009).

Specifically, the proposed project is located on the border between the Los Cerritos and Bixby Knolls neighborhoods in the City of Long Beach. The area is located south of the Southern Pacific railroad tracks between Atlantic Avenue and the Los Angeles River and the Los Altos area in southeast Long Beach. The area remained agricultural into the 1920s with subdivisions of small lots used for farming. By the 1920s, industry became the primary economic force in the area. The discovery of oil led to a population and construction boom and the agricultural land was subdivided, sold, and developed for residential, commercial, and industrial expansion (GPA 2019).

During the 1920s, the area was one of the fastest growing in Long Beach. The middle class grew tremendously in size and affluence due to wealth created by the stock market as well as the booming oil and lumber industries. Residential building construction in the form of single-family houses, apartment buildings, and bungalow courts was at a record high to meet the growing demand. Residences were designed in more traditional architectural styles such as Tudor Revival, Colonial Revival, and Spanish Colonial Revival (GPA 2019).

In 1937, the Jotham Bixby Company announced its plans to develop a neighborhood of custom homes called Bixby Knolls. Hundreds of new residences were planned in neighborhoods throughout Long Beach and surrounding areas as a result of population growth during the mid-1930s. A substantial portion of the residential development during this period was situated on land that was formerly associated with Rancho Los Cerritos, owned by the Bixby family. Bixby Knolls quickly established itself as a unique community with several housing developments. Importance was placed on the neighborhood's aesthetic, with everything from architectural styles to street details requiring approval from a design committee (GPA 2019).

Following the end of World War II, nearly 13 million veterans returned to the United States, ready to buy homes, begin families, and settle down into suburban life away from the city center. Residential development spread throughout North Long Beach, with a number of new subdivisions appearing throughout the Bixby Knolls area. In addition to single-family homes, thousands of new multiple family properties—including duplexes, garden apartments, and “dingbat” apartments—were built after the war. By the late 1950s, the impact of the automobile began to be reflected in the built environment, as the economic potential from commercial establishments along heavily traveled highways and thoroughfares prompted roadside development. Suburban shopping centers appeared adjacent to new developments (GPA 2019).

b. Existing Conditions

The project site is located on a 0.13-acre lot at 3917 Long Beach Boulevard. The subject property stretches from Long Beach Boulevard on the east to North Virginia Road to the west. Long Beach Boulevard is a major four-lane street with two-way traffic traveling north-south and a center turning lane. North Virginia Road is a two-lane street with two-way traffic traveling north-south. The surrounding buildings are generally low-rise commercial buildings constructed between the 1930s and 2000s, low- to mid-rise multi-family residential buildings constructed between the 1960s and 1980s, and single-family residences constructed between the 1920s and 1950s. The property is occupied by Fire Station No. 9, which was constructed in 1938 in the Tudor Revival style. The building is one-and-a-half stories in height with a 5,548 square-foot footprint and occupies approximately 48 percent of the project site. The majority of the lot is paved, and the only vegetation is a small strip of unpaved grassy area along the south of the building and decorative

hedges near the building's main entrance. Thus, soils within the project site have been previously graded and disturbed. The proposed project would involve demolition of the existing building, and the replacement of the building with a single-story, temporary modular structure.

The results of a Historical Resources Evaluation found the existing building is significant for its representation of the partnership between the City and Works Progress Administration (WPA), which resulted through the need to rebuild and add public services after the 1933 earthquake. While significant and potentially eligible under Criterion A/1 of the National and California registers, the building was ultimately found ineligible for either register due to a lack of integrity. The City of Long Beach criteria vary slightly from the National and California register criteria, but generally mirror the aspects of significance evaluated under the National Register criteria at the local level of significance. Thus, Fire Station No. 9 appears to be significant under local Criterion A for its association with the City and WPA as outlined above. Although some aspects of integrity have been diminished, such as setting, workmanship and materials, the property retains integrity comparable to that of Station No. 12, which is a listed Historic Landmark. Therefore, Fire Station No. 9 retains sufficient integrity to be considered eligible for listing as a Historic and/or Local Landmark. As a property that is eligible for listing in a local historic register, the building is considered a historical resource pursuant to CEQA.

The cultural resources records search and NAHC Sacred Lands File search conducted for the project did not result in the identification of any archaeological resources or tribal cultural resources at or near the project site.

The City of Long Beach prepared and mailed letters to five Native American contacts on December 10, 2019 in accordance with the requirements of AB 52, which are discussed further below in Section 4.2.2, *Regulatory Setting*. The City received one response for consultation from the Gabrieleno Band of Mission Indians – Kizh Nation. During consultation, the Gabrieleno Band of Mission Indians – Kizh Nation noted that the project site is in the vicinity of Rancho Los Cerritos, which was the historic location of the tribal village, *Tevaaxa'anga*. As a result of consultation, several mitigation measures have been incorporated in order to avoid or minimize impacts to any potential tribal cultural resources located on the project site. The City completed AB 52 consultation with the Gabrieleno Band of Mission Indians – Kizh Nation on July 6, 2020.

Paleontological Resources Setting

Paleontological resources (i.e., fossils) are the remains and/or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on a number of factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction.

The project site is situated within the Los Angeles Basin in the northern Peninsular Ranges Province, one of 11 major provinces in the state (California Geological Survey [CGS] 2002). These provinces are “naturally defined geologic regions that display a distinct landscape or landform” (CGS 2002). The Peninsular Ranges trend northwest-southeast and extend 900 miles from the Los Angeles Basin to the tip of Baja California in Mexico. The province varies from 30 to 100 miles wide and is bounded on the east by the Colorado Desert and on the west by the coastal plain and the Gulf of California

(Norris and Webb 1990). The Los Angeles Basin is approximately 60 miles long and 35 miles wide and is defined by Yerkes et al. (1965) as the region bounded by the northern foothills of the Santa Monica Mountains to the north, the San Jose Hills and the Chino fault on the east, and the Santa Ana Mountains and San Joaquin Hills in the southeast. The Los Angeles Basin is underlain by a structural depression that was the site of extensive accumulation of interstratified fluvial, alluvial, floodplain, shallow marine, and deep shelf deposits on underlying Mesozoic metamorphic and granitic plutonic basement rocks. Sediment accumulation and subsidence has occurred there since the Late Cretaceous and has reached a maximum thickness of more than 20,000 feet (McCulloh and Beyer 2004; Norris and Webb 1990; Yerkes et al. 1965). During that time, transgressions and regressions (rise and fall of relative sea level) related to tectonic uplift, subsidence, and Pleistocene glaciation resulted in both marine and terrestrial sedimentary deposits throughout the Los Angeles Basin (Beyer 1995; McCulloh and Beyer 2004).

According to the published geologic mapping by Saucedo et al. (2016), the project site is entirely underlain by older Quaternary (late to middle Pleistocene) shallow marine deposits (Qom). The Pleistocene marine deposits consist of reddish brown, poorly sorted, slightly consolidated to indurated siltstone, sandstone, and conglomerate deposits. Locally, this unit also includes deposits of older Quaternary alluvium consisting of moderately well consolidated, poorly sorted fluvial deposits including gravel, sand, and clay (Saucedo et al. 2003). Alluvial sediments of Pleistocene age have a well-documented record of abundant and diverse vertebrate fauna throughout California, especially within the Los Angeles Basin. Fossil specimens of whale, sea lion, horse, ground sloth, bison, camel, mammoth, dog, pocket gopher, turtle, ray, bony fish, shark, and bird have been reported (Agenbroad 2003; Bell et al. 2004; Jefferson 1985, 1989, 1991; Maguire and Holroyd 2016; Merriam 1911; Reynolds et al. 1991; Savage 1951; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Tomiya et al. 2011; Wilkerson et al. 2011; Winters 1954; University of California Museum of Paleontology 2020).

According to paleontological collections records maintained at the Natural History Museum of Los Angeles County (NHMLAC), at least seven vertebrate localities were identified within older Quaternary alluvial deposits in the general vicinity of the project site (McLeod 2015). The NHMLAC reports several vertebrate localities, including LACM 1021, LACM 1022, LACM 6802, and LACM 3660, were identified on the western side of the Long Beach Airport, less than two miles east of the project site. LACM 6802, identified near Bixby Road between Atlantic Avenue and Orange Avenue, yielded undetermined vertebrate fossil specimens from 16 feet below ground surface. LACM 3660 produced a specimen of mammoth (*Mammuthus*) from 19 feet below ground surface at Cover Street between Pixie Avenue and Paramount Boulevard. LACM 1021 yielded fossilized specimens of bird (*Aves*) and mammoth at unknown depths near Spring Street and Cherry Avenue, south of I-405, and LACM 1022 produced fossil specimens of birds from an unspecified depth near the intersection of Spring Street and Orange Avenue. Several additional localities were identified approximately four miles southwest of the project site. LACM 3319 yielded a fossil specimen of mammoth at a depth of 30 feet below ground surface between the Los Angeles River and the Dominguez Channel. Further west of the project site, south of I-405, and east of I-110, two additional vertebrate localities (LACM 1919 and LACM 4129) produced fossil specimens of mammoth and camel from depths between 10 to 24 feet below ground surface (McLeod 2015).

4.2.2 Regulatory Setting

This section includes a discussion of the applicable federal, state, and local laws, ordinances, regulations, and standards governing cultural resources and paleontological resources, which must be adhered to before and during implementation of the proposed project.

National Register of Historic Places

The National Register of Historic Places (NRHP) was established by the National Historic Preservation Act (NHPA) of 1966 as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment” (CFR 36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B:** It is associated with the lives of persons who are significant in our past;
- Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or
- Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history.

California Environmental Quality Act

Paleontological resources are protected under the California Environmental Quality Act (CEQA), which states, in part, that a project will “normally” have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in of Appendix G of the State CEQA Guidelines, the Environmental Checklist Form, the question is posed, “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, mitigation of adverse impacts, to the extent practicable, to paleontological resources is mandated by CEQA.

California Register of Historical Resources

CEQA (Section 21084.1) requires a lead agency determine whether a project could have a significant effect on historical resources and tribal cultural resources (Public Resources Code [PRC] Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building,

structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

PRC Section 5024.1, Section 15064.5 of the *CEQA Guidelines*, and PRC Sections 21083.2 and 21084.1 were used as the basic guidelines for this cultural resources study. PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, as enumerated according to CEQA below.

(3) [...] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (2) Is associated with the lives of persons important in our past;
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP and/or CRHR or adversely alter the significance of a resource listed in or eligible for

listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (*CEQA Guidelines*, Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR (*CEQA Guidelines*, Section 15064.5[b][2][A]).

Assembly Bill 52

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, “tribal cultural resources.” Assembly Bill 52 establishes that “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and meets either of the following criteria:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

- (1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
- (2) Establish a new category of resources in CEQA called “tribal cultural resources” that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
- (3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
- (4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.

- (5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision making body of the lead agency.
- (6) Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
- (7) Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
- (8) Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
- (9) Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Long Beach Cultural Heritage Ordinance

The City’s Cultural Heritage Ordinance (Municipal Code Title 2 Chapter 2.63) was adopted in 2015 and authorizes the Cultural Heritage Commission to recommend the nomination of local landmarks and landmark districts to the City Council. The Council may designate local landmarks and historic districts by the procedures outlined in the ordinance. An eligible property may be nominated and designated as a landmark if it retains integrity and manifests one (1) or more of the following criteria:

- A) It is associated with events that have made a significant contribution to the broad patterns of the City’s history
- B) It is associated with the lives of persons significant in the City’s past
- C) It embodies the distinctive characteristics of a type, period, or method of construction, or it represents the work of a master or it possesses high artistic values
- D) It has yielded, or may be likely to yield, information important in prehistory or history

A group of properties qualify for designation as a Landmark District if it retains integrity as a whole and meets the following criteria:

- A) The grouping represents a significant and distinguishable entity that is significant within a historic context.

- B) A minimum of sixty percent (60%) of the properties within the boundaries of the proposed Landmark District qualify as a contributing property.

California Public Resources Code

Section 5097.5 of the California Public Resource Code (PRC) states “no person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface” any “vertebrate paleontological site” on public lands without the “permission of the public agency having jurisdiction over such lands.” Violation of this section is a misdemeanor. As used in this PRC section, “public lands” means lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

4.2.3 Impact Analysis

a. Methodology and Significance Thresholds

The analysis of cultural resources impacts is based on empirical research presented in the Cultural Resources Assessment (Appendix D, *Cultural and Tribal Cultural Resources*) prepared for the proposed project. The methodologies and significance thresholds employed for the cultural resources impact analyses are described below and in the *Regulatory Setting*, above.

In accordance with Appendix G of the State CEQA Guidelines, an impact to Cultural Resources is considered significant if it can be demonstrably argued that the project would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5;
3. Disturb any human remains, including those interred outside of dedicated cemeteries.

In addition, this section of the Draft EIR considers impacts to paleontological resources. The proposed project would have an impact if it:

4. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

The significance of an archaeological deposit and subsequently the significance of any impact are determined by the criteria established in the *CEQA Guidelines*, as provided in the *Regulatory Setting*.

If an archaeological resource does not meet either the historical resource or the more specific “unique archaeological resource” definition, impacts do not need to be mitigated [13 PRC 15064.5 (e)]. Where the significance of a site is unknown, it is presumed to be significant for the purpose of the EIR investigation.

In accordance with Appendix G of the *CEQA Guidelines*, an impact to Tribal Cultural Resources from the proposed project would be significant if the project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape

that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

b. Project Impacts and Mitigation Measures

Threshold 4.2.1:	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5.
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Impact CR-1 CONSTRUCTION OF THE PROPOSED PROJECT WOULD INVOLVE DEMOLITION OF A BUILDING THAT IS ELIGIBLE FOR LISTING AS A HISTORIC RESOURCE. DUE TO THIS IRREVERSIBLE LOSS OF A HISTORIC RESOURCE, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As discussed in *Existing Conditions*, the results of a Historic Resource Evaluation (Appendix D) found that the existing building is found ineligible for the NRHP and CRHR register due to a lack of integrity, but is eligible for designation as a local Long Beach Historic Landmark under Criterion A in the area of Institutional Development as it represents the partnership between the City and WPA created to rebuild and add public services after the 1933 earthquake. As such, the building is considered a historic resource in accordance with CEQA.

According to CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment. Substantial adverse change is defined as demolition, destruction, relocation, or alteration activities that would impair the significance of the historic resource.

Option A

Under Option A, the project would result in the demolition of the existing Fire Station No. 9 building, which would result in a substantial adverse change to a historic resource. Although not capable of reducing impacts to below the level of significance, three mitigation measures, CR-1 through CR-3, have been identified that would minimize project impacts related to the demolition of the existing building to the maximum extent practicable.

Option B

Similar to Option A, Option B would involve the demolition of the Fire Station No. 9 structure. The three mitigation measures, CR-1 through CR-3, would also apply to Option B and would reduce project impacts to the extent feasible. However, impacts under Option B would remain significant and unavoidable.

Mitigation Measures

Mitigation Measures CR-1 through CR-3 are proposed to minimize impacts related to demolition of a historic resource.

CR-1 Building Recordation

Archival documentation of as-built and as-found condition shall be prepared for Fire Station No. 9 building at 3917 Long Beach Boulevard prior to demolition. Prior to issuance of demolition permits, the Department of Public Works shall ensure that documentation of the buildings and structures proposed for demolition is completed that follows the general guidelines of Historic American Building Survey (HABS)-level III documentation. The documentation shall include high resolution digital photographic recordation, a historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified professional who meets the standards for history, architectural history, or architecture as set forth by the Secretary of the Interior's Professional Qualification Standards (36 CFR, Part 61). The original archival-quality documentation shall be offered as donated material to the Billie Jean King Main Library, Historical Society of Long Beach, and the Long Beach Firefighter's Museum to make it available for current and future generations. Archival copies of the documentation also would be submitted to the City of Long Beach Department of Public Works, where it would be available to local researchers.

CR-2 Interpretive Plaque

An interpretive plaque discussing the history of the building, its significance, and important details and features shall be installed at the site of Fire Station No. 9. The plaque shall be installed on a publicly accessible outdoor location. The plaque shall include images and details from the Historic American Building Survey (HABS) documentation and any collected research pertaining to the historic property. The content shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History (36 CFR, Part 61). Installation of the plaque shall be completed within one year of the date of completion of the proposed project.

CR-3 Salvage Plan

Historic architectural features and materials from Fire Station No. 9 shall be offered to architectural salvaging organizations. The Department of Public Works shall seek the guidance of Long Beach Heritage to identify the appropriate organizations and provide guidance on the salvaging process. An inventory with brief descriptions of salvageable items shall be created to provide to architectural salvaging organizations.

Significance After Mitigation

Implementation of Mitigation Measures CR-1 through CR-3 would minimize significant direct impacts to the historic resource to the maximum extent feasible. However, the demolition of this historical resource under Option A or Option B would still remain a significant and unavoidable adverse impact after implementation of required mitigation.

Threshold 4.2.2:	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5.
Threshold 4.2.3:	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
Threshold 4.2.4:	Disturb any human remains, including those interred outside of dedicated cemeteries.
Threshold 4.2.5:	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact CR-2 CONSTRUCTION OF THE PROPOSED PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES SUCH AS GRADING, WHICH HAVE THE POTENTIAL TO UNEARTH OR ADVERSELY IMPACT PREVIOUSLY UNIDENTIFIED ARCHAEOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Impact CR-3 CONSTRUCTION OF THE PROPOSED PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES SUCH AS GRADING, WHICH HAVE THE POTENTIAL TO UNEARTH OR ADVERSELY IMPACT PREVIOUSLY UNIDENTIFIED PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Impact CR-4 CONSTRUCTION OF THE PROPOSED PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES SUCH AS GRADING, WHICH HAVE THE POTENTIAL TO UNEARTH OR ADVERSELY IMPACT PREVIOUSLY UNIDENTIFIED TRIBAL CULTURAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Impact CR-5 CONSTRUCTION OF THE PROPOSED PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES SUCH AS GRADING, WHICH HAVE THE POTENTIAL TO UNEARTH OR ADVERSELY IMPACT PREVIOUSLY UNIDENTIFIED HUMAN REMAINS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

As discussed in *Existing Conditions*, the project site is within an urbanized area and has been previously graded and paved. Because the project site has been developed previously, any surficial archaeological resources, human remains, or tribal cultural resources that may have been present at one time have likely been disturbed and the likelihood of encountering intact resources is low. However, during tribal consultation, the Gabrieleno Band of Mission Indians – Kizh Nation noted that the project site is approximately 4,000 feet south of Rancho Los Cerritos, which was the historic site of the tribal village, *Tevaaxa'anga*. While there is no evidence that tribal cultural resources exist

on the surface of the project site, it is possible that previously unknown tribal cultural resources associated with the historic village at Rancho Los Cerritos could exist in undisturbed soils on the site. During consultation, the Gabrieleno Band of Mission Indians – Kizh Nation provided mitigation measures in order to avoid or limit potential impacts of project construction on tribal cultural resources.

Option A

Under Option A, project ground disturbance would reach a maximum depth of four feet below ground surface during excavation associated with the temporary modular structure. Due to the depth of soil cover overlying the older Quaternary sedimentary deposits, impacts to paleontological resources are not expected above five feet below ground surface. Given that the fossiliferous deposits may occur at greater depths than anticipated project disturbance, the potential for encountering fossil resources during project-related ground disturbance is low and impacts to paleontological resources are not anticipated. Although project implementation is not expected to uncover archaeological resources, paleontological resources, human remains, or tribal cultural resources, the possibility for such resources exists and therefore impacts would be potentially significant. Mitigation Measures CR-4 through CR-12 would be implemented under Option A in order to reduce potential impacts to previously undiscovered tribal cultural and paleontological resources.

Option B

Under Option B, project ground disturbance would reach a maximum depth of one foot below ground surface during removal of the building and site preparation. Similar to Option A above, impacts to paleontological resources are not expected above five feet below ground surface. Although project implementation is not expected to uncover archaeological resources, paleontological resources, human remains, or tribal cultural resources, the possibility for such resources exists and therefore impacts would be potentially significant. Mitigation Measures CR-4 through CR-12 would be implemented under Option B in order to reduce potential impacts to previously undiscovered tribal cultural and paleontological resources.

Mitigation Measures

The following mitigation measures would reduce impacts related to previously unidentified archaeological, paleontological, and tribal cultural resources to a less than significant level.

CR-4 Unanticipated Discovery of Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for California Register of Historical Resources (CRHR) eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery, excavation, Native American consultation, and archaeological monitoring may be warranted to mitigate any significant impacts to cultural resources.

CR-5 Unanticipated Discovery of Paleontological Resources

In the event an unanticipated fossil discovery is made during the course of project development, then in accordance with SVP (2010) guidelines, it is the responsibility of any worker who observes fossils within the project site to stop work in the immediate vicinity of the find and notify a qualified professional paleontologist who shall be retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted (SVP 2010). Work in the area of the discovery will resume once the find is properly documented and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring will be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.

CR-6 Retain a Native American Monitor

The lead agency shall retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting tribal cultural resources.

CR-7 Professional Standards

Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

CR-8 Unanticipated Discovery of Tribal Cultural Resources

Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of

avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.

Pursuant to Public Resources Code Sections 21083.2(b), preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All tribal cultural resources shall be returned to the Tribe.

Any historic archaeological material that is not Native American in origin shall be curated at a public, nonprofit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.

CR-9 Unanticipated Discovery of Human Remains and Associated Funerary Objects

Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.

CR-10 Resource Assessment and Continuation of Work Protocol

Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

CR-11 Kizh-Gabrieleno Procedures for Burials and Funerary Remains

If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

CR-12 Treatment Measures

Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

Significance After Mitigation

Through the monitoring of ground disturbance and evaluation of any unidentified cultural resources, should they be discovered, implementation of Mitigation Measures CR-4 through CR-12 would reduce impacts of Option A or Option B to previously unidentified archaeological resources, paleontological resources, human remains, and tribal cultural resources to a less than significant level.

c. Cumulative Impacts

The proposed project, in conjunction with other nearby planned, pending, and potential future projects in the City of Long Beach, as discussed in Section 3, *Environmental Setting*, would have the potential to adversely impact additional cultural, tribal cultural, and paleontological resources. As discussed above, impacts to tribal cultural and paleontological resources under Options A and B would be less than significant with mitigation incorporated. With the proposed mitigation measures identified in this section of the EIR, impacts to historic resources under Option A and Option B would be significant and unavoidable at the project level; however, these impacts are site-specific and not cumulative in nature. In addition, the project would not be expected to result in cumulative adverse impacts to historic resources as it is the only proposed project in the vicinity that involves the demolition of a historic building.

As such, Option A and Option B of the proposed project would not contribute to cumulative impacts on cultural resources outside the project site. In addition, individual development proposals are

reviewed separately by the appropriate jurisdiction and undergo environmental review when it is determined that the potential for significant impacts exist. In the event that future cumulative projects would result in impacts to known or unknown cultural and paleontological resources, impacts to such resources would be addressed on a case-by-case basis. Therefore, impacts related to cultural, paleontological, and tribal cultural resources would not be cumulatively considerable.

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4.3 Greenhouse Gas Emissions and Energy

This section analyzes greenhouse gas (GHG) emissions, potential impacts related to climate change, and energy use associated with either Option A or Option B (proposed project or project). The analysis herein is based partially on data from project specific, California Emissions Estimator Model Version 2016.3.2 (CalEEMod) estimates (Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*).

The relevant regulatory requirements are also discussed, as are the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

4.3.1 Setting

a. Climate Change and Greenhouse Gases

Earth's atmosphere plays an important role in regulating the climate by mediating the amount of radiation that enters and leaves the Earth's surface. A specific class of atmospheric gases, referred to as GHGs, play a particularly important role in this process. Due to the chemical properties of GHGs, they absorb little of the solar radiation coming through the atmosphere, and more of the longer wavelength radiation emitted from the Earth's surface. By letting radiation in, but reducing its ability to escape out, GHGs act like the glass ceiling of a greenhouse, trapping heat below. Without the natural heat trapping effect of GHGs, it is estimated that Earth's surface would be about 34° C cooler (California Environmental Protection Agency [CalEPA] 2006).

While GHGs are generated by natural processes, such as aerobic respiration, volcanic eruptions, and decomposition, human activities since the Industrial Revolution have increasingly contributed to the annual mass of GHGs being emitted to the atmosphere. Examples of human activities that produce GHGs include fossil fuel burning (e.g., coal, oil, and natural gas for heating and electricity, gasoline and diesel for transportation), methane generated by landfill wastes and raising livestock, deforestation activities, and some agricultural practices. These activities produce such GHGs as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆).

The rapid increase in atmospheric GHGs resulting from human activities has resulted in a shift in Earth's long-term average temperature and precipitation, a phenomenon referred to as climate change. Impacts of climate change are felt on a global scale and are expected to manifest in different ways in different locations depending on local and regional factors, such as topography, regional climate, ocean circulation, and land uses. In California, climate change is forecasted to result in the following effects (CARB 2014):

- Reduction in water supply and significant loss of snowpack;
- Sea level rise resulting in coastal erosion and seawater intrusion;
- Increased average temperatures including more extreme heat days per year;
- Exacerbation of air quality problems including more high ozone days;
- Increased vulnerability of forests due to pest infestation and higher temperatures;
- More large forest fires;
- More drought years;

- Increased challenges for the state’s important agricultural industry due to water shortages, increasing temperatures, and saltwater intrusion into the Delta;
- Increased electricity demand, particularly in the hot summer months;
- Damage to marine ecosystems and the natural environment including acidification of the oceans due to increased CO₂ levels (including coral bleaching); and
- Increased incidences of infectious diseases, asthma, and other human health related problems

Though the project site is currently developed, operations at the existing Fire Station No. 9 building have ceased due to unsafe environmental conditions for the station crew. Therefore, no GHG emissions are associated with the project site in its current state.

Greenhouse Gas Emissions Inventory

Based on CARB’s California Greenhouse Gas Inventory for 2000-2017, California produced 424 million metric tons (MMT) of CO₂e in 2017 (CARB 2019a). The major source of GHGs in California is transportation, which generates 40 percent of the State’s total GHG emissions. The industrial sector is the second largest source, contributing 21 percent of the State’s GHG emissions, and electric power accounted for approximately 15 percent (CARB 2019a). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California’s per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. Between 2000 and 2008, GHG emissions ranged from a low of 466.32 MMT of CO₂e in 2000 to a high of 492.86 MMT of CO₂e in 2004. In 2016, the State of California achieved its 2020 GHG emission reduction targets as emissions fell below 431 MMT of CO₂e (CARB 2018). The annual 2030 statewide target emissions level is 260 MMT of CO₂e (CARB 2017a). With implementation of the 2017 Scoping Plan, regulated GHG emissions are projected to decline to 260 MMT of CO₂e per year by 2030.

Electricity and Natural Gas

In 2018, California used 285,488 gigawatt-hours (GWh) of electricity, of which 31 percent were from renewable resources (CEC 2019a). California also consumed approximately 23,834.3 million U.S. therms (MMthm) of natural gas in 2018 (U.S. Energy Information Administration [EIA] 2020). Southern California Edison (SCE) provides electricity to the project site and natural gas is provided by the Long Beach Energy Resources Department. Table 4.3-1, *Electricity Consumption in the SCE Service Area in 2018*, and Table 4.3-2 show the electricity and natural gas consumption by sector and total for SCE and the Long Beach Energy Resources Department. In 2018, SCE provided approximately 29.9 percent of the total electricity used in California. Also, in 2017, Long Beach Energy Resources Department provided approximately 0.4 percent of the total natural gas usage in California.

Table 4.3-1 Electricity Consumption in the SCE Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
2,975.4	31,573.8	4,367.4	13,391.6	2,390.0	29,865.0	496.0	85,276.0

Notes: Usage expressed in GWh

Source: CEC 2019b

Table 4.3-2 Natural Gas Consumption in the Long Beach Energy Resources Department Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
0.1	22.1	4.9	8.4	7.3	45.5	88.3

Notes: Usage expressed in MMThm

Source: CEC 2019c

Petroleum

In 2015, the total amount of energy consumed by the transportation sector in California was equal to 23.2 billion gallons of gasoline, including 15.5 billion gallons of finished gasoline¹ and 3.7 billion gallons of diesel (CEC 2017). Though California’s population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030, a 20 to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles. Diesel demand continues to rise, increasing from around 3.7 billion diesel gallons in 2015 to about 4.7 billion gallons in 2030 (CEC 2017).

4.3.2 Regulatory Setting

The following regulations address climate change, GHG emissions, and energy use.

a. Federal Regulations

In *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120), the U.S. Supreme Court held that the United States Environmental Protection Agency (U.S. EPA) has the authority to regulate motor-vehicle GHG emissions under the Federal Clean Air Act (CAA). U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when CAA permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit (*Utility Air Regulatory Group v. EPA* [134 S. Ct. 2427]). The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).²

¹ Finished gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act.

² *Massachusetts et al. v. Environmental Protection Agency et al.*

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels
- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon (mpg) by 2020 – an increase in fuel economy standards of 40 percent

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 USC Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA), a part of the United States Department of Transportation (USDOT), for establishing and regularly updating vehicle standards. The U.S. EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards.

Corporate Average Fuel Economy Standards

The CAFE standards are Federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy and GHG emissions standards for new passenger cars and light trucks sold in the United States. The CAFE standards become more stringent each year, reaching an estimated 38.3 miles per gallon for the combined industry-wide fleet for model year 2020 (77 Federal Register 62624 et seq. [October 15, 2012 Table I-1]). It is, however, legally infeasible for individual municipalities to adopt more stringent fuel efficiency standards. The CAA (42 United States Code [USC] Section 7543[a]) states that "no state or any political subdivision therefore shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part." In August 2018, the U.S. EPA and NHSTA issued a proposed ruling to roll back some of the fuel economy and GHG standards for medium- and heavy-duty trucks. The new ruling proposed by the US EPA and NHSTA, the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rules, would replace the CAFE standards set for model year 2022-2025 passenger car and light trucks, while the 2021 model year vehicles will maintain the CAFE standards.

On September 19, 2019, NHSTA and U.S. EPA began the rulemaking process to establish the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The SAFE Vehicles Rule removes California's waiver to regulate fuel standards for model years 2022 through 2026, making a single national standard for fuel efficiency. The effect of the repeal of the federal CAFE standards is to set the 2020 standards of 43.7 miles per

gallon (mpg) and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light duty trucks (U.S. EPA 2018). The rule took effect on November 26, 2019.

Construction Equipment Fuel Efficiency Standard

U.S. EPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were to be completely phased in by the end of 2015.

Energy Star Program

In 1992, U.S. EPA introduced Energy Star® as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG 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 specification for maximum energy use established under the program are certified to display the Energy Star® label. In 1996, U.S. EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, as well as homes (Energy Star 2020).

b. California Regulations

Greenhouse Gas Emissions

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the State's GHG emissions. These initiatives are summarized below.

California Advanced Clean Car Standards

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles" (CARB 2019b). On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The clean car standards are now grouped under the CARB's Advanced Clean Cars program, which was adopted by CARB in 2012 (CARB 2019b). The program, developed in coordination with the U.S. EPA and NHTSA, established emission requirements for passenger vehicles, model years 2015 through 2025, and manufacturer requirements to provide Zero Emissions Vehicles (ZEV).

However, on September 19, 2019 the NHTSA and the U.S. EPA issued a final action entitled the One National Program on Federal Preemption of State Fuel Economy Standards Rule. This action finalizes Part I of the Safer, Affordable, Fuel-Efficient (SAFE) Vehicles Rule. The SAFE Rule withdraws the Clean Air Act waiver it granted to California in January 2013 as it relates to California's GHG and ZEV

programs. Under the SAFE Rule, fuel economy and GHG emission standards for new vehicles would not improve beyond model year 2020.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations that require reporting and verification of statewide GHG emissions. The Scoping Plan was approved by CARB on December 11, 2008 and included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2014 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as water, waste, natural resources, clean energy and transportation, and land use (CARB 2014). In 2016, the State of California achieved its 2020 GHG emission reduction targets as annual emissions fell below 431 MMT of CO₂e (CARB 2018).

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On

March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 32

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the state to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted “California’s 2017 Climate Change Scoping Plan” (the “2017 Scoping Plan”), which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO₂e by 2030 and two MT CO₂e by 2050 (CARB 2017a).

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane: 40 percent below 2013 levels
- Hydrofluorocarbons: 40 percent below 2013 levels
- Anthropogenic black carbon: 50 percent below 2013 levels

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

Energy

While also relevant to GHG emissions, the following California legislation and regulations pertain more specifically to energy supply, demand, and consumption.

Assembly Bill 2076

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and the California Air Resources Board (CARB) prepared and adopted a joint-agency report, Reducing California’s Petroleum Dependence, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the

performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

Integrated Energy Policy Report

Senate Bill 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent adopted assessment, the *2018 Integrated Energy Policy Report*, contains two volumes. Volume I highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, adopted February 20, 2019, provides more detail on several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system (CEC 2018a and 2019d). The 2019 Report is currently being drafted and has not been adopted (CEC 2019e).

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Energy Action Plan (EAP)

In the October 2005, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the state's ongoing actions in the context of global climate change.

Assembly Bill 1007

Assembly Bill 1007 (Chapter 371, Statutes of 2005) requires the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in

partnership with CARB and in consultation with other Federal, State, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assesses various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. Executive Order S-06-06 also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste

California Code of Regulations, Title 24

Title 24 of the California Code of Regulations (CCR) requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code).

PART 6 (BUILDING ENERGY EFFICIENCY STANDARDS)

Part 6 of Title 24 contains the 2019 Building Energy Efficiency Standards for new residential and non-residential buildings, which became effective on January 1, 2020. The 2019 Standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements. Under the 2019 Standards, nonresidential buildings will be 30 percent more energy-efficient compared to the 2016 Standards, and single-family homes will be seven percent more energy-efficient (CEC 2018b). When accounting for the electricity generated by the solar

photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

PART 11 (CALGREEN)

The California Green Building Standards Code (24 CCR, Part 11, known as “CALGreen”) was adopted as part of the California Building Standards Code in 2008. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The 2019 Standards, which became effective on January 1, 2020, establish green building criteria for residential and nonresidential projects including: increasing the number of parking spaces that must be prewired for electric vehicle chargers in residential development; requiring residential development to adhere to the Model Water Efficient Landscape Ordinance; and requiring more appropriate sizing of HVAC ducts.

c. Regional/Local Regulations

Southern California Association of Governments (SCAG) 2016-2040 RTP/SCS

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally MPO for the majority of the southern California region and is the largest MPO in the nation, where by law, SCAG is required to ensure that transportation activities are supportive of and comply with the goals of regional and state air quality plans in order to attain the National Ambient Air Quality Standards (NAAQS). In addition, SCAG co-produces the transportation strategy and transportation control measure sections of the AQMP with the SCAQMD for the South Coast Air Basin. With regard to air quality planning, in April 2016 SCAG adopted the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2016 RTP/SCS addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP. The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the Air Quality Management Plan (AQMP). The RTP/SCS and AQMP are based on growth forecasts originating in local jurisdictions.

SCAG’s SCS provides specific implementation strategies, which include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a “Complete Streets” policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles (SCAG 2016).City of Long Beach Sustainable City Action Plan

City of Long Beach Sustainable City Action Plan

The City of Long Beach’s Sustainable City Action Plan (SCAP) was adopted in February 2010 (Long Beach 2010). The SCAP is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The SCAP includes initiatives, goals, and actions that will move Long

Beach toward becoming a sustainable city. These goals and actions included in the SCAP relate to the following:

- Buildings & Neighborhoods
- Urban Nature
- Energy
- Waste Reduction
- Green Economy and Lifestyle
- Water
- Transportation

City of Long Beach Climate Action and Adaptation Plan

In 2017, the City of Long Beach began development of a Climate Action and Adaptation Plan (CAAP), which has not yet been finalized. The CAAP aims to reduce communitywide GHG emissions, and help the city adapt to future climate change impacts. As part of the CAAP, the City conducted a communitywide GHG inventory to identify its baseline emissions footprint and is developing business-as-usual forecasts of emissions based on anticipated growth in population, employment, housing, and other factors in the community. In the next stages of the project, the City will establish GHG reduction targets and define local actions to achieve those targets. The CAAP will provide a framework for creating or updating policies, programs, practices, and incentives for Long Beach residents and businesses to reduce the City's GHG footprint and ensure the community and physical assets are better protected from the impacts of climate change. The policies, programs, practices, and incentives included in the CAAP will relate to the following:

- Public Health
- Parks and Open Space
- Water Supply
- Transportation
- Housing & Neighborhoods
- Energy
- Coastal Resources
- Wastewater/Stormwater

4.3.3 Impact Analysis

a. Greenhouse Gas Emissions

Methodology

Calculations of CO₂, CH₄, and N₂O emissions are provided to identify the magnitude of potential effects of the proposed project. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98 percent of all GHG emissions by volume (IPCC 2014). Emissions of all GHGs are converted into their equivalent global warming potential in terms of CO₂ (CO₂e). Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA 2008).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (see Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*, for calculations). In order to be more conservative in the analysis of potential GHG emissions and energy use impacts, existing building uses were not considered in this analysis. See Section 4.1, *Air Quality*, for a detailed discussion of modeling assumptions.

Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether the suggested threshold approaches (as discussed below under *Significance Thresholds*) adequately address impacts from temporary construction activity. As stated in CAPCOA's *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Nevertheless, air districts have recommended amortizing construction-related emissions over the lifetime of the project in conjunction with the project's operational emissions. SCAQMD recommends an amortization period of 30 years (SCAQMD 2008).

CalEEMod was used to estimate emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment used during construction and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009). Complete results from CalEEMod and assumptions are included in Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*.

Operational Emissions

CalEEMod provides operational emissions of CO₂, N₂O, and CH₄. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42 (*Compilation of Air Pollutant Emissions Factors*) and CCAR General Reporting Protocol. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2017). The default electricity consumption values in CalEEMod include the California Energy Commission [CEC]-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. As discussed above, SB 100 requires retail sales of electricity to be generated by 33 percent renewable energy by 2020 and 60 percent renewable energy by 2030.

Emissions under Option A and Option B associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, U.S. EPA, and emission factor values provided by the local air district (CAPCOA 2017).

Under Option A emissions associated with waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CAPCOA 2017). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle). As the project site would remain vacant under Option B, GHG emissions associated with operational waste disposal were not included in the Option B model inputs.

Emissions associated with water and wastewater usage under Option A were calculated in CalEEMod based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for northern and southern

California. As the project site would remain vacant under Option B, GHG emissions resulting from water consumption and wastewater generation were not included in the Option B model inputs.

Since the temporary closure of Fire Station No. 9, its crewmembers and service vehicles have continued to operate within the City of Long Beach out of alternative locations. As a result, service trip lengths and response times within Fire Area No. 9 have increased. Option A would return the Fire Station No. 9 crew and service vehicles to their service area. Therefore, from a regional greenhouse gas emissions and energy use perspective, there would be no net increase in vehicle trips, VMT, and petroleum use, and, consequentially, no net increase in GHG emissions associated with mobile sources under Option A. Likewise, under Option B, regional trips and associated GHG emissions would not increase as the project site would remain vacant. Consequently, operational trips were not included in the CalEEMod model inputs for Option A and Option B.

Significance Thresholds

Appendix G of the CEQA Guidelines considers a project to have a significant impact related to GHG emissions if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In addition, CEQA Guidelines Section 15064.4(b) states that a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions.

Project-Specific Efficiency Threshold and Brightline Threshold

In late 2015, the California Supreme Court's Newhall Ranch decision confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA, depending on the circumstances of a given project (Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal. 4th 204). Given the legislative attention and judicial action regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed through the year 2050, the Association of Environmental Professionals' (AEP) Climate Change Committee published a white paper in October 2016 to provide guidance on defensible GHG thresholds for use in CEQA analyses and GHG reduction targets in climate action plans in light of the change in focus on the 2030 reduction target and questions raised in the Newhall Ranch case (AEP 2016).

The AEP Climate Change Committee white paper identified seven thresholds for operational emissions. The following four methods described are the most widely used evaluation criteria.³

- (1) **Consistency with a Qualified GHG Reduction Plan.** For a project located within a jurisdiction that has adopted a qualified GHG reduction plan (as defined by CEQA Guidelines Section 15183.5), GHG emissions would be less than significant if the project is anticipated by the plan and fully consistent with the plan. However, projects with a horizon year beyond 2020 should not tier from a plan that is qualified up to 2020.
- (2) **Bright line Thresholds.** There are two types of bright line thresholds:
 - a. **Standalone Threshold.** Emissions exceeding standalone thresholds would be considered significant.
 - b. **Screening Threshold.** Emissions exceeding screening thresholds would require evaluation using a second-tier threshold, such as an efficiency threshold or other threshold concept to determine whether project emissions would be considered significant.
However, projects with a horizon year beyond 2020 should take into account the type and amount of land use projects and their expected emissions out to the year 2030.
- (3) **Efficiency Thresholds.** Land use sector efficiency thresholds are currently based on AB 32 targets and should not be used for projects with a horizon year beyond 2020. Efficiency metrics should be adjusted for 2030 and include applicable land uses.
- (4) **Percent Below “Business as Usual” (BAU).** GHG emissions would be less than significant if the project reduces BAU emissions by the same amount as the statewide 2020 reductions. However, this method is no longer recommended following the Newhall Ranch ruling.

Criteria options (1) and (4) are not applicable. The SCAQMD’s GHG CEQA Significance Threshold Working Group recommended a bright line threshold of 3,000 MT CO₂e in September 2010. Therefore, under evaluation criteria option 2, Options A and B would result in a significant impact if project-generated emissions exceed the bright line threshold recommended by the SCAQMD. In addition, the City of Long Beach is currently drafting a Climate Action and Adaptation Plan (CAAP), which is expected to be adopted by City Council in 2020 (Long Beach 2020). While, the CAAP has not yet been adopted by the City and cannot be used for project tiering, the emissions inventories and targets can be used in the development of a project-specific efficiency threshold. Efficiency thresholds are quantitative thresholds based on a measurement of GHG efficiency for a given project, regardless of the amount of mass emissions. These thresholds identify the emission level below which new development would not interfere with attainment of statewide GHG reduction targets. A project that attains such an efficiency target, with or without mitigation, would result in less than significant GHG emissions.

Accordingly, consistent with the concerns raised in the Golden Door (2018) and Newhall Ranch (2015) decisions regarding the correlation between state and local conditions, the 2030 City

³ The three other thresholds are best management practices (BMP)/best available mitigation (BAM), compliance with regulations, and a hybrid threshold concept: separate transportation and non-transportation threshold. The BMP/BAM concept would require creation and implementation of an approved list of BMPs to ensure compliance with statewide reduction targets. No such list has been created/approved to date. Compliance with existing regulations is not recommended until the state has developed its regulatory framework to meet 2030 GHG reduction targets. Finally, the hybrid transportation and non-transportation thresholds approach is generally reserved for residential and/or mixed-use projects qualifying for relief from analysis GHG emissions from cars and light-duty trucks. As such, none of these thresholds specifically apply to this project.

inventory targets were modified to establish a locally appropriate, evidence-based, project-specific threshold consistent with California’s GHG reduction targets.

The Draft Climate Action Plan provides an inventory of the Community wide emissions and breaks the energy emissions into residential, commercial sectors, and industrial categories. The City also includes aggregated emissions from energy facilities, fugitive natural gas, transportation, and solid waste emissions. The aggregated emissions were assigned to the residential or commercial/industrial sectors based on SCAG’s 2030 population and employment projections included in the 2040 Regional Transportation Plan and Sustainable Communities Plan. Table 4.3-3, *2030 GHG Efficiency Thresholds by Land Use for the City of Long Beach*, summarizes the project specific threshold for this analysis.

Table 4.3-3 2030 GHG Efficiency Thresholds by Land Use for the City of Long Beach

2030 Population	2030 Employment	2030 Emissions	Residential Emissions	Commercial/Industrial Emissions	Residential Threshold	Commercial/Industrial Threshold
483,355	189,524	3,125,564 MT CO ₂ e	1,787,091 MT CO ₂ e	1,332,699 MT CO ₂ e	3.70 MT CO ₂ e/ Resident	7.03 MT CO ₂ e/Employee

Source: Long Beach 2019; SCAG 2016b

The proposed fire station use under Option A does not match the categories listed in Table 4.3-3. However, as the project has a substantial residential component with the presence of crew onsite 24 hours per day, the residential threshold is used for assessing Option A. In addition, the residential threshold of 3.70 MT CO₂e is the most stringent locally appropriate GHG emissions threshold and therefore represents the most conservative evaluation of Option A. The efficiency threshold would not apply to Option B as the project site would remain vacant and there would be no service population. Emissions associated with the project were estimated using CalEEMod, version 2016.3.2. Complete CalEEMod results and assumptions can be viewed in Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*.

Service Population

A project’s service population includes both its residents and employees. Under Option A, the proposed new Fire Station No. 9 temporary structure would serve as the workplace for the six existing Fire Station No. 9 employees. There would be no new employees associated with Option A and no residents. Under Option B, the project site would remain vacant upon completion of construction activities and there would be no service population.

b. Energy Use

Methodology

Construction energy demand was obtained from CalEEMod (Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*) and considers diesel fuel consumption associated with operation of off-road construction equipment and vendor/hauling truck trips as well as gasoline fuel consumption associated with worker trips to and from construction sites. Energy demand for off-road construction equipment is based on anticipated equipment, usage hours, horsepower, load factors, and construction phase duration provided in CalEEMod, as well as *Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines* (U.S. EPA 2018). Hauling, vendor, and worker trip

fuel consumption were determined from CalEEMod default values, which consider anticipated daily trips, default trip lengths, and average fuel efficiency values obtained from the Bureau of Transportation Statistics (U.S. Department of Transportation 2018).

Operational energy demand under Option A considers electricity and natural gas consumption associated with the proposed project. As previously discussed, Option B would leave the project site vacant; therefore, there would be no electricity or natural gas consumption associated with Option B. Electricity and natural gas consumption were based on CalEEMod outputs. For more detailed discussion of CalEEMod modeling methodology, refer to Section 4.1, *Air Quality*. As discussed under Section 4.3.3(a), there would be no net increase in operational vehicle trips and VMT associated with Option A and Option B, therefore there would not be an increase in petroleum use due to operation.

Significance Thresholds

According to Appendix G of the CEQA Guidelines, an energy-related impact would be considered significant if the proposed project would result in one or more of the following conditions:

1. Wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

c. Project Impacts and Mitigation Measures

Greenhouse Gas Emissions

Threshold 4.3.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-1 CONSTRUCTION AND OPERATION OF THE PROPOSED PROJECT WOULD GENERATE GHG EMISSIONS ASSOCIATED WITH CONSTRUCTION EQUIPMENT USE, MOBILE SOURCE EMISSIONS, AND ENERGY CONSUMPTION. SUCH EMISSIONS WOULD BE BELOW THE LOCALLY APPROPRIATE, PROJECT-SPECIFIC EFFICIENCY THRESHOLD. THUS, THE PROPOSED PROJECT’S IMPACT WOULD BE LESS THAN SIGNIFICANT.

Option A

Construction of the proposed project would emit GHG emissions through the combustion of fossil fuels by heavy-duty construction equipment and through vehicle trips generated by construction workers and vendors traveling to and from the project site. Based on the CalEEMod results, construction activity under Option A would generate an estimated 106 metric tons of CO₂e (as shown in Table 4.3-4, *Option A: Estimated GHG Emissions during Construction*). Amortized over a 30-year period, construction of the proposed project would generate approximately 3.5 metric tons of CO₂e per year.

Table 4.3-4 Option A: Estimated GHG Emissions during Construction

Emissions (MT of CO ₂ e)	
2020	106
Total	106
Amortized over 30 years	3.53

CO₂e = equivalent global warming potential of all greenhouse gas emissions in terms of carbon dioxide
 Notes: Emissions modeling was completed using CalEEMod. See Appendix C for modeling results. Some numbers may not sum exactly due to rounding. Emission data shown is from “mitigated” results, which account for compliance with regulations and project design features.

Operation of the proposed project under Option A would also generate long-term GHG emissions from combustion of natural gas and use of electricity (energy emissions), solid waste disposal, water use and wastewater generation, and consumer products, architectural coatings, and landscaping equipment (area emissions). As discussed above, Table 4.3-5, *Option A: Combined Annual GHG Emissions*, summarizes and combines the amortized construction, operational, and mobile GHG emissions associated with the proposed project.

Table 4.3-5 Option A: Combined Annual GHG Emissions

Emission Source	Emissions (MT of CO ₂ e per year)
Construction	3.53
Operational	
Area	<0.1
Energy	2.80
Solid Waste	0.62
Water	0.30
Mobile	
CO ₂ and CH ₄	0
N ₂ O	0
Total Emissions	7.25
SCAQMD Threshold (MT CO ₂ e/year)	3,000
Service Population (employees)	6
Emissions per Service Population (MT CO₂e/SP/year)	1.21
Project-Specific Efficiency Threshold (MT CO ₂ e/SP/year)	3.70
Exceed SCAQMD Threshold	No
Exceed Project-Specific Threshold?	No

See Appendix C, *Air Quality, Energy, and GHG Emissions*, for CalEEMod results and N₂O mobile emissions data sheets.

As shown in Table 4.3-5, *Option A: Combined Annual GHG Emissions*, combined annual GHG emissions associated with the proposed project would be approximately 7.25 MT CO₂e per year, or 1.21 MT of CO₂e per service person per year, which would not exceed the SCAQMD bright line threshold of 3,000 MT CO₂e per year or the locally-appropriate, project-specific threshold of 3.70 MT of CO₂e per service person per year. Therefore, Option A would result in a less than significant impact related to GHG emissions.

Option B

Option B would emit GHG emissions through the combustion of fossil fuels by heavy-duty construction equipment and through vehicle trips generated by construction workers and vendors traveling to and from the project site. Based on the CalEEMod results, construction activity under Option B would generate an estimated 14.1 metric tons of CO₂e (as shown in *Table 4.3-6, Option B*:

Estimated GHG Emissions during Construction). Amortized over a 30-year period, construction of the proposed project would generate approximately 0.47 metric tons of CO₂e per year.

Table 4.3-6 Option B: Estimated GHG Emissions during Construction

Emissions (MT of CO ₂ e)	
2020	14.1
Total	14.1
Amortized over 30 years	0.47

CO₂e = equivalent global warming potential of all greenhouse gas emissions in terms of carbon dioxide
 Notes: Emissions modeling was completed using CalEEMod. See Appendix C for modeling results. Some numbers may not sum exactly due to rounding. Emission data shown is from “mitigated” results, which account for compliance with regulations and project design features.

Option B would not involve operational GHG emissions as the project site would remain vacant after the conclusion of construction activities. As the project site would remain vacant, Option B also would not have a service population. Therefore, the project-specific efficiency threshold would not apply to Option B. Total project GHG emissions under Option B would be 14.1 MT CO₂e, or 0.47 MT CO₂e per year, which is well below the SCAQMD bright line threshold of 3,000 MT CO₂e per year. Therefore, impacts under Option B would be less than significant.

Regulatory Compliance Measures

GHG-1, *Green Building Standards*

Mitigation Measures

Mitigation is not required.

Threshold 4.3.2:	Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?
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Impact GHG-2 THE PROPOSED PROJECT WOULD BE CONSISTENT WITH STATEWIDE PLANS, POLICIES AND REGULATIONS AND MAJOR GOALS OF SCAG’S 2016-2040 RTP/SCS AIMED AT REDUCING GHG EMISSIONS. AS SUCH, THE PROPOSED PROJECT WOULD NOT CONFLICT WITH AN APPLICABLE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GHGs. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Consistency Evaluation

OPTION A STATE POLICIES

Numerous state plans, policies, and regulations have been adopted for the purpose of reducing GHG emissions. As described in Section 4.4.2, *Regulatory Setting*, the principal overall state plan and policy is AB 32, *the California Global Warming Solutions Act of 2006*, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at a project level is not

addressed. Nonetheless, Option A would not conflict with statewide policies or regulations as the project would not substantially increase GHG emissions within the City and operations at the project site would remain unchanged from the conditions prior to the temporary closure of Fire Station No. 9. Therefore, impacts would be less than significant.

SCAG RTP/SCS

SCAG's RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375. As discussed in Section 5.6, *Land Use and Planning*, Option A would not result in an increase in residents or workers in the area, and, as such, would not conflict with applicable goals of the 2016-2040 RTP/SCS.

LOCAL POLICIES

The overarching goal of the City's SCAP and upcoming CAAP are to increase sustainability and reduce GHG emissions within the City. As discussed in Section 2, *Project Description*, Fire Station No. 9 is currently operating out of a temporary location, which is located just outside of Fire Service Area No. 9, but within the service area of the larger Battalion 3. Option A would allow Fire Station No. 9 to return to its service area, which would reduce fire engine and paramedic truck trip lengths and VMT, as well as response times in the service area. Reducing GHG emissions from the transportation sector is one of the priority areas of both the SCAP and CAAP. In addition, as discussed further below under Thresholds 4.3.3 and 4.4.4, the temporary replacement structure would be required to comply with new, more stringent energy and water efficiency standards pursuant to Title 24 of the CCR. Compared to the existing Fire Station No. 9 building, which was constructed prior to the establishment of the 2019 Title 24 requirements, the temporary replacement structure would include more green building features such as low flow fixtures and energy-efficient electrical and mechanical systems.

Option B

STATE POLICIES

Numerous state plans, policies, and regulations have been adopted for the purpose of reducing GHG emissions. As described in Section 4.4.2, *Regulatory Setting*, the principal overall state plan and policy is AB 32, *the California Global Warming Solutions Act of 2006*, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at a project level is not addressed. Nonetheless, Option B would not conflict with statewide policies or regulations as the project would not substantially increase GHG emissions within the City. Therefore, impacts would be less than significant.

SCAG RTP/SCS

SCAG's RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375. As discussed in Section 5.6, *Land Use and Planning*, Option B would not result in an increase in residents or workers in the area, and, as such, would not conflict with applicable goals of the 2016-2040 RTP/SCS.

LOCAL POLICIES

The overarching goal of the City’s SCAP and upcoming CAAP are to increase sustainability and reduce GHG emissions within the City. Option B would generate minimal emissions as the site would remain vacant and would therefore not conflict with the SCAP.

Mitigation Measures

Mitigation is not required.

Energy Use

Threshold 4.3.3:	Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
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Impact E-1 NEITHER CONSTRUCTION NOR OPERATION OF THE PROPOSED PROJECT WOULD RESULT IN A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO THE WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Option A

Construction Energy Demand

Construction activity associated with Option A would use energy in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the project site. Construction under Option A would require demolition, site preparation, excavation, and building construction, including hauling material off-site, pavement and asphalt installation, and placement of the temporary modular structure. The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from CalEEMod (Appendix C).

Table 4.3-7, *Option A: Estimated Fuel Consumption During Construction*, presents the estimated construction energy consumption of construction. Diesel fuel consumption, including construction equipment operation and vendor/hauling trips, would total approximately 2,671 gallons. Other petroleum fuel consumption, including worker trips to and from construction sites, would total approximately 383 gallons. Construction-related energy calculations are included in Appendix C.

Table 4.3-7 Option A: Estimated Fuel Consumption During Construction

Fuel Type	Gallons of Fuel	MMBtu⁴
Diesel Fuel ^{1,2}	2,671	383
Other Petroleum Fuel ³	383	42
Total	3,054	1,383

¹ Fuel demand rate for construction equipment is derived from the total hours of operation, the equipment’s horse power, the equipment’s load factor, and the equipment’s fuel usage per horse power per hour of operation, which are taken from CalEEMod outputs (see Appendix C), and from compression-ignition engine brake-specific fuel consumptions factors for engines (U.S. EPA 2018). Fuel consumed for construction equipment is assumed to be diesel.

² Fuel demand rate for hauling and vendor trips (cut material imports) is derived from hauling and vendor trip number, hauling and vendor trip length, and hauling and vendor vehicle class from “Trips and VMT” Table contained in Section 3.0, Construction Detail, of

the CalEEMod results (see Appendix C). The fuel economy for hauling and vendor trip vehicles is derived from the United States Department of Transportation (U.S. DOT 2018). Fuel consumed for hauling trucks is assumed to be diesel.

³ The fuel economy for worker trip vehicles is derived from the U.S. Department of Transportation National Transportation Statistics (24 mpg) (U.S. DOT 2018). Fuel consumed for worker trips is assumed to be gasoline.

⁴ CaRFG CA-GREET 2.0 fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for worker trips specified above (California Air Resources Board [CARB] 2015). Low-sulfur Diesel CA-GREET 2.0 fuel specification of 127,464 Btu/gallon used to identify conversion rate for fuel energy consumption for construction equipment specified above (CARB 2015). Totals may not add up exactly due to rounding.

Source: Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*

Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, Option A 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 Energy Demand

Operation of Option A would use natural gas and electricity for heating and cooling systems, lighting, appliances, and water use. As discussed above under the methodology discussion, operation of the proposed project would not result in a net increase of gasoline or diesel consumption due to vehicle trips. Gasoline consumption would be limited to emergency use of the backup generator that already exists on site and would not represent a net change in gasoline consumption.

Operation of Option A would consume approximately 8208.29 kWh (0.008 GWh) of electricity per year (Appendix C). As mentioned in Section 4.3.1, *Setting*, the proposed project would be served by SCE, which provided more than 85,000 GWh of electricity in 2018. The project's electricity demand would represent less than 0.0001 percent of electricity provided by SCE. Therefore, SCE would have sufficient supplies for the project. Estimated natural gas consumption for the project would be 0.00000027 MMthm per year (Appendix C). The project's natural gas demand would be serviced by the Long Beach Energy Resources Department, which provided 89.3 MMthm per year in 2018. Option A's natural gas consumption would represent less than 0.0001 percent of natural gas provided by the Long Beach Energy Resources Department; therefore, the Energy Resources Department would have sufficient supplies for the Option A.

Option A would comply with standards set in California Building Code (CBC) Title 24, which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources during operation. California's Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the Energy Commission. These standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

In conclusion, construction of Option A would be temporary and typical of similar projects, and would not result in the wasteful, inefficient, or unnecessary consumption of energy. Operation of Option A would increase the consumption of fuel, natural gas, and electricity from existing conditions of an undeveloped site; however, the increase would be in conformance with the latest version of California’s Green Building Standards Code and the Building Energy Efficiency Standards. In addition, SCE and Long Beach Energy Resources Department have sufficient energy supplies to serve the project. Therefore, Option A would have a less than significant impact.

Option B

Construction Energy Demand

Construction activity associated with Option B would use energy in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site and construction worker travel to and from the project site. Construction under Option B would require demolition and site preparation only. The total consumption of gasoline and diesel fuel during construction under Option B was estimated using the assumptions and factors from CalEEMod (Appendix C).

Table 4.3-8, *Option B: Estimated Fuel Consumption During Construction*, presents the estimated construction energy consumption of construction. Diesel fuel consumption, including construction equipment operation and hauling trips, would total approximately 1,756 gallons. Other petroleum fuel consumption sources, including worker trips to and from construction sites, would total approximately 104 gallons. Construction-related energy calculations are included in Appendix C.

Table 4.3-8 Option B Estimated Fuel Consumption During Construction

Fuel Type	Gallons of Fuel	MMBtu ⁴
Diesel Fuel ^{1,2}	1,756	224
Other Petroleum Fuel ³	104	11
Total	2,146	272

¹ Fuel demand rate for construction equipment is derived from the total hours of operation, the equipment’s horse power, the equipment’s load factor, and the equipment’s fuel usage per horse power per hour of operation, which are taken from CalEEMod outputs (see Appendix C), and from compression-ignition engine brake-specific fuel consumptions factors for engines (U.S. EPA 2018). Fuel consumed for construction equipment is assumed to be diesel.

² Fuel demand rate for hauling and vendor trips (cut material imports) is derived from hauling and vendor trip number, hauling and vendor trip length, and hauling and vendor vehicle class from “Trips and VMT” Table contained in Section 3.0, Construction Detail, of the CalEEMod results (see Appendix C). The fuel economy for hauling and vendor trip vehicles is derived from the United States Department of Transportation (U.S. DOT 2018). Fuel consumed for hauling trucks is assumed to be diesel.

³ The fuel economy for worker trip vehicles is derived from the U.S. Department of Transportation National Transportation Statistics (24 mpg) (U.S. DOT 2018). Fuel consumed for worker trips is assumed to be gasoline.

⁴ CaRFG CA-GREET 2.0 fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for worker trips specified above (California Air Resources Board [CARB] 2015). Low-sulfur Diesel CA-GREET 2.0 fuel specification of 127,464 Btu/gallon used to identify conversion rate for fuel energy consumption for construction equipment specified above (CARB 2015). Totals may not add up exactly due to rounding.

Source: Appendix C, *Air Quality, Energy, and Greenhouse Gas Emissions*

Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, Option B 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 Energy Demand

Under Option B, the project site would remain vacant after construction activities are completed. Therefore, there would be no significant operational energy demand associated with Option B. Occasional site maintenance would be required to maintain landscaping and cleanliness of the vacant lot, but this would involve a minimal use of energy resources. In summary, Option B would not involve the inefficient, wasteful, or unnecessary use of energy during construction and would have no operational energy use. Impacts would be less than significant.

Regulatory Compliance Measures

GHG-1, *Green Building Standards*

Mitigation Measures

Mitigation is not required.

Threshold 4.3.4: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
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Impact E-2 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY. NO IMPACT WOULD OCCUR.

Option A

As discussed in Section 4.3.2, *Regulatory Setting*, SB 100 mandates 100 percent clean electricity for California by 2045. Because the modular structure that would be constructed under Option A would be powered by the existing electricity grid, the proposed project would eventually be powered by renewable energy mandated by SB 100 and would not conflict with this statewide plan. Additionally, as discussed under Threshold 4.3.3 above, the proposed project would be subject to more stringent energy efficiency standards pursuant to updated CALGreen requirements.

The City of Long Beach has not adopted specific renewable energy or energy efficiency plans with which the project could comply; however, a Climate Action and Adaptation Plan (CAAP) is currently under development. This plan would provide framework for updating policies, programs, practices, and incentives for residents and business to reduce emissions and will likely include various energy efficiency measures to that end. In addition, the SCAP includes energy sustainability goals, such as reducing electricity use and facilitating the development of solar panels on City-owned and private rooftops. Pursuant to LBMC Section 21.45.400(I)(3.), the modular structure would include a solar-ready roof design, enabling the City to install solar panels if desired. Additionally, as discussed under Thresholds 4.3.1 through 4.3.3, Option A would not significantly increase GHG emissions or energy use and would be consistent with the state plan for renewable energy; therefore, no impact would occur.

Option B

Under Option B, the project site would remain vacant after the removal of the existing building and the site would not require the regular consumption of energy or other resources. Occasional site maintenance would be required to maintain landscaping and cleanliness of the vacant lot, but this

would involve a minimal use of energy resources. As Option B would not involve any operational activities at the project site, Option B would not conflict with any state or local plans for renewable energy.

Mitigation Measures

Mitigation is not required.

d. Cumulative Impacts

Greenhouse Gas Emissions

As discussed in Section 3, *Environmental Setting*, cumulative development in the vicinity of the project site includes 15 pending and ongoing projects. The following analysis discusses the potential cumulative impacts associated with the proposed project in conjunction with other projects within a 1.5-mile radius of the project site. GHG and climate change are by definition cumulative impacts, as they affect the accumulation of greenhouse gases in the atmosphere. As discussed above, Option A and Option B would be consistent with applicable plans and programs aimed at reducing GHG emissions and would generate emissions below the locally appropriate, project-specific efficiency and brightline thresholds. Therefore, the proposed project's contribution to cumulative GHG emissions would not be considerable.

Energy

The anticipated growth in the vicinity of the proposed project, as described in Section 3, *Environmental Setting*, would incrementally increase local and regional energy demand. This cumulative increase could result in a strain on locally available energy supplies or the need for energy infrastructure upgrades. However, as demonstrated under Impact E-1, above, Option A and Option B would not result in wasteful, inefficient, or unnecessary energy consumption. Option A would not involve an intensification of uses on site compared to existing uses prior to the temporary closure of the fire station and would not lead to significant increases in energy demand. Furthermore, Option B would leave the project site vacant and would not create additional energy demand through operation. Therefore, while other planned and pending development would increase energy demand, the proposed project's contribution to potential cumulative energy impacts under Option A and Option B would not be considerable.

4.4 Hazards and Hazardous Materials

This section evaluates the potential for Option A and Option B (“proposed project”) to result in adverse impacts associated with hazards or hazardous materials. The analysis is based on review of available hazards and hazardous materials reports, such as information obtained from site-specific investigations, as well as websites, maps of the project area and vicinity, and reports and information posted in databases by the State Water Resources Control Board (SWRCB) and the Department of Toxic Substances Control (DTSC).

The relevant regulatory requirements are also discussed, as are the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

4.4.1 Setting

Existing Conditions

The area evaluated for hazards and hazardous materials impacts includes the project site and nearby properties with the potential to affect the proposed project. The project is located within a quarter mile of the Oakwood Academy private school. The project site is located approximately 1.5 miles west of the Long Beach Airport and is not located within a Community Noise Equivalent Level (CNEL) Noise Contour area (Long Beach 2005). The Oakwood Academy school is approximately 450 feet southwest of the project site.

Historical and Present Land Uses in the Project Vicinity

The historical records reviewed for this hazards and hazardous materials analysis included aerial photographs, topographic maps, historical fire insurance maps (Sanborns), and city directories as detailed in the following sections. Copies of the historical resources reviewed are included in the Hazardous Materials Technical Study (Appendix E of this EIR).

Summary of Historical Uses

Project Site

The project site was developed in 1938 with the Fire Station No. 9 building, which is a 5,548-square foot, rectangular building of one-and-a-half stories in height with a three-story hose tower. Figure 2-3, Site Photos of Existing Structure, shows photos of the station’s exterior facades along Long Beach Boulevard and North Virginia Road. Fire Station No. 9 was designed by W. Horace Austin (1881–1942) in the Tudor Revival style as a Works Progress Administration (WPA) project for the City of Long Beach (GPA 2019). The building operated as Fire Station No. 9 from 1938 until summer 2019 when it was vacated due to the presence of toxic mold in the building.

Subject Property

Based on our review of the documents listed above, the site conditions of the subject property were verified by year through review of the following sources:

- 1896, 1899, 1902 (Topographic Map [TM]): Undeveloped
- 1923 (Sanborn Map [SM]): Undeveloped
- 1928 (Aerial Photograph [AP]): Undeveloped; vacant parcel

City of Long Beach
Fire Station No. 9 Replacement Project

- 1938 (As-Built): Developed with the existing Fire Station No. 9 structure
- 1947 (AP): Developed with a structure
- 1950 (SM): Occupied by Long Beach Fire Department Engine Co. No. 9
- 1963 (SM): Similar to 1950 SM
- 1953, 1963, 1972, 1977, 1981, 1989, 1994, 2002, 2005, 2009, 2012, and 2016 (APs): The subject property remains unchanged and has been historically developed with the Long Beach Fire Department Engine Co. No. 9 since the 1938.

Northern Adjacent Property

Based on review of the documents listed above, the site conditions of the northern adjacent property were verified by year through review of the following sources:

- 1896, 1899, 1902 (TM): Undeveloped
- 1923 (SM): Undeveloped
- 1928 (AP): Undeveloped; vacant parcel
- 1947 (AP): Developed with a structure
- 1950 (SM): Occupied by one structure with multiple stores
- 1963 (SM): Similar to 1950 SM
- 1953, 1963, 1972, 1977, 1981, 1989, 1994, 2002, 2005, 2009, 2012, and 2016 (APs): The northern adjacent property generally remains unchanged and has been historically occupied by a commercial structure.

Eastern Adjacent Property

Based on the review of the documents listed above, the site conditions of the eastern adjacent property were verified by year through review of the following sources:

- 1896, 1899, 1902 (TM): Undeveloped
- 1923 (SM): Undeveloped
- 1928 (AP): Undeveloped; vacant parcel
- 1947, 1953 (AP): Mostly vacant parcel occupied by a small structure
- 1950 (SM): Mostly vacant parcel occupied by a small restaurant fronting Long Beach Boulevard; gas and oils station to the southeast on the corner of Long Beach Boulevard and East Roosevelt Road
- 1963 (SM): Similar to 1950 SM
- 1963, 1972, 1977, 1981, 1989, 1994 (APs): The eastern adjacent property generally remains unchanged and occupied by a structure and paved parking areas.
- 2002 (AP): Vacant
- 2005 (AP): Under construction
- 2009, 2012, 2016 (AP): Occupied by a new commercial building

Southern Adjacent Property

Based on the review of the documents listed above, the site conditions of the southern adjacent property were verified by year through review of the following sources:

- 1896, 1899, 1902 (TM): Undeveloped
- 1923 (SM): Vacant, followed by a gas & oil station
- 1928 (AP): Possibly vacant
- 1947 (AP): Vacant parcel, followed by a gasoline station
- 1950 (SM): Vacant parcel, followed by a gasoline station on the corner of Long Beach Boulevard and East Roosevelt Road
- 1953 (AP): Vacant parcel, followed by a gasoline station on the corner of Long Beach Boulevard and East Roosevelt Road
- 1963 (SM): A commercial structure has been built; the gasoline station has been replaced by a commercial structure
- 1963 (AP): Similar to 1963 SM
- 1972, 1977, 1981, 1989, 1994, 2002, 2005, 2009, 2012 (APs): The southern adjacent property generally remains unchanged and occupied by commercial structures.

Western Adjacent Property

Based on the review of the documents listed above, the site conditions of the western adjacent property were verified by year through review of the following sources:

- 1896, 1899, 1902 (TM): Undeveloped
- 1923 (SM): Occupied by a dwelling
- 1928, 1947 (AP): Occupied by a dwelling
- 1950 (SM): Similar to the 1923 SM
- 1953 (AP): Occupied by a dwelling
- 1963 (SM): Similar to the 1950 SM
- 1963 (AP): Similar to 1963 SM
- 1972, 1977, 1981, 1989, 1994, 2002, 2005, 2009, 2012 (APs): Redeveloped as an apartment complex

Several gaps of greater than five years were identified in the historical records reviewed, from 1902 to 1924, 1928 to 1942, 1953 to 1963, 1964 to 1972, 1981 to 1989, and 1994 to 2002. These gaps are considered insignificant because the subject property use appears to be similar prior to and following the gaps.

Hazardous Materials at the Site

As part of the Hazardous Materials Technical Study (Appendix E) for the project site, a regulatory database search was conducted by Environmental Data Resources (EDR) on October 22, 2019 for sites that generate, store, treat or dispose of hazardous materials, or sites for which a release or incident has occurred. The search was conducted for the project site and included data from surrounding sites within a specified radius (minimum search distance) of the property. Pursuant to the American Standard for Testing and Materials (ASTM) E1527-13, factors taken into consideration to determine the minimum search distance include (1) the density (for example, urban, rural, or suburban) of the setting in which the subject property is located, (2) the distance that the hazardous substances or petroleum products are likely to migrate based on local geologic or hydrogeologic conditions; (3) the property type; (4) existing or past uses of surrounding properties; and, (5) other

reasonable factors. For the purpose of this evaluation, a minimum search distance of 1/8 mile was selected.

As reported by EDR, the project site was listed in the Hazardous Waste Manifests (HAZNET) and UST databases. The HAZNET listing indicates that the fire station was a generator of hydrocarbon solvents (benzene, hexane, Stoddard, etc.) in 1988. The UST listing indicates that the site was associated with an underground storage tank; however, details regarding the capacity and contents of the UST were not reported. Plot plans issued on December 17, 1937 indicate that a 550-gallon gasoline UST was located on the northwest corner (backside) of the fire station building. The City of Long Beach Health and Human Services Department reported the following:

- A historical, 550-gallon UST was installed in 1938
- The tank was abandoned and slurried in-place in 1988
- At the time of tank closure, no sampling was conducted

Because it is reported that the tank was abandoned in-place and sampling was not conducted, an abandoned in-place UST may remain onsite (Rincon 2020). Therefore, there is the potential for an unreported release of petroleum product to have occurred at the project site.

Hazardous Materials at Nearby Sites (within 1/8 mile)

Offsite properties listed by EDR fall under two general categories of databases: those reporting unauthorized releases of hazardous substances (e.g., Leaking Underground Storage Tank [LUST], National Priority List [a.k.a. Superfund sites], and corrective action facilities), and databases of businesses permitted to use hazardous materials or generate hazardous wastes, for which an unauthorized release has not been reported to a regulatory agency.

Rincon reviewed EDR and the SWRCB online GeoTracker database to evaluate their potential to impact the subject property, based on the following factors:

- Reported distance of the facility from the subject property;
- The nature of the database on which the facility is listed, and/or whether the facility was listed on a database reporting unauthorized releases of hazardous materials, petroleum products, or hazardous wastes;
- Reported case type (e.g., soil only, failed underground storage tank [UST] test only);
- Reported substance released (e.g., chlorinated solvents, gasoline, metals);
- Reported regulatory agency status (e.g., case closed, “no further action”); and,
- Location of the facility with respect to the reported groundwater flow direction

Facilities/properties that were interpreted by Rincon to be of potential environmental concern to the subject property, based on one or more of the factors listed above, are summarized in Table 4.4-1, *EDR Listing Summary of Select Sites within One-Eighth Mile of the Subject Property*.

Contamination migration pathways in soil, groundwater, and soil vapor were considered in our analysis of offsite properties of potential environmental concern.

ADJACENT OR NEARBY NOTABLE SITES

Five adjacent or notable properties were listed in databases searched by EDR, two EDR Historical Cleaners (Hist Cleaner), one EDR Historical Automobile Gasoline Station (Hist Auto), and two nearby release sites. The Hist Cleaners and Hist Auto sites are as follows:

- Hist Cleaners - 3931 Long Beach Boulevard (1948) (approximately 115 feet to the north of the subject property)
- Hist Cleaner - 3937 Long Beach Boulevard (1963) (approximately 150 feet to the north of the subject property)
- Hist Auto (1939, 1944-1957) - 3901 Long Beach Boulevard/3900 Virginia Road (approximately 130 feet to the south of the subject property)

Although the cleaners and historical gasoline service stations are not listed in release databases searched by EDR, both types of facilities are generally associated with the use of hazardous materials such as chlorinated solvents and hydrocarbons and are therefore considered in this analysis.

NEARBY RELEASE SITES

EDR and the SWRCB's online GeoTracker database reported two nearby release sites (within 1/8 mile) as follows:

- **Desert Petroleum #210/Gasco Service Station #210/Parks Texaco Service Station/Blockbuster Video/Parks Texaco Service Stations - 3910 Long Beach Boulevard.** This site is located approximately 175 feet southeast of the subject property. The former gasoline station is associated with a closed unauthorized release case. The cleanup status is listed as "Completed – case closed as of 3/19/1996." The contaminant of concern was reported as gasoline and the media affected was reported as "other groundwater uses other than drinking water." Case closure documentation was not available for review through GeoTracker. Based on the distance of the former release (175 feet) and the downgradient location of the release site with respect to the subject property, the former Desert Petroleum gasoline station release is not expected to have impacted the subject property.
- **Mobil – 3991 Long Beach Boulevard – 3991 Long Beach Boulevard.** This site is located roughly 300 feet northeast of the subject property. According to EDR and GeoTracker, the former gasoline station is associated with a closed unauthorized release case. The cleanup status is listed as "Completed – case closed as of 4/3/2009." The contaminant of concern was reported as "aviation" and the media affected was reported as "soil." Case closure documentation was not available for review through GeoTracker. Based on the distance of the former release (roughly 300 feet) and the soil-only nature of the case, the former Mobil release is not expected to have impacted the subject property.

EDR reported 13 orphan or unmapped site listings, which EDR is unable to plot due to insufficient address information. Based on Rincon's review of the limited address information, these listings are not expected to impact the subject property. Sites listed in EDR are summarized in Table 4.4-1, *EDR Listing Summary of Select Sites within One-Eighth Mile of the Subject Property*, below.

Table 4.4-1 EDR Listing Summary of Select Sites within One-Eighth Mile of the Subject Property

Site Name	EDR Site ID	Site Address	Distance from Subject Property	Database Reference	Comments
Subject Property					
Fire Station #9	A1, A2	3917 Long Beach Boulevard	Subject Property	HAZNET	HAZENT – Generator of hydrocarbon solvents (benzene, hexane, Stoddard, etc.)
				UST	No other details provided by EDR
Adjacent Notable Properties					
De Wachter Caroline Mrs.	A3	3931 Long Beach Boulevard	100 feet to the north	EDR Hist Cleaner	Clothes Presser and Dyers - 1948
Los Cerritos Cleaners	A7	3937 Long Beach Boulevard	100 feet to the north	EDR Hist Cleaner	Cleaners and Dyers - 1963
Frederick Marshall/ Donovan Edwards Ricketts	A4	3925 Long Beach Boulevard	Adjacent to the north	RCRA NonGen/NLR	Facility does not currently generate hazardous waste; no violations noted
Laughter Service/ McClellan S J	A5, A6, A8	3901 Long Beach Boulevard/3900 Virginia Road	150 feet to the south	EDR Hist Auto	Listed as a gasoline service station from 1944 through 1957
				UST	No other details provided by EDR
				EDR Hist Auto	Listed as a gasoline service station in 1939
Ross Nathan MD Inc. DBA The Hand & Wrist Center/Laser Skin Care Center	A9, A10	3918 Long Beach Boulevard #100	Adjacent to the east, across Long Beach Boulevard	RCRA NonGen/NLR	Facility does not currently generate hazardous waste; facility is a historical generator of hazardous materials
				FINDS	No pertinent information provided
				ECHO	No pertinent information provided

Site Name	EDR Site ID	Site Address	Distance from Subject Property	Database Reference	Comments
Nearby Release Sites					
Desert Petroleum #210/Gasco Service Station #210/Parks Texaco Service Station/Blockbuster Video/Parks Texaco Service Stations	A11, A12, A13, A14, A15, A16	3910 Long Beach Boulevard	175 feet to the southeast	LUST (GeoTracker)	Release of gasoline to groundwater; case closed in 1996
				HIST CORTESE	No pertinent information provided
				CERS	Indicates site was listed as a LUST Cleanup Site
				SWEEPS UST	Indicates that facility was associated with seven fuel USTs ranging from 10,000-20,000 gallons
				HIST UST	Indicates that facility is associated with seven former USTs; closure date not reported
				CA FID UST	No pertinent information provided
				EDR Hist Auto	Listed as a gasoline service station from 1952 through 1979
				UST	No other details provided by EDR
Mobil	B19	3991 Long Beach Boulevard	300 feet to the northeast	LUST (GeoTracker)	Reported release of aviation oil to soil; case closed in 2009
				HIST CORTESE	No pertinent information provided
				CERS	Indicates site was listed as a LUST Cleanup Site

HAZNET = Hazardous Waste Manifests, UST = Underground Storage Tank, EDR Hist Cleaner = Environmental Data Resources Historic Dry Cleaner, RCRA NonGen/NLR = Resource Conservation and Recovery Act Non-Generator/ No Longer Regulated, EDR Hist Auto = Environmental Data Resources Historic Automobile Repair Shop, FINDS = Facility Index System Database, ECHO = Enforcement and Compliance History Online, LUST = Leaking Underground Storage Tank, HIST CORTESE = Historic Cortese, CERS = California Environmental Reporting System, SWEEPS UST = Statewide Environmental Evaluation and Planning System Underground Storage Tank, CA FID UST = California Facility Inventory Database Underground Storage Tank

***Bold** listings indicate a release database

Regulatory agency information reviewed for the listings in the table above are summarized in the Additional Environmental Record Sources section of the Hazardous Materials Technical Study (Appendix E).

4.4.2 Regulatory Setting

Federal, state, and local government laws define hazardous materials as substances that are toxic, flammable/ignitable, reactive, or corrosive. Extremely hazardous materials are substances that show high acute or chronic toxicity, carcinogenicity, bioaccumulative properties, persistence in the environment, or that are water reactive. The following are federal, state and local regulations that may apply to the proposed project.

Federal

Resource Conservation and Recovery Act

At the federal level, the U.S. Environmental Protection Agency (U.S. EPA) has primary responsibility for enforcing laws and regulations that govern the use, storage, and disposal of hazardous materials and hazardous waste. The Resource Conservation and Recovery Act of 1976 (RCRA) defines when a hazardous substance is a hazardous waste based on a number of criteria and regulates hazardous wastes from generation of the waste through disposal. Title 49 of the Code of Federal Regulations (CFR 49) contains lists of more than 2,400 hazardous materials and regulates the transport of those materials.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C Section 9601 et seq.), also known as Superfund, was established to hold multiple parties, including past and present owners, operators, transporters, and generators jointly, severally, and strictly liable for the remediation costs of a hazardously contaminated site.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) amends CERCLA and increases state involvement and requires Superfund actions to consider state environmental laws and regulations. SARA also established a regulatory program for Underground Storage Tanks (USTs) and the Emergency Planning and Community Right-to-Know Act.

Toxic Substances Control Act

The Toxic Substances Control Act (15 U.S.C. 2601 et seq.) regulates manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. It addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos-containing materials (ACMs), and lead-based paint (LBP).

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act regulates the transport of hazardous materials by motor vehicles, rail, marine vessels, and aircraft.

Hazardous Materials Transportation Uniform Safety Act of 1990

The Hazardous Materials Transportation Uniform Safety Act of 1990 (Public Law 101-615) regulates the safe transport of hazardous material intrastate, interstate, and for foreign commerce. The statute includes provisions to encourage uniformity between different state and local highway

routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials.

Occupational Health and Safety Administration Standard 1910.120

The Occupational Health and Safety Administration (OSHA) published Standard 1910.120, which in part requires that employers evaluate the potential health hazard that hazardous materials pose in the workplace and communicate information concerning hazards and appropriate protective measures to employees. Under OSHA Standard 1910.120, a health hazard is defined as “a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.”

State

California Code of Regulations, Title 22, Hazardous Waste Management

At the State level, under Title 22, Division 4.5 of the California Code of Regulations (CCR 22), the DTSC regulates hazardous waste in California primarily under the authority of the Federal RCRA and the California Health and Safety Code (HSC). The Hazardous Waste Control Law (HWCL), under Title 22 CCR, Chapter 30, establishes regulations that are similar to RCRA but more stringent in their application and empowers the DTSC to administer the state’s hazardous waste program and implement the federal program in California. The DTSC is responsible for permitting, inspecting, ensuring compliance, and imposing corrective action programs to ensure that entities that generate, store, transport, treat, or dispose of potentially hazardous materials and waste comply with federal and state laws. The DTSC defines hazardous waste as waste with a chemical composition or other properties that make it capable of causing illness, death, or some other harm to humans and other life forms when mismanaged or released into the environment.

The DTSC shares responsibility for enforcement and implementation of hazardous waste control laws with the SWRCB and, at the local level, the Regional Water Quality Control Board, and city and county governments.

Proposition 65 – Safe Drinking Water and Toxic Enforcements Act

The California Safe Drinking Water and Toxic Enforcements Act of 1986 (Proposition 65), adopted in November 1986, established a prohibition on contaminating drinking water with chemicals known to cause cancer or reproductive harm, as outlined in the HSC, Division 20, Chapter 6.6 Sections 25249.5 - 25249.14. It also requires businesses to provide warnings before causing exposure to chemicals known to cause cancer or reproductive toxicity and requires a list of such chemicals to be published and updated annually.

The La Follette Bill

The La Follette Bill (Assembly Bill 3777) established guidelines for Hazardous Materials Management as outlined in the HSC, Division 20, Chapter 6.95, Article 2, Sections 25531-25540. It requires owners or operators of each business in the state, which at any time, handles any acutely hazardous material in quantities equal to or greater than 500 pounds, 55 gallons, or 200 cubic feet under standard temperature and pressure for compressed gas to register with an administering agency.

The California Environmental Protection Agency (CalEPA) is directly responsible for administering the “Unified Program” that consolidates and coordinates the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs. The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs and is implemented at the local government level by Certified Unified Program Agencies (CUPA). A local CUPA is responsible for administering/overseeing compliance with the following programs, as required by state and federal regulations:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention (CalARP) Program
- Underground Storage Tank (UST) Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure (SPCC) Plans
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

Hazardous Waste Control Act

The Hazardous Waste Control Act (HSC, Section 25100 et seq.), is similar to the Federal RCRA in that it regulates the identification, generation, transportation, storage, and disposal of materials deemed hazardous by the State of California.

Cortese List Statute

The Cortese List Statute requires the DTSC to compile and maintain lists of potentially contaminated sites located throughout the state and includes the Hazardous Waste and Substances Sites List (Cortese List).

California Public Resources Code, Section 21151.4

California Public Resources Code Section 21151.4 requires the lead agency to consult with any school district with jurisdiction of a school within 0.25 mile of the project about potential impacts on the school if the project might reasonably be anticipated to create hazardous air emissions or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance.

California Health and Safety Code, Title 22, Risk-Based Screening Levels and Cleanup Goals

Toxicity criteria for all human health risk assessments, human health risk-based screening levels, and remediation (cleanup) goals are established in the California Health and Safety Code (HSC) Title 22, Chapter 50, Section 68400.5 and Chapter 51, Sections 69020 – 69022. Section 68400.5 states that “for any release of hazardous waste or hazardous constituents, the human health risk assessment calculations, including, but not limited to, all cancer risk and non-cancer hazard screening levels and corrective action objectives, shall use the toxicity criteria specified in ... Sections 69022, subdivision (a) and (b).” Pursuant to Section 69021, all human health risk assessments,

human health risk-based screening levels, and remediation goals must use the Office of Environmental Health Hazard Assessment (OEHHA) risk factors, oral slope factors, chronic reference exposure levels, and blood-lead values. These values are listed in Appendix I of Section 69021. For any contaminant of potential concern (COPC) not listed in Appendix I, toxicity criteria provided in the U.S. EPA Integrated Risk Information System (IRIS) database shall be used. For COPCs not listed in Appendix I or the IRIS database, toxicity criteria from another source may be used, provided that it applies the best available science and is health-based.

The California HSC Section 25395.95 (c), states that “on or before 60 days after the date an agency receives a response plan, the agency shall make a written determination that proper completion of the response plan constitutes appropriate care for purposes of subdivision (a) of Section 25395.67.” The statute defines appropriate care in HSC Section 25395.67 as either of the following:

- (a) The performance of a response action, with respect to hazardous materials found at a site, for which the agency makes the determination specified in paragraph (1) of subdivision (c) of Section 25395.96 and that meets all of the following conditions:
 - (1) The response action is determined by an agency to be necessary to prevent an unreasonable risk to human health and safety or the environment, as defined in Section 25395.90.
 - (2) The response action is performed in accordance with a response plan approved by the agency pursuant to Article 6 (commencing with Section 25395.90).
 - (3) The approved response plan includes a provision of oversight and approval of the completed response action by the agency pursuant to Article 6 (commencing with Section 25395.90); or
- (b) A determination that no further action is required pursuant to Section 25395.95.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) was created by the state legislature to facilitate compliance with the Federal Clean Air Act and to implement the state air quality program in Los Angeles County. SCAQMD Rule 402 prohibits discharges from any source such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or 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. SCAQMD Rule 403 reduces the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions. Rule 1166 sets requirements to control the emission of volatile organic compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition. SCAQMD Rule 1466 sets forth air monitoring requirements for toxic air contaminants during earth moving activities at sites designated as cleanup sites by a regulatory agency (such as the Los Angeles Regional Water Quality Control Board). The purpose of the rule is to minimize off-site fugitive dust emissions containing toxic air contaminants. SCAQMD Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities.

Local

South Coast Air Quality Management District (SCAQMD) Rule 1403 (Asbestos)

Rule 1403, Asbestos Emissions from Demolition/Renovation Activities, specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of ACM. This rule is generally designed to protect workers conducting demolition or renovation activities from exposure to asbestos emissions. Rule 1403 requires surveys of any facility being demolished or renovated for the presence of all friable and Class I and Class II non-friable ACM and defines those classes. Rule 1403 establishes notification procedures, removal procedures, handling operations, and warning label requirements. Approved procedures for ACM removal to protect surrounding uses and people identified in Rule 1403 include High Efficiency Particulate Air (HEPA) filtration, the glovebag method, wetting, and some methods of dry removal.

Long Beach Storm Water Management Program

This City of Long Beach Program reinforces the Construction General Permit Stormwater Pollution Prevention Plan (SWPPP) requirements for projects disturbing more than an acre. The program lists minimum requirements to be met at every construction site regardless of the construction site's size. The Long Beach Storm Water Management Program is incorporated in RCM HYDRO-2 and further detailed in Table 2-2, *Regulatory Compliance Measures*, within Section 2, *Project Description*.

Long Beach MS4 Permit

A MS4 is a conveyance system owned and operated by a city or other government entity that collects and directs stormwater. The MS4 permit authorizes the city or other government entity to discharge stormwater to water of the United States, such as the Pacific Ocean (National Association of Clean Water Agencies 2018). The City of Long Beach is covered under the Long Beach MS4 Permit: Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City of Long Beach; Order No. R4-2014-0024 (SWQCB 2014).

Long Beach Low Impact Development Manual

The City adopted Low Impact Development (LID) regulations (LBMC Chapter 18.74) for the purpose of encouraging the beneficial use of rainwater and urban runoff; reducing stormwater/urban runoff while improving water quality; reducing off-site runoff and providing increased groundwater recharge; reducing erosion and hydrologic impacts downstream; and, enhancing the recreational and aesthetic values of communities (Long Beach 2013).

Long Beach Municipal Code Title 8, Health and Safety

- **Chapter 8.85: Underground and Aboveground Storage Tanks.** This chapter designates the Long Beach/Signal Hill Certified Unified Program Agency (CUPA) as the local agency responsible for enforcing regulations pertaining to underground and aboveground storage tanks regulations within the City.
- **Chapter 8.86: Hazardous Materials Release Response Plans and Inventory.** This chapter designates the Long Beach/Signal Hill CUPA as the local agency responsible for enforcing regulations regarding Hazardous Materials Release Response Plans within the City.

- **Chapter 8.87: Hazardous Waste Control.** This chapter designates the Long Beach/Signal Hill CUPA as the local agency responsible for enforcing regulations regarding hazardous waste control within the City.
- **Chapter 8.88: Hazardous Materials Cleanup.** This chapter reinforces the requirements for site characterization and remediation for hazardous materials spills and requires characterization and remediation permits be acquired from the Health Officer of the City of Long Beach and a deputy Health Officer or designee. The Health Officer shall determine the compliance with the hazardous waste control laws by responsible parties.
- **Chapter 8.96: Storm water and Runoff Pollution Control.** This chapter reinforces the requirements of the Federal Clean Water Act and the State Porter Cologne Act (including Construction General Permit requirements) within the City.

City of Long Beach General Plan

The City of Long Beach Public Safety Element, adopted in 1975, outlines the existing safety hazards within the City and the goals and policies to address public safety issues such as fire protection, geologic hazards, crime prevention, and industrial hazards. Goals outlined in the Public Safety Element that apply to the proposed project include the following:

- Reduce public exposure to safety hazards
- Use safety precautions as one means of preventing blight and deterioration
- Provide the maximum feasible level of public safety protection services

Recommended actions that apply to the proposed project include the following:

- Abandoned and condemned buildings should be demolished to reduce availability to potential law violators

City of Long Beach/Signal Hill CUPA

The Long Beach/Signal Hill CUPA has been in effect since July 1, 1997. The CUPA combines both the Fire Department and Health Department programs related to hazardous materials management into one Agency function in the Cities of Long Beach and Signal Hill. The City of Long Beach CUPA Program covers the following programs:

- Hazardous Waste Generator Inspection Program (Health)
- Hazardous Materials Inspection/Business Plan Program (Fire)
- CalARP Program (Health)
- Aboveground Storage Tank (AST) Spill Prevention (Health/Fire)
- UST/AST Program: 1) Tank monitoring/Installs and Removals (Fire); and, 2) Site Mitigation (Health): Review of Soil Sampling Reports related to UST, AST, Clarifier & Hydraulic Lift removals and upgrades; Site Characterization (Phase II); Site Remediation (Phase III)
- Other soil-only projects non-UST related

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, a project would result in a significant impact to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
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, create a significant hazard to the public or the environment;
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
6. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; or
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

b. Project Impacts and Mitigation Measures

Threshold 4.4.1:	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
Threshold 4.4.2:	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.

Impact HAZ-1 THE PROPOSED PROJECT WOULD NOT CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT THROUGH THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS. WITH ADHERENCE TO EXISTING REGULATIONS, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Impact HAZ-2 THE PROPOSED PROJECT WOULD NOT 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. THE PROPOSED PROJECT WOULD INVOLVE THE DEMOLITION OF A STRUCTURE THAT COULD CONTAIN ASBESTOS AND LEAD-BASED PAINT. HOWEVER, IMPLEMENTATION OF MITIGATION MEASURES HAZ-1 AND HAZ-2 AND ADHERENCE TO ALL APPLICABLE SCAQMD AND STATE REGULATIONS REGARDING THE HANDLING AND DISPOSAL OF THESE MATERIALS WOULD REDUCE THESE POTENTIAL IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.

Option A

Option A would involve demolition and construction activities. Demolition of the existing Fire Station No. 9 would involve excavation/earthwork that could require the removal of up to 705 cubic yards of soil and asphalt, including the building foundation/pad and the existing building structure. Although mold is not included in the definition of hazardous substance or hazardous waste and would not pose a threat to nearby sensitive receptors, the remediation of mold may disturb hazardous materials such as asbestos and lead in building materials.

The Hazardous Materials Technical Study from 2019 reported that previous studies of the building documented the presence of LBP on the ceiling of the kitchen (HSA 2017d). Furthermore, the report indicated that eight suspect asbestos samples were collected; however, none of the plaster or drywall materials sampled were determined to contain ACM. Additionally, the Health Science Associates (HSA) report indicated that due to the age of the structure, hidden or unknown suspect ACM, LBP, or other hazardous materials may be uncovered during building demolition, renovation, and maintenance activities.

Mitigation Measure (MM) HAZ-1 requires that work involving materials that could contain LBP be monitored under the direction of a Certified Industrial Hygienist (CIH) who is also a Certified Lead Project Designer. This would provide that all onsite workers have received appropriate training and that they adhere to safety requirements during demolition and excavation/earthwork activities. Furthermore, MM HAZ-1 requires that all contractors working on the project be informed of protocol for notification requirements if suspect hazardous materials are discovered during the project. In addition, MM HAZ-2 requires that suspect ACMs discovered during demolition activities be sampled and analyzed for asbestos content prior to further disturbance and that if ACMs are identified onsite, the material be abated by trained personnel in accordance with SCAQMD Rule 1403.

Project construction would involve the use of potentially hazardous materials such as vehicle fuels and fluids that could be released should an accidental leak or spill occur. However, standard construction best management practices for the use and handling of such materials would be implemented to avoid or reduce the potential for such conditions to occur. Any use of potentially hazardous material during construction of the proposed project would comply with local, California Highway Patrol, and federal regulations regarding the handling of potentially hazardous materials.

Operation of the replacement temporary modular fire station would include common hazardous materials such as cleaning products and fuels used for landscaping equipment, as well as small amounts of fire retardant stored in a protective cabinet. Fire trucks would not refuel on site; therefore, no large quantities of diesel fuel would be stored onsite. Operation of Option A would not routinely transport, use, or dispose of hazardous materials in significant quantities. Furthermore, the proposed project would comply with state and federal laws that govern the proper handling, use, storage and disposal of hazardous materials, in the event hazardous materials are accidentally released, to prevent or reduce injury to human health and the environment.

The Long Beach Fire Department/Fire Prevention Bureau is the lead regulatory agency for USTs within the City and enforces regulations pertaining to safe handling and proper storage of hazardous materials and would comply with federal and state occupational safety standards to minimize worker safety risks from both physical and chemical hazards in the workplace. Project operations are not anticipated to create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Moreover, due to the aforementioned regulatory requirements and implementation of MM HAZ-1 and MM HAZ-2, Option A would not 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.

Option B

Under Option B, the existing fire station structure would be demolished, and the project site would undergo site preparation activities that would involve the removal of up to 705 cubic yards of

material from the project site. Similar to Option A, Mitigation Measures HAZ-1 and HAZ-2 would be required during construction activities to ensure that proper safety and handling protocols are in place for any suspect ACMs/LBP within the existing building. Project construction would involve the use of potentially hazardous materials such as vehicle fuels and fluids that could be released should an accidental leak or spill occur. However, standard construction best management practices for the use and handling of such materials would be implemented to avoid or reduce the potential for such conditions to occur. Any use of potentially hazardous material during construction of Option B would comply with local, California Highway Patrol, and federal regulations regarding the handling of potentially hazardous materials.

After construction activities are completed, the project site would remain vacant and there would not be any operational use of hazardous materials on the project site. With implementation of mitigation, Option B would not 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.

Regulatory Compliance Measures

HMM-1, Hazardous Materials Release Response Plans and Inventory

Mitigation Measures

HAZ-1 Lead-based Paint

Project work with materials that could contain Lead Based Paint (LBP) shall be monitored under the direction of a Certified Industrial Hygienist (CIH) who a Certified Lead Project Designer. The CIH shall confirm workers on site have received appropriate training and adhere to safety requirements during construction activities. All contractors shall be provided with and be responsible for following the required if suspect hazardous materials are identified during demolition (e.g. stop work, remove workers onsite, and notify the CIH). If LBP is found to be present, standard handling and disposal practices for LBP shall be implemented pursuant to Occupational Safety and Health Administration (OSHA) regulations.

HAZ-2 Suspect Asbestos Containing Materials

Prior to the issuance of a demolition permit, the City shall obtain a letter from a qualified asbestos abatement consultant that no Asbestos Containing Materials (ACMs) are present in the building. If ACMs are found to be present, the materials shall be abated in compliance with South Coast Air Quality Management District (SCAQMD) Rule 1403, as well as other applicable State and Federal rules and regulations. Only asbestos trained and certified abatement personnel shall be allowed to perform asbestos abatement activities onsite. All ACMs removed from the onsite structure shall be hauled and disposed offsite by a transportation company certified to handle asbestos and hazardous materials.

Significance After Mitigation

Implementation of Mitigation Measures HAZ-1 and HAZ-2 would reduce significant impacts associated with the discovery of potentially hazardous materials located on the project site.

Threshold 4.4.3:	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
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Impact HAZ-3 THE PROPOSED PROJECT WOULD NOT EMIT HAZARDOUS EMISSIONS OR HANDLE HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL.

The nearest school, Oakwood Academy, is approximately 0.08 mile (450 feet) southwest of the project site and is separated from the project site by commercial development and Long Beach Boulevard right-of-way.

Option A

Although the demolition and construction of the proposed fire station would involve hazardous materials typical of a construction project, as discussed above, it is expected that the proposed project would be operated in compliance with federal, state, and local regulations described under Section 4.5.1, *Regulatory Setting*. Additionally, potential construction-related hazardous releases or emissions would be from commonly used materials such as fossil fuels, solvents, and paints and would not include substances listed in 40 CFR 355 Appendix A: “Extremely Hazardous Substances and Their Threshold Planning Quantities.” Given the site-specific nature of the excavation and construction activities, such spills would be localized and immediately contained and cleaned, and the risk of contaminated soils or other hazardous materials being released to the closest school would be minimal. Although mold is not included in the definition of hazardous substance or hazardous waste and would not pose a threat to nearby sensitive receptors, the remediation of mold may disturb hazardous materials such as asbestos and lead in building materials. As discussed under Threshold 4.4.2, above, construction activities would be required to implement Mitigation Measures HAZ-1 and HAZ-2 to ensure proper handling and disposal of any potential ACMs/LBP identified during demolition of the existing structure. In addition, operation of Option A would not involve the routine use of significant quantities of hazardous materials. Therefore, Option A would have a less than significant impact.

Option B

Similar to Option A, Option B would involve the use of hazardous materials, such as petroleum fuels, during construction activities. Construction activities would comply with federal, state, and local regulations described under Section 4.5.1, *Regulatory Setting*. In addition, as discussed under Threshold 4.4.2, above, construction activities would be required to implement Mitigation Measures HAZ-1 and HAZ-2 to ensure proper handling and disposal of any potential ACMs/LBP identified during demolition of the existing structure. Under Option B, the project site would remain vacant after the completion of construction activities and would not include the use or storage of any hazardous materials. Therefore, Option B would have less than significant impacts.

Regulatory Compliance Measures

HHM-1, *Hazardous Materials Release Response Plans and Inventory*

Mitigation Measures

Mitigation is not required.

Threshold 4.4.4:	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, create a significant hazard to the public or the environment.
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Impact HAZ-4 THE PROJECT SITE IS NOT INCLUDED ON A LIST OF HAZARDOUS MATERIALS SITES COMPILED PURSUANT TO GOVERNMENT CODE SECTION 65962.5 (CORTESE LIST). AS NOTED ABOVE, CITY OF LONG BEACH FIRE PREVENTION BUREAU RECORDS INDICATE THAT THERE MAY BE A CEMENT-FILLED HISTORICAL UST PRESENT ONSITE. WITH IMPLEMENTATION OF MITIGATION MEASURES HAZ-3 AND HAZ-4, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The Fire Department does not have an open or historic Leaking Underground Fuel Tank (LUFT) case associated with the project site. However, closure documentation for the former UST located on the project site was not provided by the City of Long Beach Fire Protection Bureau, nor was there information available as to whether a new UST was installed at the time of the 1988 historical tank closure event.

Option A

As discussed above, the project site potentially contains a UST which requires further investigation prior to the commencement of construction activities. Therefore, MM HAZ-3 would be implemented to determine whether a UST exists on the site, to properly remove historical USTs from the site (if any are encountered), and to determine whether contamination occurred as a result of a potential onsite UST. If soil contamination is detected onsite, MM HAZ-4 would be implemented to properly handle and dispose of impacted soil offsite. With compliance with MM HAZ-3 and MM HAZ-4, impacts associated with potential USTs onsite would be less than significant.

Option B

Option B would require construction activities to remove the existing building and prepare the site for a future use. As such, MM HAZ-3 would be implemented prior to construction activities to ensure the proper handling of any historic USTs and associated contamination that could potentially exist on the site. Similar to Option A, HAZ-4 would be required if soil contamination is detected on the project site. With implementation of MM HAZ-3 and HAZ-4, Option B would have less than significant impacts.

Mitigation Measures

HAZ-3 Underground Storage Tank (UST) Investigation and Closure

A potholing investigation in the vicinity of the historical underground storage tank (UST) shall be conducted and/or a geophysical survey of the site shall be conducted. If a UST is found onsite, the City shall apply for a permit for tank removal at least one month prior to demolition activities. UST(s) found onsite shall be removed under regulatory oversight of the Long Beach Fire Prevention Bureau. Additionally, the City may require that the tank also be permitted for its prior installation. During tank removal activities, a minimum of two excavation sidewall and bottom soil matrix confirmation samples shall be collected to evaluate potential onsite impacts associated with the UST(s).

HAZ-4 Soil Management Plan

If soil contamination is found onsite at actionable levels, a Soil Management Plan (SMP) shall be prepared and, if required, approved by the Los Angeles Regional Water Quality Control Board. Soil brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with applicable provisions of state and federal law. The SMP shall include health and safety information for workers and posted on-site for the general public and would inform the various contractors and workers of the presence of soil impacted with petroleum hydrocarbons and the appropriate measures to safely deal with the soil.

Significance After Mitigation

Implementation of Mitigation Measures HAZ-3 and HAZ-4 would reduce significant impacts associated with the discovery of potentially hazardous materials located on the project site.

Threshold 4.4.5: A project located within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.

Impact HAZ-5 THE PROPOSED PROJECT IS LOCATED APPROXIMATELY 1.5 MILES WEST OF THE LONG BEACH AIRPORT. THE PROJECT SITE IS NOT LOCATED IN AN AIRPORT LAND USE PLAN OR, WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, AND WOULD NOT RESULT IN A SAFETY HAZARD OR EXCESSIVE NOISE FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The Long Beach Airport is located 1.5 miles east of the project site. However, the project site is not located within a CNEL noise contour and fire station employees would not be impacted from noise impacts associated with inbound or outbound flights from the airport. The project site is not within the airport land use planning area.

Option A

Under Option A, a temporary structure would be added to the project site and Fire Station No. 9 operations would resume at the site. The proposed temporary structure would be single-story and would not interfere with airport operations, alter air traffic patterns, or conflict with established Federal Aviation Administration flight protection zones. Due to the limited use of the project site for emergency responder operations with a maximum of six crew members at the site for one shift at a time there would be limited activities at or near the site, impacts of the project operations on operations at the Long Beach Airport would be considered less than significant.

Option B

Under Option B, the project site would remain vacant upon conclusion of construction activities. Therefore, Option B would not impact airport operations and would not result in a safety hazard or excessive noise for people working or living in the area. There would be no impact associated with Option B.

Mitigation Measures

Mitigation is not required.

Threshold 4.4.6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?
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Impact HAZ-6 THE PROPOSED PROJECT WOULD NOT INVOLVE THE DEVELOPMENT OF STRUCTURES, INFRASTRUCTURE, OR ROADS THAT COULD POTENTIALLY IMPAIR IMPLEMENTATION OF, OR PHYSICALLY INTERFERE WITH, AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Option A

Option A would not involve the development of structures, infrastructure, or roads that could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Additionally, as discussed in Section 5.11, *Transportation*, Option A would not result in increased traffic that could impact emergency response and evacuation plans. Moreover, under Option A, the project site would house emergency responders that respond to fire, medical, beach, and waterway emergencies throughout the City. Their stated goals are to provide effective prevention, education, and preparedness services and to coordinate the City's disaster management and Homeland Security efforts. Therefore, the project would have a less than significant impact.

Option B

Under Option B, the project site would be left undeveloped after the removal of the existing Fire Station No. 9 building. Option B would not involve the development of structures, infrastructure, or roads that could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. In addition, Option B would not involve any operational activities or generate traffic which could impact emergency response and evacuation plans. Therefore, Option B would have no impact to emergency response and evacuation activities.

Mitigation Measures

Mitigation is not required.

Threshold 4.4.7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impact HAZ-7 THE PROPOSED PROJECT WOULD NOT RISK EXPOSING PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF LOSS, INJURY, OR DEATH INVOLVING WILDLAND FIRES.

Option A

As further discussed in Section 5.13, *Wildfire*, the project is located within an urban, built-out area and is not within a designated very high fire severity hazard zone. There would be no risk of exposing the proposed temporary modular structure or fire and paramedic crews to a significant risk of loss, injury, or death involving wildland fires. No impact is identified for this issue area, and no further analysis in the EIR is warranted.

Option B

As discussed above, the project site is in an urban area and is not subject to wildland fires. In addition, under Option B, the project site would remain undeveloped and there would be no personnel or residents on the site. Therefore, Option B would not risk exposing people or structures to a significant risk of loss, injury, or death involving wildland fires.

Mitigation Measures

Mitigation is not required.

c. Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, cumulative development in the vicinity of the proposed project includes fifteen projects, including residential, commercial/retail, and industrial uses. Cumulative development in the vicinity of the project site has potential to expose area residents, employees, and visitors to current and historical use of hazardous materials. The magnitude of hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Compliance with appropriate federal, State, and local hazardous waste remediation and disposal requirements, including remedial action on contaminated sites, would avoid potential hazard impacts associated with cumulative development in the City. Overall, hazards and hazardous materials impacts associated with individual developments are site-specific in nature and must be addressed on a case-by-case basis. Since hazards and hazardous materials are required to be examined as part of the permit application and environmental review process, it is anticipated that potential impacts associated with individual projects would be adequately addressed and mitigated prior to development permit approval. Therefore, under both Options A and B, the proposed project's contribution to cumulative impacts related to hazardous materials and waste or the creation of any health hazards would not be cumulatively considerable.

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4.5 Noise

The proposed project involves demolition and removal of vacant Fire Station No. 9 under both Option A and Option B (“proposed project”). Option A would erect a temporary modular structure on the project site to accommodate Fire Station No. 9 operations, whereas Option B would leave the site vacant and undeveloped. This section evaluates the potential noise impacts of Options A and B, primarily consisting of temporary construction noise and vibration.

The relevant regulatory requirements are also discussed, as are the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

4.5.1 Setting

a. Fundamentals of Sound, Environmental Noise, and Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs (e.g., the human ear). Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013a).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000-Hertz (Hz) and less sensitive to frequencies around and below 100 Hz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 dB; similarly, dividing the energy in half would result in a decrease of 3 dB (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive an increase (or decrease) of up to 3 dBA in noise levels (i.e., twice [or half] the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud (10.5 times the sound energy) (Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in sound level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Noise levels from a point source (e.g., construction, industrial machinery, ventilation units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result simply from the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to

a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013a). Noise levels may also be reduced by intervening structures. The amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce occupants’ exposure to noise as well. The FHWA’s guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs, its frequency, and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed.

One of the most frequently used noise metrics that considers both duration and intensity is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, L_{eq} is equivalent to a one-hour period, even when measured for shorter durations as the noise level of a 10- to 30-minute period would be the same as the hour if the noise source is relatively steady. L_{max} is the highest Root Mean Squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Normal conversational levels at three feet are in the 60 to 65-dBA L_{eq} range, and ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (L_{dn} or DNL), which is a 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). Noise levels described by DNL and CNEL usually differ by about 0.5 dBA. Quiet suburban areas typically have a CNEL in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 70+ CNEL range.

There is no precise way to convert a peak hour L_{eq} to DNL or CNEL - the relationship between the peak hour L_{eq} value and the DNL/CNEL value depends on the distribution of traffic volumes during the day, evening, and night. However, in urban areas near heavy traffic, the peak hour L_{eq} is typically 2 to 4 dBA lower than the daily DNL/CNEL. In less heavily developed areas, such as suburban areas, the peak hour L_{eq} is often roughly equal to the daily DNL/CNEL. For rural areas with little nighttime traffic, the peak hour L_{eq} will often be 3 to 4 dBA greater than the daily DNL/CNEL value (California State Water Resources Control Board [SWRCB] 1999).

Propagation

Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dBA for each doubling of distance.

Traffic noise is not a single, stationary point source of sound. Rather, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is 3 dBA for each doubling of distance.

b. Fundamentals of Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in./sec.). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

Response to Vibration

Vibration associated with construction of the proposed project has the potential to be an annoyance to nearby land uses. Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures from continuous and intermittent sources. The Caltrans *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) identifies two impact criteria for buildings and humans: Table 4.5-1, *Caltrans Vibration Damage Potential*, presents the impact criteria for buildings, and Table 4.5-2, *Caltrans Vibration Annoyance Potential*, presents the impact criteria for humans.

Table 4.5-1 Caltrans Vibration Damage Potential

Human Response	Maximum PPV (in./sec.)	
	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

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Table 4.5-2 Caltrans Vibration Annoyance Potential

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

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Propagation

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. Variability in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is exposed to vibration, a ground-to-foundation coupling loss (the loss that occurs when energy is transferred from one medium to another) will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

c. Sensitive Receivers

Sensitive receivers typically include residences (including senior housing), educational facilities, churches, medical facilities, libraries, and park and recreation facilities. Similar to noise-sensitive receivers, vibration-sensitive receivers include residences and institutional uses and facilities, such

as schools, churches, hospitals and libraries. Vibration-sensitive receivers also include structures or buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be below levels associated with human annoyance (e.g., recording studios or medical facilities with sensitive equipment).

Sensitive receivers in the project vicinity include the single- and multi-family residences to the north, east, south, and west and the Oakwood Academy private school, which is located approximately 400 feet southeast of the site across Long Beach Boulevard. The nearest sensitive receivers to the site are the multi-family residences located approximately 100 feet west of the site along North Virginia Road.

d. Existing Noise Conditions

The primary source of noise in the project site vicinity is vehicular traffic on adjacent roadways, including Long Beach Boulevard, North Virginia Road, and East Roosevelt Road. Ambient noise levels are generally highest during the daytime and rush hour unless congestion substantially slows speeds.

To characterize the existing noise level at the nearest sensitive receivers to the project site, one 15-minute sound level measurement was collected on November 25, 2019 between 4:55 p.m. and 5:10 p.m.¹ As shown in Figure 4.5-1, *Noise Measurement Location*, Noise Measurement (NM) 1 was taken along North Virginia Road and is representative of the existing ambient noise level along this roadway.

Table 4.5-3, *Noise Measurement Result*, summarizes the noise measurement result. Noise levels for the 15-minute measurements are provided in L_{eq} for the measurement period; L_{min} and L_{max} are also provided. Detailed sound level measurement data are included in Appendix F, *Noise*.

Table 4.5-3 Noise Measurement Result

#	Measurement Location	Sample Time	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
1	North Virginia Road, west of the project site	4:55 PM – 5:10 PM	25 feet to centerline of North Virginia Road	55.2	46.9	67.0

dBA = A-weighted decibels, L_{eq} = equivalent noise level, L_{min} = lowest Root Mean Squared (RMS) sound pressure level, L_{max} = highest RMS sound pressure level

See Appendix F, *Noise*, for noise monitoring data.

Source: Rincon field visit on November 25, 2019.

The project area is also subject to noise from intermittent aircraft overflights typical to an urban environment. The nearest airport is the Long Beach Airport, located approximately 1.5 miles east of the project site. Noise from stationary equipment in the project site vicinity primarily consists of operational noise from heating, ventilation, and air conditioning (HVAC) equipment associated with the existing residential and commercial uses.

¹ Measurements taken with an Extech (Model 407780A) ANSI Type 2 integrating sound level meter with an A-weighted slow response setting. The noise meter was placed approximately five feet above ground level.

Figure 4.5-1 Noise Measurement Location



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Fig. 4 Noise Measurement Location

4.5.2 Regulatory Setting

City of Long Beach Municipal Code

The City of Long Beach Municipal Code (LBMC) contains the City’s adopted Noise Ordinance (LBMC Chapter 8.80), which sets exterior and interior noise standards. As outlined in LBMC Section 8.80.150, maximum exterior noise levels are based on land use districts identified for the City of Long Beach. According to the Noise District Map in LBMC Section 8.80.160, the project area is within District One, which is defined as “predominantly residential with other land use types also present.” Table 4.5-4, *Exterior Noise Limits – District One*, summarizes the City’s exterior noise limits for District One.

Table 4.5-4 Exterior Noise Limits – District One

Receiving Land Use District	Night (10:00 PM to 7:00 AM)	Day (7:00 AM to 10:00 PM)
One	45 dBA	50 dBA

dBA = A-weighted decibels

Source: LBMC Section 8.80.160

LBMC Section 8.80.160 states that:

No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the city or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:

1. The noise standard for that land use district for a cumulative period of more than thirty minutes in any hour; or
2. The noise standard plus five decibels for a cumulative period of more than fifteen minutes in any hour; or
3. The noise standard plus ten decibels for a cumulative period of more than five minutes in any hour; or
4. The noise standard plus fifteen decibels for a cumulative period of more than one minute in any hour; or
5. The noise standard plus twenty decibels or the maximum measured ambient, for any period of time.

Furthermore, “if the measured ambient level exceeds that permissible within [the first four of the above categories], the allowable noise exposure standard shall be increased in five decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth [category listed above], the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.”

LBMC Section 8.80.170 establishes standards for interior noise in various land use districts. Table 4.5-5, *Interior Noise Limits*, summarizes interior noise limits for general noise-sensitive land uses.

Table 4.5-5 Interior Noise Limits

Receiving Land Use District	Source Land Use	Time Period	Noise Level
All	Residential	10:00 PM to 7:00 AM	35 dBA
		7:00 AM to 10:00 PM	45 dBA
All	School	7:00 AM to 10:00 PM (while school is in session)	45 dBA
All	Hospital; Designated quiet zones and noise-sensitive zones	Anytime	40 dBA

dBA = A-weighted decibels

Source: LBMC Section 8.80.170

Section 8.80.200 regulates noise disturbances, including vibration. A violation of the noise ordinance would occur if the operation of any device that creates vibration above the “vibration perception threshold” of an individual occurs at or beyond the property boundary of the source on private property or at 150 feet from the source on public space or right-of-way. “Vibration perception threshold” is defined as the “minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration [through] touch or visual observation of moving objects.” The perception threshold is 0.001 g’s² in the 0–30 hertz frequency range and 0.003 g’s in the 30–100 hertz frequency range. Additional noise disturbances include:

- Creating or causing the creation of any sound within any noise-sensitive zone, so as to exceed the specified land use noise standards set forth in Sections 8.80.150 and 8.80.170; or
- Creating or causing the creation of any sound within or adjacent to any noise-sensitive zone containing a hospital, nursing home, school, court or other designated use so as to interfere with the functions of such activity or annoy the patients or participants of such activity.

LBMC Sections 8.80.202A. through 8.80.202C. establish construction noise regulations for weekdays, federal holidays, Saturdays, and Sundays. Construction activities are prohibited between the hours of 7:00 PM and 7:00 AM on weekdays and federal holidays. In addition, construction activities are prohibited between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday. No construction activities may occur on Sunday unless a permit is issued from the noise control officer and is limited to the hours of 9:00 AM and 6:00 PM.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Pursuant to Appendix G of the *CEQA Guidelines*, potentially significant impacts would occur if the proposed project would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies;

² Vibration can be expressed in metric units (m/s²) or units of gravitational constant “g,” where 1 g = 9.81 m/s² (National Instruments 2019).

2. Generate excessive groundborne vibration or groundborne noise levels;
3. Expose people residing or working in the project area to excessive noise levels for a project located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

Construction Noise

Construction of the proposed project would be the primary source of temporary noise associated with the project. Temporary noise levels caused by construction would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. Noise generated by construction equipment can vary in intensity and duration during each phase of construction. However, the demolition, site preparation, and grading phases of construction tend to create the highest temporary noise levels because of the operation of heavy equipment, which commonly include tractors, bulldozers, excavators, front-end loaders, graders, and stationary equipment, such as compressors and generators. Construction of the project under Option A would involve demolition, site preparation, placement of the temporary modular structure, and paving. Construction of the project under Option B would involve demolition and site preparation. The loudest hour of project construction would likely occur during the demolition and site preparation phases. For assessment purposes, this loudest hour has been modeled regardless of phase and under the conservative assumption that a dozer, an excavator, and a loader would be operating simultaneously. It is assumed that diesel engines would power construction equipment (Appendix F, *Noise*).

Construction noise was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) Version 1.1. This model predicts noise levels based on the expected construction equipment, empirical data for noise generated by this equipment, the expected usage of equipment during each workday, and formulas to estimate sound attenuation from source to receiver. Mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, excavators, and loaders (FTA 2018). Therefore, noise impacts from mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site) to the nearest noise-sensitive receivers, which consist of the multi-family residences located approximately 125 feet west of the center of the project site along North Virginia Road. Other sensitive receivers in the project vicinity include the single- and multi-family residences to the north, south and west and the Oakwood Academy private school, which is located approximately 425 feet southeast of the center of the project site across Long Beach Boulevard. Therefore, construction noise was modeled at distances between 125 feet and 425 feet from the center of the project site for surrounding sensitive receivers.

As discussed in Section 4.5.1, *Setting*, construction noise levels would attenuate at a rate of approximately 6 dBA per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Ground absorption adds to the attenuation from distance alone. The analysis does not account for attenuation from intervening structures between construction equipment and receivers or for soft-site attenuation. RCNM calculations are included in Appendix F, *Noise*.

While the City does not have specific noise level criteria for assessing construction noise impacts, the FTA has developed guidance for determining whether construction of a project would result in a substantial temporary increase in noise levels. Based on FTA guidance, a significant impact would occur if project-generated construction noise exceeds a one-hour 90 dBA L_{eq} noise limit during the day and a one-hour 80 dBA L_{eq} noise limit during the night at the nearest residences (FTA 2018).

On-site Operational Noise

Under Option A, the primary on-site noise sources associated with operation of the proposed project would include noise from fire and paramedic trucks, new heating, ventilation, and air conditioning (HVAC) equipment, and the emergency generator that was previously located at the site. On-site operational noise associated with the proposed project would generate a significant impact if noise levels exceed the standards shown in Table 4.5-4, *Exterior Noise Limits—District One*, and Table 4.5-5, *Interior Noise Limits*. Under Option B, the project site would remain vacant after the conclusion of construction activities and there would be no on-site operational noise generated.

Off-site Operational Noise

While the proposed project would generate vehicle trips under Option A, as discussed in Section 5.11, *Transportation*, Option A would not substantially increase traffic on off-site area roadways. Option A would generate approximately 14 daily trips. While these are occurring within the City and would not increase noise within the overall network, due to the lack of recent activity at the site, these trips may increase noise levels on roadways adjacent to the site. Roadway noise impacts were assessed using the FHWA Traffic Noise Prediction Model on select area roadways, including North Virginia Road and Long Beach Boulevard. These roadways would capture the majority of project-generated vehicle trips. A significant impact from off-site operational traffic noise would occur if the project-generated daily traffic volume doubles existing volumes and increases existing traffic noise by 3 dBA, which would be a barely perceivable increase in traffic noise.

Under Option B, the project site would remain undeveloped and would only involve occasional trips to the site by Public Works personnel for site maintenance activities. Therefore, there would be no off-site operational noise impacts associated with Option B and off-site noise impacts were not modeled.

Groundborne Vibration

Operation of the proposed project under both Option A and Option B would not involve activities that would expose sensitive receivers or nearby buildings to vibration. Rather, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers. Since groundborne vibration could cause physical damage to structures, vibration impacts were modeled based on the distance from the location of vibration-intensive construction activities to the nearest building, assumed to be at edge of the project site to the edge of nearby off-site structures. Therefore, equipment was modeled at 25 feet from the nearest off-site structures to the north and south, and 100 feet to the nearest off-site multi-family residences to the west across North Virginia Road.

According to Section 8.80.200 of the City's Municipal Code, a violation of the ordinance would occur if the operation of any device which creates vibration above the "vibration perception threshold" of an individual occurs at or beyond the property boundary of the source on private property or at 150 feet from the source on public space or right-of-way. "Vibration perception threshold" is defined as the "minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration [through] touch or visual observation of moving objects." The perception threshold is 0.001 g's in the 0 to 30 hertz frequency range and 0.003 g's in the 30 to 100 hertz frequency range.

The Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human

annoyance. Based on the Caltrans criteria shown in Table 4.5-1, *Caltrans Vibration Damage Potential*, construction vibration impacts would be significant if vibration levels exceed 1.0 in./sec. PPV at nearby receivers, which is the limit above which minor architectural damage may occur to new residential structures. In addition, based on the Caltrans criteria shown in Table 4.5-2, *Caltrans Vibration Annoyance Potential*, construction vibration impacts would cause human annoyance at nearby receivers if vibration levels exceed 0.24 in./sec. PPV, which is the limit above which vibration becomes distinctly perceptible rather than barely perceptible.

b. Project Impacts and Mitigation Measures

Threshold 4.5.1:	Would the project generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
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Impact N-1 TEMPORARY CONSTRUCTION ACTIVITIES WOULD NOT EXCEED FTA DAYTIME OR NIGHTTIME NOISE LIMITS FOR CONSTRUCTION NOISE AT RESIDENTIAL RECEIVERS NEAR THE PROJECT SITE AND CONSTRUCTION ACTIVITIES WOULD BE RESTRICTED TO THE HOURS SPECIFIED BY THE CITY'S NOISE ORDINANCE. THEREFORE, TEMPORARY CONSTRUCTION-RELATED NOISE IMPACTS AT EXISTING SENSITIVE RECEIVERS NEAR THE PROJECT SITE WOULD BE LESS THAN SIGNIFICANT.

Construction activity would result in temporary increases in ambient noise in the project area on an intermittent basis and, as such, would expose surrounding noise sensitive receivers to increased noise. Temporary construction noise would not generate continuously high noise levels, although occasional single-event disturbances from construction would be possible. Construction noise would typically be higher during the heavier periods of initial construction (i.e., demolition and grading work) and reduced in the later construction phases (i.e., implementation of the modular structure). Both Option A and Option B would involve demolition and site preparation; therefore, maximum construction noise levels under each of these options would be similar. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receivers, and presence or absence of intervening structures, terrain, or other noise attenuation barriers. Construction equipment would be continuously moving across the site, coming near and then moving further away from individual receivers.

Due to the dynamic nature of construction, maximum hourly noise levels are calculated at various distances from the center of on-site construction activity to the nearest noise-sensitive receivers. The nearest receivers consist of multi-family residences located approximately 125 feet west of the center of the project site along North Virginia Road. Other sensitive receivers in the project vicinity include the single- and multi-family residences to the north, east, and south, and the Oakwood Academy private school, which is located approximately 425 feet southeast of the center of the project site across Long Beach Boulevard. Table 4.5-6, *Options A and B: Estimated Hourly Construction Noise Levels*, shows the maximum expected noise levels at distances of 125, 225, 325, and 425 feet from the center of the project site under the conservative assumption that a dozer, an excavator, and a loader would be operating simultaneously during the "loudest hour" of construction activity. These estimates are conservative because they assume no attenuation of noise by intervening structures and assume construction activity adjacent to sensitive receptors.

Table 4.5-6 Option A and Option B: Estimated Hourly Construction Noise Levels

Construction Equipment	Approximate L_{eq} , dBA			
	125 Feet	225 Feet	325 Feet	425 Feet
Bulldozer, Front-End Loader, Excavator	74	68	65	63

dBA = A-weighted decibels, L_{eq} = equivalent noise level
 See Appendix F, *Noise*, for RCNM results.

Option A

As shown in Table 4.5-6, *Option A and Option B: Estimated Hourly Construction Noise Levels*, construction activities would generate noise levels up to an estimated 74 dBA L_{eq} at the nearest noise-sensitive receivers. Therefore, construction activities would not generate noise levels exceeding the applicable one-hour 90 dBA L_{eq} daytime or one-hour 80 dBA L_{eq} nighttime FTA thresholds for residential land uses. (FTA 2018) Furthermore, LBMC Sections 8.80.202A. through 80.202C. prohibit construction activities between the hours of 7:00 PM and 7:00 AM on weekdays and Federal holidays, between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and any time on Sunday. Nonetheless, according to project construction plans, construction activities under the proposed project would be limited to weekday hours between 7:00 AM and 3:00 PM and would occur for approximately six months. Therefore, construction noise would be temporary and would not occur during nighttime hours, reducing impacts to noise-sensitive residential receivers. Construction noise would cease after completion of the proposed project and temporary construction noise associated with Option A would be less than significant.

Option B

Similar to Option A, construction under Option B would not generate noise levels exceeding the applicable standards and construction activities would comply with LBMC Sections 8.80.202A. through 80.202C. Under Option B, construction activities would only last approximately two months and would be limited to weekday hours between 7:00 AM and 3:00 PM. Therefore, construction noise would be temporary and would not occur during nighttime hours, reducing impacts to noise-sensitive residential receivers. Construction noise would cease after completion of the proposed project and temporary construction noise associated with Option B would be less than significant.

Regulatory Compliance Measures

N-1, *Construction Noise*

Mitigation Measures

Mitigation is not required.

Threshold 4.5.2:	Would the project generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
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Impact N-2 OPERATION OF THE PROPOSED PROJECT WOULD GENERATE ON-SITE NOISE THAT MAY PERIODICALLY BE AUDIBLE TO EXISTING NOISE-SENSITIVE RECEIVERS IN THE VICINITY. HOWEVER, WITH ADHERENCE TO THE CITY'S NOISE ORDINANCE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Option A

Operation of Option A would generate on-site noise from HVAC equipment, delivery trucks, trash hauling trucks, and fire and paramedic truck sirens typical of fire stations. The project site has historically been used as a fire station, thus operational noises would be typical and similar to noise levels at the site prior to the station's temporary closure in 2019.

Noise from HVAC equipment would typically generate noise in the range of 70 dBA L_{eq} at a reference distance of 3 feet from the source. Noise-sensitive receivers would typically be located at least 100 feet from the nearest HVAC equipment, and noise levels from HVAC equipment would be 42 dBA L_{eq} at the nearest noise sensitive receiver across North Virginia Road.

The noise level of the generator would be 72 dBA at a reference distance of 23 feet from the source. This is a constant noise level and, assuming a full hour of operation, the generator would result in a noise level of 72 dBA L_{eq} . However, the operation of the generator would be exempt from the City's noise ordinance during emergencies. Therefore, only the testing and maintenance activities would be subject to the noise ordinance. Based on the manufacturer's specifications, this would require the generator to be run for 15 minutes once a month. Based on the reduced amount of time the generator would be running, noise levels would be reduced by 6 dBA, to 66 dBA L_{eq} , at a distance of 23 feet. The nearest noise-sensitive receivers would be located 75 feet from the generator's on-site placement, across North Virginia Road, and noise levels from the generator would attenuate to 56 dBA L_{eq} at this location.

The operation of the HVAC and simultaneous testing and maintenance would result in a noise level of 56 dBA L_{eq} at the nearest noise-sensitive land use across North Virginia Road. As shown in Table 4.5-3, ambient noise levels at the project site were measured at 55.2 dBA L_{eq} . Based on estimated noise levels, project operations would not exceed ambient noise levels by more than 5 dBA, as regulated under Chapter 8.80 of the LBMC.

While it has been less than a year since the temporary closure of Fire Station No. 9, due to the lack of activity at the site, residents or other sensitive-noise receptors in the immediate vicinity of the proposed project may experience periodic exposure to high noise levels due to sirens that they have grown unaccustomed to. Typically, this is concern related to the idea that a fire station would respond to many emergencies, with multiple emergency vehicles leaving the site daily. In addition, emergency sirens are intentionally loud and such loud noise could disrupt quiet residential neighborhoods.

In terms of magnitude of noise exposure, a typical siren emits approximately 100 dB at 100 feet. However, because emergency vehicle response is by nature rapid, the duration of exposure to these peak noise levels in the is estimated to last for a maximum of ten seconds as emergency vehicles pause at the driveway exit, engage the siren and turn onto the roadway and accelerate rapidly away from the fire station. Thus, residents of existing nearby homes would be exposed to short-duration

high noise levels for approximately ten seconds, an average of approximately 12 times per day, based on the number of service calls Fire Station No. 9 responded to in 2019. Further, the typical practice for emergency siren use is to use sirens to break traffic at intersections or warn drivers of the emergency vehicle approach when traffic is congested. Responses to nighttime emergency calls, when nuisance noise is most noticeable, routinely occur without the use of sirens. Other homes and residents along routes used for emergency access would also be exposed to such noise levels, although the magnitude and frequency of this exposure would vary by distance from the road and proximity to Fire Station No. 9. The duration of such exposure would likely be less than the projected ten seconds for homes near proposed Fire Station No. 9, as the emergency vehicles would generally be assumed to be passing at full speed, with no time required for turning out of the driveway or accelerating. This impact would be less than significant.

Option B

Option B would involve the removal of existing fire station on the project site, upon which, the site would remain undeveloped. There would be no operational activities under Option B. Therefore, Option B would have no operational noise impacts to noise-sensitive receivers in the vicinity.

Regulatory Compliance Measures

N-2, *Operational Noise*

Mitigation Measures

Mitigation is not required.

Threshold 4.5.3:	Would the project generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
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Impact N-3 OPERATION OF THE PROPOSED PROJECT WOULD NOT GENERATE A DOUBLING IN TRAFFIC VOLUMES ON AREA ROADWAYS AND, THEREFORE, WOULD NOT INCREASE EXISTING TRAFFIC NOISE BY 3 DBA OR MORE. THEREFORE, THE INCREASE IN NOISE WOULD BE IMPERCEPTIBLE AND LESS THAN SIGNIFICANT.

Option A

To determine whether Option A would create traffic noise resulting in a significant noise increase, existing and potential future noise levels were modeled using the FHWA Traffic Noise Model based on existing peak hour traffic volumes from the City's 2014 Citywide Traffic Flow Map, the most recently collected data on local roadway traffic within the City (Long Beach 2014). Roadway noise impacts were assessed on Long Beach Boulevard as the major source of roadway noise at the project site. In 2014, Long Beach Boulevard had an average daily traffic (ADT) flow of 25,600 vehicles in the segment adjacent to the project site (Long Beach 2014). As discussed in Section 5, *Impacts Found Not to be Significant*, the operation of Option A would involve an average of 14.4 vehicle trips per day. The approximately 14 additional trips would not represent a doubling of ADT on Long

Beach Boulevard and the noise increase of 14 additional trips per day to this roadway would be less than 1 dBA.³ The impact would be less than significant.

Option B

Under Option B, traffic to and from the site would be limited to occasional trips from Public Works to maintain the site. These trips would not contribute significantly to traffic growth along nearby roadways. Therefore, operation of Option B would not result in a perceptible increase of traffic noise and impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Threshold 4.5.4:	Would the project generate excessive ground-borne vibration or ground-borne noise levels?
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Impact N-4 CONSTRUCTION VIBRATION GENERATED BY THE PROPOSED PROJECT WOULD NOT CREATE EXCESSIVE VIBRATION LEVELS THAT WOULD CAUSE PHYSICAL DAMAGE TO NEARBY STRUCTURES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction activities would intermittently generate groundborne vibration on and adjacent to the project site. Construction of the proposed project would potentially utilize loaded trucks, a roller, a jackhammer and a bulldozer during most construction phases and during the demolition phase. Both Options A and B would involve demolition and would therefore produce similar levels of groundborne vibration.

Because groundborne vibration could cause physical damage to structure, vibration impacts are assessed based on the distance from the location of vibration-intensive construction activities, assumed to be at edge of the project site, to the edge of nearby off-site structures. The groundborne vibration analysis differs from the construction noise analysis in that modeled distances for vibration impacts are those distances between the project site to nearest off-site structures (regardless of sensitivity) whereas modeled distances for construction noise impacts are those distances between the center of on-site construction activity and the property line of the nearest off-site sensitive receivers. Therefore, equipment was modeled at 25 feet from the nearest off-site commercial structures to the north and south, and 100 feet to the nearest off-site multi-family residences to the west across North Virginia Road. Table 4.5-7, *Option A and Option B: Estimated Vibration Levels for Construction Equipment*, shows estimated groundborne vibration levels from project equipment that is likely to result in the highest vibration levels.

³ The 2014 traffic count data is the most up-to-date data available for local roads in the vicinity of the project site. No large-scale development has been identified in the project vicinity that has occurred since 2014. Though traffic volumes could have fluctuated slightly since 2014, it is reasonable to assume that traffic volumes on Long Beach Boulevard have not changed so substantially since 2014 that the approximately 14 additional daily trips associated with Option A would represent a doubling of traffic volume.

Table 4.5-7 Option A and Option B: Estimated Vibration Levels for Construction Equipment

Equipment	in./sec. PPV	
	25 Feet	100 Feet
Roller	0.210	0.046
Large Bulldozer	0.089	0.019
Loaded Truck	0.076	0.017
Jackhammer	0.035	0.008
Small Bulldozer	0.003	0.001

PPV = peak particle velocity; in./sec. = inches per second See Appendix F, *Noise*, for vibration modeling data sheets.

Option A

Based on Table 4.5-7, *Option A and Option B: Estimated Vibration Levels for Construction Equipment*, construction activities would generate peak vibration levels of approximately 0.21 in./sec. PPV at the nearest off-site commercial structures to the north and south. Therefore, according to Caltrans vibration criteria, groundborne vibration from typical construction equipment would not exceed the applicable threshold of 1.0 in./sec. PPV for adjacent residences surrounding the project site. Furthermore, groundborne vibration would not exceed the threshold of 0.24 for human annoyance at any of the modeled distances. In addition, according to LBMC Sections 8.80.202A. through 80.202C., construction activities are prohibited between the hours of 7:00 PM and 7:00 AM on weekdays and Federal holidays, between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and any time on Sunday. Therefore, sensitive residential receivers would not be disturbed by construction vibration during nighttime hours. Project construction would not result in groundborne vibration that would cause building damage or human annoyance. Option A’s impacts would be less than significant.

Option B

Option B would involve the same demolition activities as those of Option A, and would, therefore, produce similar levels of groundborne vibration. As shown in Table 4.5-7, *Option A and Option B: Estimated Vibration Levels for Construction Equipment*, vibration generated by Option B would not exceed the applicable Caltrans threshold. Similar to Option A, Option B would be required to comply with LBMC Sections 8.80.202A. through 80.202C., which would ensure that sensitive receivers would not be disturbed by groundborne vibration during nighttime hours. Project construction would not result in groundborne vibration that would cause building damage or human annoyance. Option B’s impacts would be less than significant.

Regulatory Compliance Measures

N-1, *Construction Noise*

Mitigation Measures

Mitigation is not required.

Threshold 4.5.5:	Would the project expose people residing or working in the project area to excessive noise levels for a project located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport?
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Impact N-5 THE PROPOSED PROJECT IS LOCATED APPROXIMATELY 1.5 MILES WEST OF THE LONG BEACH AIRPORT. WORKERS AT THE PROJECT SITE WOULD BE SUBJECT TO TEMPORARY AND INTERMITTENT NOISE FROM AIRCRAFT OVERFLIGHTS; HOWEVER, THE PROPOSED PROJECT IS NOT LOCATED WITHIN THE AIRPORT'S NOISE CONTOURS AND WOULD NOT BE AFFECTED BY SUBSTANTIAL NOISE FROM AIRCRAFT OPERATIONS.

The proposed project is not located in the vicinity of a private airstrip, nor is the project located within an airport land use plan. The airport closest to the project site is the Long Beach Airport, which is a public airport located approximately 1.5-miles east of the project site.

Option A

Option A would involve the return of the Fire Station No. 9 crew to the project site upon completion of the temporary modular structure. While crew members of Fire Station No. 9 would be subject to temporary and intermittent noise from aircraft overflights, the site is not located in the airports' noise contours and would not be affected by substantial noise from aircraft operations (Los Angeles County 2003). Therefore, Option A would not expose people residing or working in the project area to excessive noise levels from aircraft noise and no impact would occur.

Option B

Under Option B, the project site would remain vacant after the removal of the existing building and no employees or residents would be added to the project site. Therefore, Option B would not expose people residing or working in the project area to excessive noise levels from aircraft noise and no impact would occur.

Mitigation Measures

Mitigation is not required.

c. Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, the cumulative impacts analysis is based on projects occurring within a 1.5-mile radius of the project site. Cumulative development in the vicinity of the project site includes 15 pending and ongoing projects. The following analysis discusses the potential cumulative impacts associated with the proposed project in conjunction with these other projects in the area.

Cumulative construction impacts would consist of combined noise and vibration impacts from the construction under the proposed project and other planned projects in the vicinity. As determined under Thresholds 4.5.1 and 4.5.4, construction noise and vibration under Option A and Option B of would be similar and less than significant. Furthermore, the proposed project, as well as other planned and pending projects, would be required to comply with the daytime construction hours permitted by the LBMC. Therefore, construction noise and vibration would not disturb residences during sensitive nighttime hours of sleep. The proposed project would not substantially contribute to temporary cumulative construction noise and vibration impacts.

Cumulative operational noise impacts would consist of combined operational noise of the proposed project in conjunction with planned projects in the vicinity. Operation of the fire station under Option A would involve intermittent siren use, which could be disturbing to nearby residents and businesses. However, operation of Option A would not result in noise levels above the levels present prior to the temporary closure of Fire Station No. 9, as the land use and number of employees reporting to the fire station would not change. Under Option B, the project site would remain undeveloped and there would be no operational noise sources on the site. Therefore, Options A and B of the proposed project would not contribute considerably to cumulative noise increases in the project vicinity above ambient noise levels.

5 Effects Found Not to be Significant

This section summarizes the analysis of topics for which no significant adverse impacts were identified and, therefore, are not discussed in detail in the EIR, consistent with CEQA Guidelines Section 15143. The items listed below are contained in Appendix G of the CEQA Guidelines. Items not addressed in this section have been addressed in Section 4.0, *Environmental Impact Analysis*, of this EIR. Section 4.0 also includes an expanded discussion of the settings under each environmental issue area discussed therein.

5.1 Aesthetics

A significant impact would occur if the proposed project would: (1) Have a substantial adverse effect on a scenic vista; (2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; (3) Conflict with applicable zoning and other regulations governing scenic quality; or (4) Create a new source of substantial light or glare which would adversely affect day or nighttime views.

Scenic vistas are panoramic views of features such as mountains, forests, the ocean, or urban skylines. The project site is in the southern, urbanized portion of the Los Angeles metropolitan area. The San Gabriel Mountains, which are approximately 35 miles away, and the Palos Verdes shoreline cliffs, approximately 12 miles away, would be distant background views. The proposed project is located approximately five miles north of the Pacific Ocean and is approximately 95-105 feet above mean sea level. Views of the ocean are obstructed by existing structures and do not constitute scenic vistas. Likewise, downtown Long Beach is approximately four miles south of the site and skyline views are obstructed by development in the area. Views of the skyline would be distant background views that do not constitute a panoramic view or scenic vista.

According to the City's General Plan Urban Design Element (2019), visual assets include vistas of the Pacific Ocean, port facilities, Ocean Boulevard, Queensway Bay and Shoreline Park to the Queen Mary and cruise ships, the downtown Long Beach skyline, and Signal Hill. As previously described, views of the ocean, along with Ocean Boulevard, the port facilities and ships, are not available from the site. Signal Hill is located approximately 2.5 miles southeast of the site and views are obstructed by existing development. Option A would involve replacing the existing one-and-a-half story structure (and three-story hose tower) with a temporary single-story structure that would fit entirely within the existing project boundaries. Implementation of the temporary modular structure at the project site would not cause an increase in height or massing on site that could block scenic views. Therefore, development of Option A would not obstruct public scenic vistas as these resources are not available in the project site vicinity. Under Option B, the project site would be left undeveloped after construction activities are completed and Option B would therefore not obstruct any public views. There would be no impact to scenic vistas.

According to the Caltrans State Historic Highway Program, no existing or proposed State scenic highways are in the vicinity of the project site (Caltrans 2017). The nearest highway eligible for State Scenic Highway listing is the segment of State Route (SR)-1 (Pacific Coast Highway from I-5 south of San Juan Capistrano to SR-19 (Lakewood Boulevard), located approximately seven miles southeast of the site. The nearest officially designated State Scenic Highway is SR-55 in Anaheim, located approximately 21 miles northeast of the site. Neither of these highways is within the viewshed of

the proposed project. Additionally, no historic overlays or preservation zones and no rock outcroppings are present at or near the site. Therefore, the project site is not located within an eligible or designated State scenic highway corridor and there would be no impact to scenic resources within a State Scenic Highway or eligible State Scenic Highway corridor under both Option A and Option B.

As shown in Figure 3 of the *Project Description*, the project site is in an urbanized area of the City. Surrounding land uses consist of commercial buildings to the north, east, and south, and single- and multi-family residences to the north, east, south, and west. The site is zoned CCA (Community Automobile-Oriented District). Uses permitted in the CCA District include retail and service uses for an entire community; a Fire Station is a permitted use in this zone with an administrative use permit. Option A does not involve a change in use on site and is compliant with the applicable zoning regulations. Option A would involve the demolition of the existing 5,548 square foot, one-and-a-half story building (with a 3-story hose tower), which was constructed in 1938 in the Tudor Revival style. A temporary 4,080 square foot, single-story modular structure would be placed on the site so that first responder operations can resume. While Option A would change the visual character of the site, upon approval of the proposed project, changes to scenic quality would be compliant with local zoning and regulations governing scenic quality. Under Option B, the project site would be left undeveloped after removal of the existing building on site. While Option B would change the character of the site by removing development from the site, changes to scenic quality under Option B would comply with local zoning and regulations governing scenic quality. Impacts under Option A and Option B would be less than significant.

The project site is in an urban area of the City with existing light sources on the site, as well as from the residential and commercial developments in the surrounding area. Option A would not involve substantial changes to the lighting on the project site as uses would remain the same. Existing sources of light on the property include interior lighting within the building, single lights above the front and rear entrances, and security lighting affixed to the exterior of the building. Light sources associated with the project would be comparable to existing lighting conditions and would include spillover from the windows of the modular structure, outdoor security lighting/building mounted lighting, and the existing streetlights. However, lighting associated with the proposed project would comply with LBMC Section 21.33.090(e), *Light and Glare Standards*, through RCM AES-1, *Light and Glare*. Furthermore, Option A is not expected to result in increased traffic along adjacent streets. As such, light and glare from reflections of vehicle windows or vehicle headlights shining at night are not expected to increase. Under Option B, sources of light and glare currently existing on the project site would be removed and the site would remain vacant and undeveloped. Therefore, under Option B, no increases in daytime or nighttime light and glare would occur. Impacts associated with light and glare under both Option A and Option B would be less than significant.

Based on the above, the proposed project under both Option A and Option B would have less than significant impacts or no impact to scenic vistas, state scenic highways, and light/glare and would not conflict with regulations governing visual resource or aesthetic value.

5.2 Agriculture and Forestry Resources

A significant impact would occur if the proposed project would: (1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use; (2) Conflict with existing zoning for agricultural use or a Williamson Act Contract; (3) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; (4) Result in

the loss of forest land; or (5) Involve other changes in the existing environment which could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

The project site is located within an urban area of the City of Long Beach. The site contains an existing City-owned fire station and uses in the vicinity include commercial buildings to the north, east, and south, and single- and multi-family residences to the north, east, south, and west. Based on the Department of Conservation's Farmland Mapping and Monitoring Program and Williamson Act maps, neither the project site nor nearby properties are State-designated Farmland, enrolled in Williamson Act contracts, or support forest land or resources (California Department of Conservation [DOC] 2016). Neither the site nor the surrounding area is zoned for forest land or timberland (Long Beach 2018). Therefore, neither Option A nor Option B would conflict with forest land or timberland zoning. Additionally, the project would not result in the loss of forest land or conversion of forest land to non-forest use.

Based on the above, Option A and Option B would have no impact with respect to conversion of Farmland to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contract; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use.

5.3 Biological Resources

A significant impact would occur if it would have a substantial adverse effect on: (1) any species identified as a candidate, sensitive, or special status species; (2) any riparian habitat or other sensitive natural community; (3) state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or (4) the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. A significant impact can also occur if the project conflicts with any local policies or ordinances protecting biological resources or with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Queries of the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (IPaC) (USFWS 2019a), USFWS Critical Habitat Portal (USFWS 2019b), USFWS National Wetland Inventory (NWI) (USFWS 2019c), and CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2019) were conducted. The queries indicated that there is no known habitat suitable for candidate, sensitive, or special status species within the project site. The project site is developed and is in an urbanized area in the City of Long Beach. The area does not contain native biological habitats or habitats for special status species.

Most of the site is developed with an existing fire station building and hardscaping. Vegetation on site consists of ruderal vegetation and ornamental shrubbery and there are no trees on the adjacent properties or public right of way immediately surrounding the site. However, trees in the vicinity of the project site could provide nesting habitat for a variety of bird species that are afforded protection under the federal Migratory Bird Treaty Act (MBTA – 16 United State Code Section 703-711) and Section 3503 of the California Fish and Game Code (CFGC). Construction activities has the potential to impact migratory and other bird species if it occurs during the nesting season. However, Option A and Option B would comply with the applicable regulatory control measure (RCM), BIO-1, *Nesting Bird Avoidance*, that provides guidance for construction activities during

nesting season, shown in Table 2.6-1 of Section 2, *Project Description*, in order to avoid potential impacts to nesting birds. Therefore, Option A and Option B would have less than significant impacts on biological resources.

5.4 Geology and Soils

A potentially significant impact could occur if the proposed project, either directly or indirectly, results in potential substantial adverse effects related to: (1) rupture of a known earthquake fault, strong seismic shaking, landslides and ground failure/liquefaction, expansive soils as defined by the Uniform Building Code (UBC) (1994), or soils incapable of supporting the use of septic tanks where sewers are not available; and (2) substantial soil erosion. A significant impact can also occur if the project, either directly or indirectly, would result in the destruction of a unique paleontological resource or geologic feature; see Section 4.2, *Cultural, Paleontological, and Tribal Resources*, for an in-depth discussion of this impact area.

The project site is not located within a known earthquake fault, and no known fault lines cut through the site as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map. The nearest mapped fault zone is approximately 0.6 mile south/southwest of the site. Additionally, the soils underlying the site are not susceptible to liquefaction (DOC 2019). While the project site is located in the highly seismic Southern California region, development in the City is required to adhere to the California Building Standards Code (California Code of Regulations, Title 24) and the Uniform Building Code (UBC). These codes require various design measures to account for hazards from seismic shaking and adverse soil conditions. RCM GEO-1, *Seismic Hazards*, would ensure that the temporary modular structure constructed under Option A complies with LBMC Chapter 18.68, *Earthquake Hazards Regulation*, which adopts the provisions of the UBC. The impact to people, buildings, or structures on the project site from strong seismic ground shaking and adverse soil conditions, like liquefaction, would be reduced by the required conformance with applicable building codes, and accepted engineering practices. Under Option B, the site would remain undeveloped. Therefore, both Option A and Option B impacts would be less than significant.

According to the City of Long Beach Seismic Safety Element of the General Plan (Seismic Safety Element), the City is relatively flat and characterized by slopes that are not high (less than 50 feet) or steep (generally sloping flatter than 1-1/2:1, horizontal to vertical) (Long Beach 1988). The State Seismic Hazard Zone map of the Long Beach Quadrangle indicates that earthquake induced landslide hazard areas are not present on the project site (DOC 2019). Additionally, the project site and the surrounding area is flat. Therefore, there is no risk of landslides on the site and neither Option A nor B would have an impact.

The Seismic Safety Element and Conservation Elements classify the soils at the site as Granular Terrace deposits and Ramona Loam, respectively (Long Beach 1973 and 1988). The Natural Resources Conservation Services (NRCS) Web Soil Survey indicates that soils in the project site area consist of clay/clay loam in the uppermost layers (80 inches below ground surface), indicating there is a possibility for expansive soils to occur onsite (NRCS 2019). Expansive soils are highly compressible, clay-based soils that tend to expand as they absorb water and shrink as water is drawn away. Expansive soils are of concern since building foundations may rise during the rainy season and fall during dry periods in response to the soil action. However, the project site is already developed. Option A would replace the existing structure with a modular building, and the proposed ground disturbance would not exceed below previously disturbed sediments; therefore, impacts to the proposed new structure and occupants would be minimal. Under Option B, the site would

remain undeveloped and no people or structures would be exposed to risk associated with the possibility of onsite expansive soils. Impacts related to expansive soils would be less than significant under both Option A and Option B.

Option A and Option B would not include the installation of new septic tanks or alternative wastewater disposal systems. No impacts would be associated with wastewater conveyance.

The project site is entirely covered in hardscaped surfaces except for two small areas of landscaping in the front and side yards. The limited pervious surface area restricts the potential for substantial soil erosion. Ground-disturbing activities associated with construction activities under Option A and Option B may result in the removal of some soil erosion. Standard construction best management practices (BMPs), such as the use of silt fences, sand bags, and twice-daily soil watering, would be implemented under both Option A and Option B through RCMs HYDRO-1, *Low Impact Development*, HYDRO-2, *National Pollutant Discharge Elimination System*, and AQ-1, *Demolition, Grading, and Construction Activities*, in order to avoid or minimize soil erosion associated with ground-disturbing activities. As discussed further below in Section 5.5, *Hydrology and Water Quality*, implementation of erosion control measures stated in Chapter 98.02 of the Long Beach Municipal Code (LBMC), as well as adherence to requirements provided in the National Pollutant Discharge Elimination System (NPDES) permit for construction activities would avoid or minimize potential impacts of Option A and Option B.

The paleontological setting and project-related impacts to paleontological resources are discussed in Section 4.2, *Cultural, Paleontological, and Tribal Resources*. In summary, geology and soil impacts under Option A and Option B, apart from paleontological resource impacts, would be less than significant.

5.5 Hydrology and Water Quality

A significant impact would occur if the proposed project would: (1) violate any water quality standards or waste discharge requirements or substantially degrade surface or ground water quality; (2) substantially decrease groundwater supplies or interfere with groundwater; (3) substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces in a way that would result in erosion or siltation, cause flooding, impede or redirect flood flows or create runoff water which would exceed the capacity of stormwater drainage systems; (4) be located in a flood hazard, tsunami, or seiche zone and risk release of pollutants due to flooding, or (5) conflict with a water quality control plan or sustainable groundwater management plan.

Excavation, grading, and construction activities associated with project construction under Option A or Option B would result in soil disturbance. As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals, and transport them to receiving water bodies. The nearest receiving water body is the Los Angeles River, located approximately 4,500 feet west of the project site. In order to avoid or reduce impacts to the Los Angeles River, the Option A and Option B would require a National Pollutant Discharge Elimination System (NPDES) General Construction Permit (MS4 Permit) for storm water discharge associated with construction activities. Objectives of the MS4 Permit are: (1) to identify pollutant sources that may affect the quality of storm water discharges from the construction site that are associated with construction activity, and (2) to identify, construct, and implement storm water pollution preventive measures (best management practices [BMPs]) to reduce pollutants in storm water discharges from the site, both during construction and after construction is completed.

As part of the MS4 Permit, the City of Long Beach would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Plan (MP) before commencing construction activities in accordance with LBMC Section 8.96.110. The SWPPP would include the following: erosion and sediment control, non-storm water management, post-construction storm water management; waste management and disposal, maintenance, inspection, and repair of construction equipment and vehicles, and employee training to perform inspections of the BMPs at the construction site. The SWPPP would describe both structural and nonstructural BMPs to minimize or eliminate the potential for spills and leakage of construction materials and the potential for erosion of disturbed areas by water and wind. The MP would evaluate the BMPs effectiveness to minimize pollutants that could be picked up by storm water runoff. Inspections would be conducted on the project site once every seven calendar days, or once every 14 calendar days and within 24 hours of a 0.25-inch storm event (U.S. EPA 2017). Compliance with NPDES and LBMC Section 8.96.110 would be achieved through implementation of RCM HYDRO-2, *National Pollutant Discharge Elimination System*.

In addition, both Options A and Option B would be required to implement a Low Impact Development (LID) Plan, in accordance with LBMC Chapter 18.74, *Low Impact Development Standards*, as discussed further below and in Table 2-2, *Regulatory Compliance Measures*, of Section 2, *Project Description*. As such, both Option A and Option B would be consistent with water quality standards and waste discharge requirements and substantially would not decrease groundwater or interfere with groundwater recharge. Impacts of Option A and Option B would be less than significant.

Option A would replace the existing fire station building and would reinstate the first responder crew assigned to the location of Fire Station No. 9. Redeveloping the site with a temporary modular structure would not result in a net deficit in aquifer volume or a lowering of the groundwater table because there would be no increase in impermeable areas, and no increase in groundwater use. Under Option B, the project site would remain vacant, there would be no increase in impervious surface on the site, and water use on the site would cease. Under Option B, hardscaping on the project site would be reduced and the vacant site would be covered in a two-inch layer of mulch, which would allow water infiltration. Therefore, Option A and Option B of the proposed project would not result in an exceedance of safe yield or a significant depletion of groundwater supplies. Impacts of Option A and Option B would be less than significant.

Option A would comply with LBMC Chapter 18.74, *Low Impact Development Standards*, by preparing a LID plan and implementing Best Management Practices (BMPs) on the site during demolition, installation, and operation as demonstrated through RCM HYDRO-1, *Low Impact Development*, in Table 2-2, *Project Regulatory Compliance Measures* (see Section 2, *Project Description*). Likewise, Option B would prepare and implement a LID plan and BMPs during all construction activities. The BMPs implemented during project construction would prevent sediment flow into a water source. These construction and erosion control practices would reduce the potential for adverse effects to water quality during construction under Option A and Option B.

The project site is relatively flat, and there is already a structure and hardscape on the project site. Thus, redeveloping the site with the proposed project under Option A would not introduce new surface water discharges, substantially increase runoff volumes, or result in flooding on- or off-site. Under Option B, the project site would be left undeveloped after removal of the existing structure and would have reduced hardscaping compared to current conditions; therefore, Option B would not increase runoff volumes or result in flooding on- or off-site. Impacts under both Option A and Option B would be less than significant.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is in a Zone X (Map # 06037C1955F, effective 2008), which refers to an area that is subject to minimal flood hazard (FEMA 2008). Given the fact that the project site is already developed and paved, and Option A and Option B would comply with LIDs and BMPs pursuant to the LBMC, adverse impacts resulting from inundation and runoff are not anticipated. Therefore, impacts under Option A and Option B would be less than significant.

Lastly, the project site is located approximately five miles from the coast of the Pacific Ocean and is not located in an inundation or tsunami zone (California Geological Survey 2020). The dam nearest to the project site is the Sepulveda Dam located approximately 30 miles to the northwest. Additionally, the project site is not located near a body of water that would be subject to seiche and is not located on or near slopes subject to mudflow events. Therefore, the project site is not located in a hazard area for tsunami, seiche, and mudflow. Impacts under Option A and Option B would be less than significant.

5.6 Land Use and Planning

A significant impact would occur if the proposed project would: (1) physically divide an established community, or (2) conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The project site is developed with a fire station that has been closed due to environmental conditions at the site. Option A would redevelop the site with a temporary modular structure within the existing boundaries of the Fire Station No. 9 footprint and is consistent with recent previous use and the existing land uses in the vicinity. Option A would not include development beyond the current developed area and would not separate an established community. Under Option B, the project site would be left undeveloped after removal of the existing building is completed. While the vacant site may potentially be enclosed by temporary fencing to prevent nuisance activities, this would not significantly impede pedestrian movement in the area, nor would it divide an established community. Therefore, under Option A and Option B, no impacts regarding division of an established community would occur.

The project site is designated as Neighborhood Serving Center or Corridor – Low (NSC-L) by the City's General Plan and zoned CCA (Community Automobile-Oriented District). The NSC-L PlaceType is characterized by low-intensity commercial and multifamily residential uses, and includes schools, parks, libraries, police, and fire stations. Option A would redevelop the project site with a temporary fire station structure, which would align with the General Plan PlaceType. Uses permitted in the CCA Zoning District include retail and service uses for an entire community. A fire station is a permitted use within the CCA Zone with an administrative use permit (LBMC Section 21.32.040). Therefore, Option A would not conflict with any land use plan, policy, or regulation. Under Option B, the project site would remain undeveloped after removal of the fire station building. Therefore, Option B would not conflict with any general plan, policy, or zoning regulations. No impacts would occur under Option A or Option B.

5.7 Mineral Resources

A significant impact would occur if the proposed project would: (1) result in the loss of availability of a known mineral resource, or (2) result in the loss of a locally important mineral resource recovery site that would be a value to the region and residents of the state.

The project site is in an area classified by the California Geological Survey (CGS) as Mineral Resource Zone-4 (MRZ-4). This designation indicates that there is not adequate information to assign the area to another zones, or that it is uncertain whether there are significant mineral deposits in the area (DOC 1982). However, the project site is currently developed with a fire station and uses in the vicinity include commercial buildings to the north, east, and south, and single- and multi-family residences to the north, east, south, and west. Because the area is predominantly developed and is not planned for use as a mineral extraction area, the proposed project Option A and Option B would not have an adverse effect on mineral resources. Further, neither Option A nor Option B would affect mineral resource recovery facilities. Therefore, the proposed project would have no impact on the availability of mineral resources.

5.8 Population and Housing

A significant impact would occur if the proposed project would: (1) induce substantial unplanned population growth either directly or indirectly, or (2) displace substantial numbers of people or existing housing.

Option A involves the demolition of an existing unoccupied fire station and construction of a new modular fire station building as a replacement. The building would not include residences and would not generate population growth. Furthermore, there are no housing units on the project site or people residing on the project site in any form of temporary housing. Therefore, Option A would not displace existing housing units or people. The proposed temporary replacement structure would accommodate the Fire Station No. 9 crew and would not increase the crew members, rather it would rehouse the currently displaced crew. Operation of Option A would not create new jobs and temporary employment opportunities generated during construction are only expected to last for the approximately six-month long construction period; therefore, Option A is not expected to cause indirect population growth through employees relocating to the area. Likewise, construction under Option B would only generate minimal, temporary jobs during project construction. Upon completion of construction activities, the project site would remain vacant and undeveloped. No new housing or employment centers would be operated at the project site under Option B. Therefore, under Option A or Option B, no impact would occur to population and housing.

5.9 Public Services

A significant impact would occur if the proposed project would require new or physically altered government facilities for the provision of fire protection, police protection, schools, parks, or other public facilities that would result in a physical impact to the environment.

Fire protection, rescue services, and emergency medical (paramedic services) are provided by the Long Beach Fire Department (LBFD). The Fire Station No. 9 crew have been displaced to a temporary location because of the uninhabitable building conditions at Fire Station No. 9, which affects response times in the Fire Station No. 9 service area. Since Fire Station No. 9 was vacated, response times within the Fire Service Area No. 9 have increased on average by 16 percent, with response times increasing by as much as 55 percent in certain neighborhoods within the service area. With continued implementation of existing LBFD practices, including compliance with the California Fire Code and the UBC, Option A would not substantially affect community fire protection services and would not result in the need for construction of additional fire protection facilities. Rather, the replacement of the building on site with the temporary modular structure would restore the ability

of Fire Station No. 9 to serve the area and would have a positive impact on public services and response times. Under Option B, the project site would remain vacant and would not require the expansion of fire services. Impacts to fire services under Option A or Option B would be less than significant.

Police protection is provided by the Long Beach Police Department (LBPD). Option A would not result in a net addition of employees and would not cause substantially delayed response times, degraded service ratios or necessitate construction of new facilities, due to the site location within an already developed and well-served area with an average response time for Priority 1 calls in 2019 of 4.3 minutes (LBPD 2019). Likewise, Option B would not result in an increase in residents or workers in the area that could require expanded police protection services. Impacts to police services would be less than significant under both Option A and Option B.

The project site is served by the Long Beach Unified School District. Neither Option A nor Option B would not involve the siting of new residents, and therefore would not result in additional students in the school district. There would be no impact.

The Long Beach Parks, Recreation, and Marine Department is responsible for planning for and the maintenance of parkland in the City. Neither Option A nor Option B would not result in a net increase in employees or residents in the area, thereby adding uses to parks or the need for new recreational facilities in the area. Therefore, impacts to parks would be less than significant under Option A or Option B.

There are no other public services or public facilities, such as libraries or hospitals, for which significant impacts are anticipated. Option A would provide a benefit to public services by removing the uninhabitable building on site and allowing the fire station location to reopen with an improved facility that does not pose a health risk to the first responders. Likewise, Option B would benefit the public and public services by removing a vacant building that could foster nuisance criminal activities in the neighborhood such as break ins, graffiti, and squatting. Overall, impacts to public services under Option A and Option B would be less than significant.

5.10 Recreation

A significant impact would occur if the proposed project would: (1) increase the use of existing parks or recreational facilities such that a substantial physical deterioration would occur or be accelerated, or (2) if it would require construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Recreational amenities in the City of Long Beach include 170 parks and 26 community centers, providing more than 3,100 acres of developed for recreational space (Department of Parks, Recreation, and Marino [DPRM] 2019). Based on a population of 475,013 residents, the City's current parkland ratio is approximately 6.5 parkland acres per 1,000 residents (DOF 2019). The desired standard stated in the 1975 Quimby Act is three acres of parkland per 1,000 residents. Applying this guideline, the City has an adequate amount of open space on a per population basis. The nearest park to the project site is Los Cerritos Park, located approximately 3,000 feet to the southwest.

As discussed above in Sections 5.8, *Population and Housing*, and 5.9, *Public Services*, neither Option A nor Option B would increase the number of residents or employees in the area. Because the City is well served by open space on a per population basis and because the proposed project does not increase the number of residents, the proposed project would not create unanticipated demand on

city parks or cause substantial deterioration of existing parks such that new park facilities would be needed. Therefore, no impacts to recreation would occur under Option A and Option B.

5.11 Transportation

A significant impact would occur if the proposed project would: (1) conflict with a program, plan, ordinance or policy addressing the circulation system; (2) conflict with CEQA Guidelines § 15064.3, subdivision (b); (3) substantially increase hazards due to a geometric design feature; or (4) result in inadequate emergency access.

Construction of Option A would occur over an approximately six-month period and would involve the use of 10-wheel dump trucks for debris removal. Other large construction equipment and vehicles would be delivered to the site via flat-bed trucks. Construction-related vehicles would travel to, and access, the project site via Interstate 405 and Long Beach Boulevard. Construction vehicles and equipment would be staged onsite. Construction worker trips were estimated based on default values provided by the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (see Appendix B for CalEEMod worksheets). Option A would generate a maximum of 18 construction worker trips per day. As the increase in average daily traffic would be less than one percent of the annual average daily traffic on each roadway, Option A is not anticipated to affect the performance of the circulation system. Other than haul trucks, other construction-related vehicles would be delivered to the project site and remain staged onsite for the duration of a construction phase and would not affect local traffic or circulation. Likewise, Option B would involve construction activities that would include hauling trips for demolished material, construction worker trips to and from the site, and delivery of construction equipment which would remain staged on site for the duration of the approximately two-month long construction period. Under Option B, the maximum number of trips per day during construction would be 13 based on CalEEMod estimates. Therefore, construction under Option B would have a less than significant impact on local traffic and circulation.

RCM T-1 requires that a Construction Traffic Management Plan (CTMP) would be prepared as part of the proposed project. The CTMP would require signage and flagging to alert motorists of any construction-related pending lane or road closures and detours. Given the short-term nature of such an effect on traffic flow, the effect of lane or roadways closures or detours on roadway circulation would be considered less than significant. Because construction of Option A or Option B would not substantially increase traffic on nearby roadways, the proposed project would not conflict with applicable plans, ordinances, or policies that establish measures of effectiveness for the performance of the circulation system around the project site. Therefore, the construction phase of the proposed project would have a less than significant impact on traffic circulation.

CEQA Guidelines Section 15064.3(b) identifies appropriate criteria for evaluating transportation impacts. It states that land use projects with vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact, and that projects that decrease VMT compared to existing conditions should be presumed to have a less than significant transportation impact. Trips associated with operation of Option A include crewmember travel to and from the site and fire and paramedic trips associated with service calls. According to the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, fire and rescue stations generate an estimated 0.48 trips per employee daily (ITE 2017). Fire Station No. 9 has six crewmembers, for an estimated three trips per day. From January to December 2019, Fire Station No. 9 responded to an average of 12 service calls per day. Combining these, Option A would be

expected to increase the average daily trips to the site back to the 15 trips per day that occurred prior to the temporary closure of the existing fire station. Under Option B, operational trips would be limited to occasional site visits by Public Works for site maintenance activities. According to the Governor's Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018), land use projects such as the proposed project "that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact." Option A and Option B would involve fewer than 110 daily trips and would therefore cause a less than significant impact.

In addition, the project site is within 400 feet of bus stops along Long Beach Boulevard that serve Long Beach Transit (LBT) Routes 51 and 52 and within 0.30 mile of bus stops along Atlantic Avenue that serve LBT Routes 61, 101, and 103. LBT Routes 51 and 52 run approximately every 12 to 13 minutes during peak hours and have terminals at Metro's Artesia Station and at Long Beach Boulevard and 1st Street in Downtown Long Beach (LBT 2020a). LBT Route 61 runs approximately every 12 minutes during peak hours and has terminals at the Metro Blue Line Artesia Station and the Long Beach Transit Gallery (LBT 2020b).

CEQA Guidelines Section 15064.3, subdivision (b)(1), states that, "Generally, projects within one-half mile of either an existing major transit stop¹ or a stop along an existing high-quality transit corridor² should be presumed to cause a less than significant transportation impact." LBT Routes 51 and 52 run approximately every 12 to 13 minutes during peak hours and have terminals at Metro's Artesia Station and at Long Beach Boulevard and 1st Street in Downtown Long Beach (LBT 2020a). LBT Routes 191 and 192 run approximately every 12 to 15 minutes during peak hours and have stops at the Metro Blue Line Station in downtown, the Blue Line Del Amo Station, Los Cerritos Center, and Artesia Highschool (LBT 2020b). Therefore, the bus stops along Long Beach Boulevard and Atlantic Avenue within a half-mile of the project site meet the definition of a high-quality transit corridor pursuant to Public Resources Code § 21064.3 and § 21155. For these reasons and the minimal number of daily trips associated with the proposed project, both Option A and Option B would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and there would be no impact.

Option A and Option B would result in a minimal increase daily trips or traffic volumes and would not conflict with any program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Implementation of the proposed project would not substantially increase hazards due to a geometric design feature or create new obstructions to emergency access or result in inadequate emergency access as site access would be subject to the Fire Department's standards. Impacts would be less than significant.

5.12 Utilities and Service Systems

A significant impact would occur if the proposed project would: (1) require construction or expansion of water, wastewater/stormwater treatment and drainage, electric power, natural gas, or telecommunications facilities that could cause significant environmental effects; (2) have insufficient water supplies available to serve the proposed project; (3) exceed the waste water treatment provider's capacity; (4) generate solid waste in excess of state or local standards or in

¹ Public Resources Code, § 21064.3 states that "'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."

² Public Resources Code, § 21155 states that "a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

excess of the capacity of local infrastructure; (5) conflict with federal, state, or local management and reduction states and regulations.

The project site is in a developed area of the City of Long Beach that is served by existing utilities systems. Option A would not involve a change in use on site and operation of the proposed modular structure that would replace the current fire station facility is not expected to cause a net increase in water or energy use, wastewater production, or solid waste generation compared to conditions prior to the temporary closure of Fire Station No. 9. Under Option B, the project site would be left undeveloped and would therefore not require the utilization of utilities services.

According to the 2015 Urban Water Management Plan the City has adequate water supplies to meet demands for the next 25 years (Long Beach Water Department 2016). A majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the Los Angeles County Sanitation Districts (Districts). The JWPCP provides advanced primary and partial secondary treatment for 261.1 million gallons of wastewater per day (MGD), with a permitted capacity for 400 MGD of wastewater, resulting in an available capacity of 138.9 MGD (Districts 2019). Therefore, the Joint Water Pollution Control Plant (JWPCP) has adequate capacity to treat wastewater from the City. Furthermore, as discussed above in Section 5.5, *Hydrology and Water Quality*, Option A and Option B would adhere to the NPDES permit and applicable LBMC and Los Angeles County regulations pertaining to stormwater drainage. As such, the proposed project would not require expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities because the proposed project would not result in net increases in utilities use.

Furthermore, operation of Option A would comply with federal, state, and local statutes and regulations related to solid waste and recycling through participation in existing City waste diversion programs. Meanwhile, Option B would leave the site undeveloped upon the conclusion of construction activities and would therefore not produce operation solid waste. Additionally, implementation of RCM U-1, *Construction Debris Recycling*, during construction of Option A or Option B ensures that construction debris would be recycled pursuant to the requirements of the Long Beach Construction and Demolition Debris Recycling Program (LBMC Chapter 18.67), which requires a diversion rate of at least 65 percent. Impacts to utilities and service systems under Option A or Option B would be less than significant.

5.13 Wildfire

A significant impact could occur if a proposed project is located in or near a State Responsibility Area or lands classified as Very High Fire Hazard Severity Zone and would: (1) substantially impair an adopted emergency response plan or emergency evacuation plan; (2) exacerbate wildfire risks due to slope, prevailing winds, and other factors; (3) require the installation or maintenance of associated infrastructure that may exacerbate fire risk; or (4) expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The project site is in an urban setting and is not located in or near a wildland fire hazard area as defined by the California Department of Forestry and Fire Protection (CalFire 2011). The project site is not located in or near a State Responsibility Area or Very High Fire Hazard Severity Zone (CalFire 2019). The closest State Responsibility Area is approximately 16 miles northeast of the project site in Whittier, while the nearest Very High Fire Hazard Severity Zone is approximately 9 miles southwest

in the Rancho Palos Verdes/Rolling Hills Estate area. Therefore, neither Option A nor Option B would exacerbate wildfire risk. No impact would occur.

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6 Other CEQA Required Discussions

CEQA requires an EIR to evaluate a project's effects in a relationship to other broader changes that may be occurring in the environment, that are foreseeable. Accordingly, this chapter includes a discussion of the other CEQA-mandated analysis for irreversible impacts and growth inducing associated with Option A and Option B ("proposed project").

Section 15126.2(d) of the CEQA Guidelines requires an EIR to "discuss the ways in which the 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..." In general terms, a project may result in a significant growth inducing impact if it individually or cumulatively with other projects results in any of the actions described in the following examples:

- The project removes an obstacle to growth, such as: the establishment of an essential public service, the provision of new access to an area, or a change in zoning or general plan designation.
- The project results in economic expansion, population growth or the construction of additional housing occurs in the surrounding environment in response to the project, either directly or indirectly.

6.1 Growth Inducement

Section 15126(d) of the State CEQA Guidelines requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if project-induced growth could result in significant physical effects in one or more environmental issue areas.

6.1.1 Population and Employment Growth

As discussed in Section 2, *Project Description*, and Section 5.8, *Population and Housing*, the proposed project involves the demolition of an existing fire station. Option A would construct a new modular fire station building as a temporary replacement on the project site, while Option B would leave the site vacant and undeveloped after removal of the existing building. Under Option A, the proposed temporary replacement structure would accommodate the existing Fire Station No. 9 crew and would not increase the crew size, rather it would rehouse the currently displaced crew that are operating at an off-site location. Thus, Option A would not provide for new residences or employment opportunities. Option B would leave the site vacant and would not provide for new residences or employment opportunities. Neither Option A nor Option B would create new permanent jobs or housing; therefore, the proposed project is not expected to cause indirect population growth through employees relocating to the area and no physical environmental impacts are expected due to indirect population growth.

6.1.2 Economic Growth

Option A and Option B would generate a small number of temporary employment opportunities during construction. Because construction workers would be expected to be drawn from the existing regional work force, construction of the project would not be growth-inducing from a temporary employment standpoint. No new permanent jobs would be created by Option A and temporary employment opportunities during construction are only expected to last for the approximately six-month long construction period. Likewise, Option B would only involve temporary employment opportunities during the approximately two-month long construction period. Therefore, the proposed project would not be expected to induce substantial economic expansion to the extent that direct physical environmental effects would result.

6.1.3 Removal of Obstacles to Growth

The project site is located in a fully urbanized area that is well served by existing infrastructure. As discussed in Section 5.12, *Utilities and Service Systems*, existing infrastructure in Long Beach would be adequate to serve the proposed temporary structure under Option A. Option B would not develop the site and would not require the use of utilities and service systems. No improvements to water, sewer, and drainage connection infrastructure or new and/or expanded roads are required to serve the proposed project under either Option A or Option B. Because the project site is within an urbanized area and does not require the extension of new infrastructure through undeveloped areas, project implementation would not remove an obstacle to growth.

6.2 Irreversible Environmental Effects

The *CEQA Guidelines* require that EIRs contain a discussion of significant irreversible environmental changes. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed project.

Under Option A, demolition of the existing building on-site and replacement with the temporary modular structure would involve use of building materials and energy, some of which are non-renewable resources like petroleum. Consumption of these resources would occur with any development in the region and would not be unique to the proposed project. Similarly, construction activities under Option B would involve the use of nonrenewable resources such as petroleum to power construction equipment.

Option A would not irreversibly increase local demand for non-renewable energy resources such as petroleum products and natural gas as it does not create a new use on-site, increase jobs or housing, or induce population growth. As discussed in Section 4.4, *Greenhouse Gas Emissions and Energy*, the Option A would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6, of the California Code of Regulations, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for new and renovated commercial and residential buildings constructed in California, and the Green Building Standards Code requires solar access, natural ventilation, and stormwater capture. Consequently, Option A would not use unusual amounts of energy or construction materials, and impacts related to consumption of non-renewable and slowly renewable resources would be less than significant. Likewise, Option B would not irreversibly increase local demand for non-renewable energy resources as the use of nonrenewable resources

would be limited to the temporary construction period. The project site would remain undeveloped after removal of the fire station building and would not contribute substantially to nonrenewable resource use.

As discussed in Section 4.5, *Noise*, Option A does not involve a change in use on site compared to conditions prior to the temporary closure of the fire station and would not result in a significant increase in traffic in the area; therefore, it would not cause a permanent increase in noise levels. Operational noise impacts from on-site noise sources (e.g., HVAC equipment, delivery and trash hauling trucks, etc.) would also be less than significant with adherence to the City's Noise Ordinance, which regulates noise emanating from these sources. Option B would leave the project site vacant; therefore, there would not be substantial noise associated with the long-term operation of Option B.

In addition, Section 8.80.202 of the Long Beach Municipal Code (LBMC) restricts construction activities to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. to 6:00 p.m. on Saturdays. Furthermore, implementation of suggested noise reduction techniques (i.e., mufflers, use of electrical power, equipment staging and idling, workers' radios, smart back-up alarms, disturbance coordinator, and temporary sound barriers) would further reduce construction noise levels at noise-sensitive receivers. As detailed in Section 4.5, *Noise*, noise and vibration from construction under Option A and Option B would be less than significant.

Additional vehicle trips during construction and construction activities associated with Option A or Option B would incrementally and temporarily increase local traffic and regional air pollutant and GHG emissions. However, as discussed in Section 4.3, *Greenhouse Gas Emissions and Energy*, development and operation of Option A or Option B would not generate air quality or GHG emissions that would result in a significant impact. Additionally, as discussed in Section 5.11, *Transportation and Traffic*, no long-term impacts to traffic are expected under either Option A or Option B, as neither involves an increase in employment or housing.

Option A would require a commitment of fire protection, law enforcement, water supply, wastewater treatment, and solid waste disposal services already existing in the area. However, as discussed under Section 5.9, *Public Services*, impacts to these service systems would not be significant under Option A. Option A would allow the Fire Station No. 9 crew to resume normal operations and help the meet the City's response time goals. Similarly, Option B would not burden the existing public services in the area as the project site would remain vacant and undeveloped.

Demolition of the existing Fire Station No. 9 building would represent an irreversible impact, as further discussed below in Section 6.3, *Significant and Unavoidable Environmental Effects*. However, the proposed use of the site under Option A with a temporary modular structure to accommodate Fire Station No. 9 operations is reversible, as is the choice to leave the site undeveloped under Option B. In the future, the City could choose to use the site for other uses and future generations would not be committed to maintaining the site with a temporary modular fire station or some other speculative use.

6.3 Significant and Unavoidable Environmental Effects

Section 15216.2(b) of the CEQA Guidelines requires EIRs to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented. Sections 4.1 through 4.5 of this EIR provide a detailed analysis of all significant environmental impacts related to Option A and Option B, identifies feasible mitigation measures, where available, that could avoid or reduce

these significant impacts, and presents a determination whether these mitigation measures would reduce these impacts to a level less than significant. Sections 4.1 through 4.5 of this EIR also identify the significant cumulative impacts resulting from the combined impacts of the project and related projects considered in cumulative analysis. If a specific impact in any of these sections cannot be fully reduced to a less than significant level, it is considered a significant and unavoidable impact.

The analysis contained in this EIR concludes that both Option A and Option B would result in a significant and unavoidable impact to a historic resource. Based on the results of the Historic Resources Evaluation Report (Appendix D), the existing Fire Station No. 9 building retains sufficient integrity to be considered eligible for listing as a Historic and/or Local Landmark and as a property that is eligible for listing in a local historic register; therefore, the building is considered a historical resource pursuant to CEQA. Due to the presence of recurrent mold that is infeasible to remediate and facilities deficiencies that make the building uninhabitable, demolition of the building is the most feasible alternative. However, demolition of the building represents a significant and unavoidable impact. Although both Option A and Option B of the proposed project would implement mitigation, as discussed in Section 4.2, *Cultural, Paleontological, and Tribal Resources*, impacts would remain significant and unavoidable due to the irreversible loss of the building.

7 Alternatives

7.1 Introduction

CEQA requires the consideration of alternative development scenarios and an analysis of their potential impacts. Through comparison of alternatives to the proposed project, the advantages of each can be assessed. Section 15126.6 of the *CEQA Guidelines* requires that an EIR describe a range of reasonable alternatives to the project that would feasibly attain the objectives of the project and would avoid or substantially lessen significant effects of the project.

Sections 15126.6 (e) and (f) of the *CEQA Guidelines* specify:

- The “no project” alternative shall also be evaluated, along with its impact. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
- The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the proposed project. Of those alternatives, the EIR needs to examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the proposed project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

In addition to specifying that the EIR evaluate a range of reasonable alternatives to the proposed project, Section 15126.6 (c) of the *CEQA Guidelines* requires that an EIR identify any alternatives that were considered but were rejected as infeasible. Pursuant to the *CEQA Guidelines*, alternatives to the proposed project, including any considered but rejected, are evaluated in this in this section.

7.2 Criteria for Alternatives Analysis

The potential alternatives were evaluated in terms of their ability to meet the basic project objectives, while reducing the environmental impacts of the proposed project identified in Section 4.1 through Section 4.5 of this EIR. As discussed in Section 2, *Project Description*, the objectives for the proposed project, are as follows:

- Removal of structurally impaired and deteriorated Fire Station No. 9, located at 3917 Long Beach Boulevard, City of Long Beach.
- Return Fire Station No. 9 equipment and personnel to its service area in order to help meet the Long Beach Fire Department response time goal of six minutes and 20 seconds for structure fires and six minutes for Advance Life Support
- Provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design, including the provision of facilities for all genders
- Removal of a potential to public health and safety, which includes, but is not limited to, mold spores associated with substantial structural water damage that require invasive remediation techniques

- Removal of a vacant building that could attract criminal activity and other nuisances
- Ensure that the City's historic and cultural heritage values are considered regarding the removal and/or remediation of the Fire Station No. 9 building

Pursuant to Section 21082.4 of the State CEQA Guidelines statute, "In describing and evaluating a project in an environmental review document prepared pursuant to this division, the lead agency may consider specific economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of a proposed project and the negative impacts of denying the project." The proposed project would provide the following benefits:

- Removal of a vacant structure that could attract nuisance/criminal behavior to the area
- Provision of a safe and healthy workplace for the Fire Station No. 9 crewmembers
- Restore operation of Fire Station No. 9 within the Fire Area No. 9 service area in order to help meet Long Beach Fire Department response time goals

7.3 Evaluation of Alternatives

The following Alternatives to either Option A or Option B are evaluated in this EIR:

- **Alternative One: No Project**

This Alternative assumes that the proposed project would not occur, and the existing Fire Station No. 9 located at 3917 Long Beach Boulevard would remain on-site. The existing fire station building would remain vacant and no ground disturbance or demolition would occur. The existing Fire Station No. 9 located at 3917 Long Beach Boulevard would continue to be spot treated/remediated as mold becomes detectable throughout the building in order to maintain the integrity of the structure. In accordance with LBMC Chapter 18.21, *Maintenance of Long-Term Boarded and Vacated Buildings*, the site and building would be maintained, including landscaping, exterior paint, and mold. Under this alternative, significant impacts to historic resources would be avoided. Mold and potentially hazardous building materials are expected to remain, and implementation of Mitigation Measures HAZ-1 and HAZ-2 would still be required in order to protect the health of contractors engaging in spot remediation activities at the site. In addition, Mitigation Measures HAZ-3 and HAZ-4 would be required in order to determine whether an abandoned UST exists on the project site and provide for the proper handling of the potential UST and any contamination as needed. Alternative One would not fulfill the Project Objectives because the building would remain uninhabitable, the vacant structure could attract criminal activities, and the Fire Service Area 9 response times would not be restored.

- **Alternative Two: Demotion of Fire Station No. 9 and Construction of New Permanent Fire Station Onsite**

Under Alternative Two, Fire Station No. 9 would be demolished and a permanent replacement fire station would be constructed. Demolition and construction of this alternative would take approximately three years to complete, during which time Fire Station No. 9 would be required to operate out of a temporary, offsite facility. Implementation of the same mitigation measures for cultural resources (i.e., Mitigation Measures CR-1 through CR-12) would be required under this alternative; however, significant impacts to a historic resource would remain. Hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would also be required during construction activities under this Alternative. Alternative Two would fulfill most of the project objectives such as removing a building with structurally impaired and deteriorated conditions; however, due to the size constraints of the project site, it is infeasible

to construct a fire station at this location that complies with NFPA standards for fire station design. Therefore, Alternative Two would have similar impacts to the proposed project but would not meet all of the project objectives.

- **Alternative Three: Demolish the Structure and Develop with Commercial Retail Development**

Under Alternative Three, the Fire Station No. 9 building located at 3917 Long Beach Boulevard would be demolished and the project site would be developed with commercial retail uses of similar scale to the existing retail surrounding the project site. Demolition and construction of this alternative would take approximately one year, during which time Fire Station No. 9 would continue to operate at an interim location while a new permanent location for Fire Station No. 9 is identified. Implementation of the same mitigation measures for cultural resources (i.e., Mitigation Measures CR-1 through CR-12) and hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would be required during construction activities. This Alternative would achieve some project objectives, such as removal of a structurally impaired and vacant building which could attract nuisance activities and pose a health threat but would not achieve the other project objectives as discussed under Section 7.2, *Criteria for Alternatives Analysis*.

- **Alternative Four: Preservation and Adaptive Reuse Alternative**

Under Alternative Four the City would complete a rehabilitation and adaptive reuse of Fire Station No. 9. It is assumed that under Alternative Four the building would be repurposed with a use that is permitted under the site land use and zoning designations, such as small-scale office or retail. A new Fire Station was deemed necessary due to the needs of the crew, the ability to meet NFPA standards, and the potential for mold to reoccur as the building continues to age. The Preservation and Adaptive Reuse Alternative would include the necessary repairs to remediate the existing mold issues as well as other repairs to bring the structure up to California Building Code standards for historic properties pursuant to LBMC Chapter 18.50, including the appropriate occupancy for the new use. The additional scope of improvements, beyond mold remediation, that would occur include modifications for the new use as well as the repair of any potential structural issues and abatement of any lead and ACMs within the structure and any potential contamination present in nearby soil due to the historic UST on the site.

Rehabilitation would be completed in conformance with the Secretary of the Interior Standards for Treatment of Historic Properties (U.S. Department of the Interior 2017) and in accordance with the California Historic Building Code (2016), including fire protection, structural integrity, ingress/egress, methods of construction and plumbing, equipment and ventilation, which allows for more flexible application of building regulations when rehabilitating a historic resource. It is assumed that all identified character-defining features of the building would be repaired and maintained in-situ to the highest degree feasible. Construction under this alternative would last for approximately eight months. Under Alternative Four, significant impacts to historic resources would be reduced or avoided. However, due to the unknown extent of mold within the building and the potentially extensive construction activities required for remediation, Alternative Four still has the potential for significant impacts on a historic resource, if remediation compromises the integrity of character-defining features.

Implementation of mitigation measures related to Tribal Cultural Resources and Paleontological Resources (i.e., Mitigation Measures CR-4 through CR-12) would be required during any ground disturbing activities. In addition, mitigation measures related to hazardous materials removal (i.e., Mitigation Measures HAZ-1 through HAZ-4) would be required during construction activities. This Alternative would reduce significant impacts and would achieve some project

objectives by repairing and adaptively reusing a structurally impaired and vacant building which could attract nuisance activities and pose a health threat but would not achieve the rest of the project objectives including returning Fire Station No. 9 to its service area and providing a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards.

A summary of buildout characteristics for each alternative is included in Table 7-1, while detailed descriptions are included in the environmental impact analysis for each Alternative under Sections 7.3.1 to 7.3.4, below. As with the proposed project, the four Alternatives would have less than significant impacts on aesthetics, agriculture and forestry resources, biological resources, geology and soils, hydrology and water quality, land use, mineral resources, public services, population and housing, recreation, transportation, utilities and services systems, and wildfire. Impacts discussed include the following:

- Air Quality
- Cultural, Paleontological and Tribal Resources
- Greenhouse Gas Emissions and Energy
- Hazards and Hazardous Materials
- Noise

Table 7-1 Comparison of Project Alternatives' Buildout Characteristics

Feature	Option A: Demolish Building and Replace with Temporary Modular Structure	Option B: Demolish Building and Prepare Site for Future Use	Alternative 1: No Project	Alternative 2: Demolish Building and Replace with New Permanent Fire Station	Alternative Three: Demolish the Structure and Develop with Commercial Retail Development	Alternative Four: Preservation and Adaptive Reuse Alternative
Lot Area (sf)	5,800	5,800 sf	5,800	5,800	5,800	5,800
Floor Area (sf)	4,080	0	5,548	5,500	5,500	5,548
Height (stories)	1 story	n/a	1.5 story	2 stories	2 stories	1.5 story
Parking Spaces	5	n/a	2	-2	-2	2
Building character	Modular structure	n/a	Tudor Revival	To be determined	To be determined	Tudor Revival
Habitable	Yes	No	No	Yes	No	Yes ¹

n/a: not applicable; sf: square feet

¹ For uses other than a fire station

² Dependent on use

7.3.1 Alternative One: No Project Alternative

Alternative One would maintain the existing structure, and the City would continue to treat the building as occurrences of mold are detected. Under this Alternative, mold would be remediated as detected and where necessary to ensure structural integrity. Under this Alternative, the building would remain unoccupied due to the potential health and safety hazards associated with the recurring mold. However, the overall physical structure would remain intact and would maintain its overall historic integrity. This alternative would preserve the character of the site and many of the aspects that qualify the building for listing in the NRHP and CRHR.

Air Quality

Under Alternative One, major construction activities, such as building demolition, paving, and installation of the temporary modular structure, would not occur. Remediation of mold and lead-containing materials would take place occasionally, as needed, as would routine maintenance, but would not represent substantial construction activities that could have a significant adverse impact on air quality. Additionally, the building would remain vacant, thus operation of Alternative One would involve minimal generation of pollutants. Therefore, Alternative One would generate smaller quantities of criteria pollutants than the proposed project and impacts related to air quality under would be less than significant.

Cultural, Paleontological, and Tribal Resources

Alternative One would retain the existing Fire Station No. 9 building and the City would continue to spot remediate the recurring mold and generally maintain the building. Although the building would not be habitable, it would remain in place, thereby maintaining the current integrity and historic value of the site. Thus, the significant unavoidable impacts associated with the proposed project would not occur and impacts to historic resources would be avoided.

Greenhouse Gas Emissions and Energy

Under Alternative One, major construction activities and operation at the project site would not occur or would be minimal in nature (e.g. mold remediation activities only). The structure would remain uninhabited and operation would not regularly generate vehicle trips or require the use of electricity or other utilities that would consume energy and produce GHG emissions. Therefore, under this alternative, GHG emissions and energy use would be lower than the proposed project and impacts to these areas would remain less than significant.

Hazards and Hazardous Materials

Under Alternative One, mold and lead within the building would remain and mold would be treated as it is detected throughout the facility in order to maintain structural integrity. Based on the site history, mold and potentially hazardous building materials are expected to remain, and implementation of Mitigation Measures HAZ-1 and HAZ-2 would be required in order to protect the health of contractors engaging in remediation activities at the site. MM HAZ-3 and MM HAZ-4 would also be required in order to investigate the potential presence of UST on-site and provide for any necessary closure and remediation activities. Under this alternative, risks associated with hazards and hazardous materials would be similar to the proposed project and the alternative would pose a less than significant impact.

Noise

Under Alternative One, major construction activities, such as building demolition, would not occur. However, occasional, small-scale construction may be required to remediate mold within the existing building. Under this alternative, construction and operational noise impacts would be lesser than the proposed project and less than significant.

Conclusion

Under Alternative One, significant and unavoidable impacts to historic resources would be avoided. However, Alternative One would not fulfill the Project Objectives because the building condition would remain uninhabitable and the vacant structure could attract criminal and nuisance activities. Additionally, the Fire Station No. 9 crew would not be able to resume operations on the site and restore response times in the service area.

7.3.2 Alternative Two: Demolish Building and Replace with New Permanent Fire Station

Under Alternative Two, Fire Station No. 9 would be demolished, and a new fire station of approximately 5,500 square feet (sf) would be constructed on the project site. The replacement structure would be two stories in height. Under this alternative, construction would involve demolition, site preparation and grading, building construction, asphalt paving, and architectural coating. It is anticipated that construction would occur over an approximately three-year period, during which time the Fire Station No. 9 crew would be required to continue operations at a temporary offsite facility.

Air Quality

Under Alternative Two, construction activities would be required to provide a permanent replacement structure for the fire station. Under this alternative, as under the proposed Option A, Fire Station No. 9 crew would return to the site. Therefore, both Option A and Alternative Two would involve incremental increases in criteria pollutants associated with construction and operation.

Construction under Alternative Two would involve similar equipment to the proposed project, though the building phase of construction would last longer under this Alternative and would include architectural coating. Regulatory compliance measures (RCMs) related to air quality as detailed in Section 2, *Project Description*, would also apply to Alternative Two and would reduce potential impacts to air quality during project construction. Demolition and site preparation activities would be similar to Option A and would involve the greatest use of heavy construction equipment which would produce the highest levels of criteria pollutants during construction. Therefore, maximum emissions of criteria pollutants under Alternative Two are anticipated to be similar to those of Option A. Operation of Alternative Two would be similar to those of Option A and would produce similar criteria pollutant emissions. As such, Alternative Two would not result in an exceedance of SCAQMD thresholds for short-term construction related emissions or long-term operation of the project.

Cultural, Paleontological, and Tribal Resources

As with the proposed Options A and B, this alternative would involve the complete demolition of Fire Station No. 9 and would therefore result in a significant and unavoidable impact to a historic

resource. Under this Alternative, implementation of Mitigation Measures CR-1 to CR-12 for cultural resources would be required in order to minimize impacts to the historical building and to previously unknown cultural, paleontological, and tribal cultural resources. Overall, in comparison to the proposed project, Alternative Two would also have significant unavoidable impacts to a historic resource.

Greenhouse Gas Emissions and Energy

Alternative Two, like the proposed Option A, would involve an incremental increase in GHG emissions and energy use associated with short-term construction activities and long-term operation of the fire station. As with Options A and B, it is reasonable to assume that under Alternative Two, construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites. Under both the proposed Option A and Alternative Two, Fire Station No. 9 crew would return to the site and crew numbers would not increase above existing conditions. Operational GHG emissions and energy use under Alternative Two would be similar to those under Option A, and higher than those under Option B. Both the proposed project and Alternative Two would have less than significant impacts to GHG emissions and energy use.

Hazards and Hazardous Materials

Under Alternative Two, mold, lead, and potential asbestos-containing materials within the building would require special treatment during demolition and disposal. In addition, the potential for an underground storage tank remains on the project site and would require further investigation and potential closure activities prior to construction. Therefore, implementation of Mitigation Measures HAZ-1 through HAZ-4 would be required in order to protect the health of contractors engaging in construction activities on the site and would reduce impacts due to hazards and hazardous materials to less than significant. Impacts would be similar to the proposed project.

Noise

Under Alternative Two, construction activities would produce short-term changes in noise levels at the project site in a similar manner to Option A and Option B. Sensitive receivers in the project vicinity include the single- and multi-family residences to the north, east, south, and west and the Oakwood Academy private school, which is located approximately 400 feet southeast of the site across Long Beach Boulevard. The nearest sensitive receivers to the site are the multi-family residences located approximately 100 feet west of the site along North Virginia Road. As discussed under Section 4.4, *Noise*, construction noise associated with the proposed project would not be considered significant. It is reasonable to assume that construction under Alternative Two, which would utilize much of the same equipment, would produce similar levels of noise and impacts would also be less than significant.

Under Alternative Two, Fire Station No. 9 operations would resume at the project site. Like the proposed Option A, operational noise sources would include HVAC, delivery trucks, trash hauling trucks, and fire and paramedic truck sirens typical of fire stations. The project site has historically been used as a fire station, thus operational noises would be typical and similar to noise levels at the site prior to the station's temporary closure in 2019. As discussed in Section 4.5, *Noise*, impacts to ambient noise levels during operation of the proposed project would be less than significant. Likewise, noise impacts under Alternative Two would also be less than significant.

Conclusion

In summary, Alternative Two would achieve most of the basic Project Objectives; however, due to the size constraints of the project site, it is infeasible to construct a fire station at this location that complies with NFPA standards for fire station design. In addition, impacts to the historic building would remain significant and unavoidable under this scenario. Therefore, Alternative Two would have similar impacts to the proposed project but would not fully meet all of the project objectives.

7.3.3 Alternative Three: Demolish Building and Replace with Commercial Retail Development

Under Alternative Three, the City would demolish the existing building at 3917 Long Beach Boulevard and replace it with a commercial retail development of approximately 5,500 sf, aligning with the surrounding commercial uses to the north and south of the property. Potential uses could include small-scale retail, café, or office development. Under this alternative, construction would involve demolition, site preparation and grading, building construction, asphalt paving, and architectural coating. It is anticipated that construction would occur over an approximately one-year period, during which time the Fire Station No. 9 crew would continue operations at a temporary offsite facility while an alternative site for a permanent station is identified.

Air Quality

Under Alternative Three, construction activities would be required to demolish the existing structure on site and build a new commercial building. Therefore, both the proposed project and Alternative Three would involve incremental increases in criteria pollutants associated with construction. Similar to Option A, Alternative Three would include operational use of the project site, while Option B would leave the site vacant.

Construction under Alternative Three would involve similar equipment to the proposed project, though the building phase of construction would last longer under this Alternative and would include architectural coating. Regulatory compliance measures (RCMs) related to air quality as detailed in Section 2, *Project Description*, would also apply to Alternative Three and would reduce potential impacts to air quality during project construction. Demolition and site preparation activities would be similar to Option A and would involve the greatest use of heavy construction equipment which would produce the highest levels of criteria pollutants during construction. Therefore, maximum emissions of criteria pollutants during construction are anticipated to be similar to those of Option A.

Alternative Three would introduce a new commercial use to the project site. Operational emissions associated with Alternative Three would include mobile source, energy, area source emissions. Operation of Alternative Three would result in higher criteria pollutant emissions compared to the proposed project, as the new land use would generate additional vehicle trips in the region. However, due to the relatively small size of the project site, operational emissions would not be anticipated to exceed regional thresholds. Though impacts would be greater than those of the proposed project, Alternative Three would have less than significant impacts to air quality.

Cultural, Paleontological, and Tribal Resources

As with the proposed Options A and B, this alternative would involve the complete demolition of Fire Station No. 9 and would therefore result in a significant and unavoidable impact to a historic resource. Under this Alternative, implementation of Mitigation Measures CR-1 to CR-12 for cultural

resources would be required in order to minimize impacts to the historical building and to previously unknown cultural, paleontological, and tribal cultural resources. Overall, in comparison to the proposed project, Alternative Three would also have significant unavoidable impacts to a historic resource.

Greenhouse Gas Emissions and Energy

Alternative Three, like the proposed project, would involve an incremental increase in GHG emissions and energy use associated with short-term construction activities. As with Option A and Option B, it is reasonable to assume that under Alternative Three, construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites.

Under both the proposed Option A and Alternative Three, the project site would include operational uses, whereas under Option B the project site would remain vacant. Operational energy use under Alternative Three would be similar to Option A as the proposed new structure would be of similar size and would comply with the energy efficiency requirements of Title 24. However, Alternative Three would introduce a new use on the project site, which would generate new vehicle trips and associated GHG emissions. As details about potential future commercial uses and service populations on the project site are unknown, it is possible that GHG emissions could exceed the locally-appropriate project-specific efficiency threshold. Therefore, Alternative Three would be anticipated to have less than significant impacts regarding energy use but could have potentially significant GHG emissions.

Hazards and Hazardous Materials

Under Alternative Three, mold, lead, and potential asbestos-containing materials within the building would require special treatment during demolition and disposal. In addition, the potential for an underground storage tank remains on the project site and would require further investigation and potential closure activities prior to construction. Therefore, implementation of Mitigation Measures HAZ-1 through HAZ-4 would be required in order to protect the health of contractors engaging in construction activities on the site and would reduce impacts due to hazards and hazardous materials to less than significant. Impacts would be similar to the proposed project.

Noise

Under Alternative Three, construction activities would produce short-term changes in noise levels at the project site in a similar manner to Option A and Option B. Sensitive receivers in the project vicinity include the single- and multi-family residences to the north, east, south, and west and the Oakwood Academy private school, which is located approximately 400 feet southeast of the site across Long Beach Boulevard. The nearest sensitive receivers to the site are the multi-family residences located approximately 100 feet west of the site along North Virginia Road. As discussed under Section 4.4, *Noise*, construction noise associated with the proposed project would not be considered significant. It is reasonable to assume that construction under Alternative Three, which would utilize much of the same equipment, would produce similar levels of noise and impacts would also be less than significant.

Under Alternative Three, a new low-intensity commercial use would operate at the project site. Similar to Option A, operational noise sources under Alternative Three would include HVAC, delivery trucks, and trash hauling trucks, but would not include fire and paramedic truck sirens. Operational noise sources would be similar to those of existing commercial uses immediately adjacent to the

north and south of the project, thus operational noises would be typical and similar to noise levels currently existing in the project site vicinity. As discussed in Section 4.5, *Noise*, impacts to ambient noise levels during operation of Option A would be less than significant. Likewise, noise impacts under Alternative Three would also be less than significant.

Conclusion

In summary, Alternative Three would achieve the Project Objective of removing a vacant building which could cause a public health threat and foster nuisance criminal activities in the neighborhood, but would not meet the objectives of providing a fire station which meets the NFPA standards for fire station design and returning Fire Station No. 9 crew to their service area. Under this scenario, impacts to the historic building would remain significant and unavoidable and GHG emissions impacts could be greater than those of the proposed project and potentially significant. Therefore, Alternative Three would have similar or worse impacts compared to the proposed project but would not fully meet all of the project objectives.

7.3.4 Alternative Four: Preservation and Adaptive Reuse

Under Alternative Four the City would conduct a complete rehabilitation and adaptive reuse of Fire Station No. 9. It is assumed that under the Preservation and Adaptive Reuse Alternative, the building would be reused for some other purpose than an active fire station; however, it is too speculative at this time to determine what that use may be. The decision to relocate and construct a new Fire Station was deemed necessary due to site size constraints preventing the Fire Department from meeting NFPA standards, and the potential for mold to reoccur as the building continues to age. The Preservation and Adaptive Reuse Alternative would include the necessary repairs to remediate the existing mold issues as well as other repairs to bring the structure up to current Building Code standards for historic properties pursuant to LBMC Chapter 18.50. Rehabilitation would be completed in conformance with the Secretary of the Interior Standards for Treatment of Historic Properties (U.S. Department of the Interior 2017) and in accordance with the California Historic Building Code.

Air Quality

Under Alternative Four, construction activities would be required to make the existing building safe for use. As with Option A, under this alternative, the building would return to operation. Therefore, both the Option A and Alternative Four would involve incremental increases in criteria pollutants associated with construction and operation, while Option B would only involve emissions during construction activities.

Construction under Alternative Four would involve similar equipment to the proposed project, though the construction period would be two- to six months longer than the proposed project. Regulatory compliance measures (RCMs) related to air quality as detailed in Section 2, *Project Description*, would also apply to Alternative Four and would reduce potential impacts to air quality during project construction. Operation of Alternative Four would not be anticipated to include substantial sources of criteria pollutants as operation would also involve a low intensity uses that align with the surrounding development and size of the existing building. Similar to the proposed project, Alternative Four would not result in an exceedance of SCAQMD thresholds for short-term construction related emissions or long-term operation of the project.

Cultural, Paleontological, and Tribal Resources

Rehabilitation and preservation of the building pursuant to the Secretary of the Interior Standards for Treatment of Historic Properties and LBMC Chapter 18.50 would reduce or avoid impacts to historic resources to the greatest extent possible. It is assumed that character-defining features would be preserved to the extent feasible; however, mold remediation activities are anticipated to require the removal of most of the existing interior walls and floors and building encapsulation, which may result in substantial changes to the existing structure. The intent of Alternative Four is that the building would maintain sufficient historic integrity to retain its eligibility as a historic resource; however, depending on the extent of mold within the building and the activities required to remediate the mold, significant impacts could occur. Implementation of mitigation measures related to Tribal Cultural Resources and Paleontological Resources (i.e., Mitigation Measures CR-4 through CR-12) would be required during any ground disturbing activities to reduce impacts to previously unidentified tribal cultural and paleontological resources to a less than significant level. Overall, in comparison to the proposed project, Alternative Four would have reduced, but potentially still significant, impacts to cultural resources.

Greenhouse Gas Emissions and Energy

Alternative Four, like Option A would involve an incremental increase in GHG emissions and energy use associated with short-term construction activities and long-term operation of the building, while Option B would only generate GHG emissions during construction. As with the proposed project, it is reasonable to assume that under Alternative Four, construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites.

Under both Option A and Alternative Four, the project site would be occupied. However, under Alternative Four, the building would be adaptively reused for some other purpose and Fire Station No. 9 would continue to operate elsewhere. Operational GHG emissions and energy use under Alternative Four would therefore be higher than the proposed project, as this alternative would introduce a new use to the site. In addition, given the age of the existing structure, the proposed new structure under Option A would likely incorporate more energy efficient design standards than are currently present in the Fire Station No. 9 building and under Alternative Four. Therefore, Alternative Four could potentially have a significant impact to GHG emissions and energy use, while the proposed project would not.

Hazards and Hazardous Materials

Under Alternative Four, mold, lead, and potential asbestos-containing materials within the building would be remediated to habitable conditions. Implementation of Mitigation Measures HAZ-1 through HAZ-4 would be required in order to protect the health of contractors engaging in construction activities on the site and would reduce impacts due to hazards and hazardous materials to less than significant. Impacts would be similar to the proposed project.

Noise

Under Alternative Four, construction activities would produce short-term changes in noise levels at the project site in a similar manner to the proposed project. Sensitive receivers in the project vicinity include the single- and multi-family residences to the north, east, south, and west and the Oakwood Academy private school, which is located approximately 400 feet southeast of the site

across Long Beach Boulevard. The nearest sensitive receivers to the site are the multi-family residences located approximately 100 feet west of the site along North Virginia Road. As discussed under Section 4.4, *Noise*, construction noise associated with the proposed project would not be considered significant. It is reasonable to assume that construction under Alternative Four, which would utilize much of the same equipment, would produce similar levels of noise and impacts would also be less than significant.

Under Alternative Four, the building would be occupied and adaptively reused. Like Option A, operational noise sources would include HVAC, delivery trucks, and trash hauling trucks. However, operation of this Alternative would not include fire and paramedic truck sirens typical of fire stations. The project site has historically been used as a fire station, thus operational noises would be similar to or lower than noise levels at the site prior to the station's temporary closure in 2019. As discussed in Section 4.5, *Noise*, impacts to ambient noise levels during operation of the proposed project would be less than significant. Likewise, noise impacts under Alternative Four would also be less than significant.

Conclusion

Under Alternative Four, significant impacts to historic resources would be reduced to the extent feasible but could potentially be significant and would be determined based on the extent of alterations required to remediate mold. Furthermore, Alternative Four would not fulfill the Project Objectives because the building would not be suitable for use as a fire station and Fire Station No. 9 crew would not be able to resume operations from within Fire Service Area No. 9 and restore response times in the service area. Additionally, this Alternative would have potentially significant GHG emissions.

7.4 Alternatives Considered but Rejected

Section 15126.6 (c) of the CEQA Guidelines requires that an EIR identify those alternatives that were considered but rejected by the lead agency because they either did not meet the objectives of the project, were considered infeasible, or could not avoid or substantially lessen one or more significant effects of the proposed project. The following describes the other alternative considered by the City of Long Beach but dismissed from further evaluation in this EIR, and a brief description of the reasons for its rejection.

Relocate Existing Fire Station No. 9

This alternative would involve the relocation of the existing Fire Station No. 9. Under this alternative, the building would not be demolished and would be physically relocated to a different City-owned location. Preservation of the building would eliminate the proposed project's significant and unavoidable impact to a historic resource. However, under this alternative, the City would be required to find an adequate site under City ownership to support the building's relocation and the City would be required to continue remediating and removing the mold in the building. No feasible alternative site building relocation was identified. This Alternative would require the City to create a separate relocation mitigation plan and would be cost prohibitive. For these reasons, this Alternative was rejected as infeasible.

7.5 Environmentally Superior Alternative

CEQA requires the identification of the environmentally superior alternative among the options studied. Table 7-2 depicts whether each alternative's environmental impact and ability to achieve Project Objectives is greater than, less than, or similar to those of the proposed project. Alternative One (No Project Alternative) would leave the site as is, and the existing Fire Station No. 9 building would remain uninhabitable and vacant and could potentially attract criminal and nuisance activity. Alternative One would have no impacts to historic resources or any other environmental issue area but would not achieve the Project Objectives. Under Alternative Two (Demolish Building and Replace with New Permanent Fire Station), the existing Fire Station No. 9 would be demolished and replaced with a new fire station. Under this Alternative, impacts to historic resources would remain significant and unavoidable. This Alternative would achieve several of the core Project Objectives but, due to project site size constraints, would not allow the City to build a replacement structure that meets the NFPA standards for fire station design. Alternative Three would involve the demolition of the existing fire station and the development of a commercial retail use on the site. Under this alternative, impacts to historic resources would remain significant and unavoidable and GHG emissions would be higher, and potentially significant, compared to the proposed. In addition, this alternative would not meet a number of the basic project objectives. Alternative Four (Preservation and Adaptive Reuse) would involve the complete rehabilitation of Fire Station No. 9 in accordance with the Secretary of the Interior Standards for Treatment of Historic Properties (U.S. Department of the Interior 2017) and the California Historic Building Code. Due to the potential for mold to reoccur as the building continues to age, the site would not be considered safe for habitation by fire station personnel. Therefore, the site would be adapted for a more appropriate use, such as office space, a café, or retail. Under this alternative, impacts to paleontological and tribal cultural resources would be less than significant with mitigation; however, project GHG emissions and energy use would be higher than the proposed project and could potentially be significant. Impacts to cultural resources would be reduced compared to the proposed project, but depending on the extent of mold and the remediation activities required, significant impacts to historic integrity of the building could potentially occur. In addition, the basic project objective of returning Fire Station No. 9 to its service area would not be met.

Based on the alternatives analysis provided above, Alternative One (No Project) would be the environmentally superior alternative as it avoids environmental impacts, requires no mitigation measures, and preserves the integrity of the historic Fire Station No. 9 building. *CEQA Guidelines* Section 15126.6 (f) states, "If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Alternative Four would be the environmentally superior option because it potentially reduces significant impacts to cultural resources to the greatest extent feasible. Though Alternative Four is considered environmentally superior, it would not meet the basic project objectives. Therefore, the proposed project remains the City's preferred option.

Table 7-2 Alternatives and Proposed Project Impacts Comparison

Environmental Issue Area	Proposed Project	Alternative 1: No Project	Alternative 2: Demolish Building and Replace with New Permanent Fire Station	Alternative 3: Demolish Building and Replace with Commercial Retail Development	Alternative Four: Preservation and Adaptive Reuse
Air Quality	Less Than Significant	Avoid. The existing baseline air emissions would remain the same, as no new development would occur.	Similar. Emissions for construction activities and operation would be similar compared to the proposed project.	Similar. Emissions for construction activities would be similar compared to the proposed project. Operational emissions would be higher due to increased vehicle trips associated with a new commercial use but would not be anticipated to cause a significant impact.	Similar. Emissions for construction activities would be similar compared to the proposed project. Operational emissions would be higher due to increased vehicle trips associated with a new use at the project site but would not be anticipated to cause a significant impact.
Cultural, Paleontological, and Tribal Cultural Resources	Significant and Unavoidable	Avoid. No demolition or ground disturbance would occur and therefore there would be no impacts.	Similar. The existing building would be demolished, which would result in a significant and unavoidable impact to historic resources.	Similar. The existing building would be demolished, which would result in a significant and unavoidable impact to historic resources.	Reduce. The existing building would be rehabilitated and preserved in accordance with the applicable guidelines, reducing significant impacts to historic resources. Impacts could potentially be significant and would require the removal of interior walls and flooring to determine the full extent of mold and remediation activities required.
Greenhouse Gas Emissions and Energy	Less Than Significant	Avoid. The existing baseline GHG emissions and energy use would remain the same, as no new development would occur.	Similar. Emissions and energy use for construction activities would be similar to the proposed project. GHG Emissions and energy use for operation would be similar to Option A and higher than Option B.	Worsen. Introduction of a new commercial use on the project site would increase area vehicle trips and GHG emissions compared to Options A and B.	Worsen. Introduction of a new commercial use on the project site would increase area vehicle trips and GHG emissions compared to Options A and B.

City of Long Beach
 Fire Station No. 9 Replacement Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project	Alternative 2: Demolish Building and Replace with New Permanent Fire Station	Alternative 3: Demolish Building and Replace with Commercial and Retail Development	Alternative Four: Preservation and Adaptive Reuse
Hazards and Hazardous Materials	Less Than Significant with Mitigation	<p>Similar. The existing building would be maintained pursuant to the LBMC to ensure that the structure does not fall into disrepair. Maintenance activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required to investigate the potential UST presence.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>	<p>Similar. Construction activities would require MMs to ensure worker safety and impacts would be less than significant with MM HAZ-1 and HAZ-2. MMs HAZ-3 and HAZ-4 would also be required.</p>
Noise	Less Than Significant	<p>Avoid. No demolition would occur, and the site would remain vacant; therefore, there would be no impacts.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as Fire Station No. 9 would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as the site would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>	<p>Similar. Noise from construction activities would be similar to both Options A and B, as both would involve the use of heavy construction equipment. Operational noise would be similar to Option A, as the site would be occupied under both scenarios, but higher than Option B in which the site would remain vacant.</p>

8 References

8.1 Bibliography

Project Description

GPA Consulting. 2019. 3917 Long Beach Boulevard Historical Resource Evaluation Report. Appendix D.

Long Beach, City of. 1998. General Plan Land Use Element. Accessed December 2019.

_____. 2010. Land Use District Maps. <http://www.longbeach.gov/lbds/planning/advance/maps/land-use-district-maps2/>. Accessed December 2019.

_____. 2018. Zoning Districts Map. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/50-by-50-zoning-map-2018-september>. Accessed December 2019.

Site History

Faithful + Gould, Inc. 2019. Facility Condition Assessment for City of Long Beach Fire Station No. 9. Appendix B.

Health Science Associates (HSA). 2017a. Limited Preliminary Fungal Investigation and Deep Cleaning Protocol Preparation. Appendix B.

_____. 2017b. Stepwise Comprehensive Cleaning Protocol. Appendix B.

_____. 2017c. Addendum #1 to the Fungal Remediation Guideline Related to the City of Long Beach, Fire Station No. 9. Appendix B.

_____. 2017d. Limited Bulk Asbestos and Lead-based Paint Survey of Specific Ceiling and Walls of the City of Long Beach Fire Station No. 9. Appendix B.

_____. 2018a. Limited Post Fungal Remediation Investigation of Long Beach Fire Station No. 9. Appendix B.

_____. 2018b. Quarterly Industrial Hygiene Inspection: Report Date July 12, 2018. Appendix B.

_____. 2018c. Quarterly Industrial Hygiene Inspection: Report Date November 5, 2018. Appendix B.

_____. 2019a. Quarterly Industrial Hygiene Inspection: Report Date February 22, 2019. Appendix B.

_____. 2019b. Quarterly Industrial Hygiene Inspection: Report Date June 4, 2019. Appendix B.

Long Beach, City of. 2003. Industrial Hygiene Report Fire Station No. 9. Appendix B.

_____. 2004. Summary of Employee Health Complaints. Appendix B.

_____. 2017. Summary: Indoor Air Quality Questionnaires (November 03, 2017). Appendix B.

Pacific EH&S Services, Inc. 2015. Fire Station No. 9 Hot Water Pipe Leak: Asbestos, Lead, and Microbiological Survey Findings. Appendix B.

_____. 2017. Fire Station No. 9 Indoor Air Quality Investigation Findings. Appendix B.

Tetra Tech, Inc. and SCS Engineers. 2020. Long Beach Fire Station #9 – Mold Assessment Report and Engineer’s Cost Estimate. Appendix B.

Environmental Setting

California Air Resources Board (CARB). 2018. Area Designation Maps/State and National. <https://ww3.arb.ca.gov/desig/adm/adm.htm>. Accessed December 2019.

California Department of Finance (DOF). 2019. E-1 Cities, Counties, and the State Population Estimates with Annual Percent Change — January 1, 2018 and 2019. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/>. Accessed December 2019.

Long Beach, City of. 1988. General Plan Seismic Safety Element. http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced. Accessed December 2019.

Air Quality

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook. <https://ww3.arb.ca.gov/ch/handbook.pdf>. Accessed December 2019.

_____. 2011. Health Effects of Diesel Exhaust. <http://www.arb.ca.gov/research/diesel/diesel-health.htm>. Accessed January 2019.

_____. 2016. Ambient Air Quality Standards. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed December 2019.

_____. 2019. Top 4 Summary: Select Pollutant, Years, & Area. <https://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed December 2019

Long Beach, City of. 2020. Long Beach Climate Action and Adaptation Plan: Upcoming Events and Project Timeline webpage. <http://www.longbeach.gov/lbds/planning/caap/events/>. Accessed January 2020.

Long Beach Public Works Department. 2014. 2014 Citywide Traffic Flow. <http://www.longbeach.gov/globalassets/pw/media-library/documents/resources/general/maps-and-gis/2014-citywide-traffic-flow>. Accessed December 2019.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hotspots Program: Risk Assessment Guidelines. <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed January 2020.

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. April 1993.

_____. 2008. Final Localized Significance Threshold Methodology. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-1st-methodology-document.pdf>. Accessed December 2019.

- _____. 2009. Appendix C – Mass Rate LST Look-up Tables. Last modified: October 21, 2009. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>. Accessed December 2019.
- _____. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>. Accessed December 2019.
- _____. 2017. Final 2016 Air Quality Management Plan (AQMP). <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed December 2019.
- _____. 2019. SCAQMD Air Quality Significance Thresholds. Last modified: April 2019. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>. Accessed January 2020.
- United States Environmental Protection Agency (U.S. EPA). 2013. Policy Assessment for the Review of the Lead National Ambient Air Quality Standards, External Review Draft. https://www3.epa.gov/ttn/naaqs/standards/pb/data/010913_pb-draft-pa.pdf. Accessed January 2020.

Cultural, Paleontological, and Tribal Cultural Resources

- Agenbroad, L.D. 2003. New localities, chronology, and comparisons for the pygmy mammoth (*Mammuthus exilis*). In J. Reumer (ed.) *Advances in Mammoth Research, Proceedings of the 2nd International Mammoth Conference, Rotterdam, the Netherlands*. DEINSEA 9, p. 1-16.
- Bean, Lowell John and Charles R. Smith. 1978. Gabrielino. In *California*, edited by Robert F. Heizer, pp. 538-549. *Handbook of North American Indians*, Vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Bell, C.J., E.L. Lundelius, Jr., A.D. Barnosky, R.W. Graham, E.H. Lindsay, D.R. Ruez, Jr., H.A. Semken, Jr., S.D. Webb, and R.J. Zakrzewski. 2004. The Blancan, Irvingtonian, and Rancholabrean Mammal Ages. In Woodburne, M.O. (ed.) *Late Cretaceous and Cenozoic Mammals of North America: Biostratigraphy and Geochronology*. Columbia University Press, New York, p. 232-314.
- Beyer, Larry, A. 1995. Los Angeles Basin Province (014). In *National Assessment of United States Oil and Gas Resources—Results, Methodology, and Supporting Data*, edited by D. Gautier, G. L. Dolton, K. I. Takahashi, K. L. Varnes. U.S. Geological Survey Digital Data Series 30. Reston, Virginia.
- Byrd, Brian F., and L. Mark Raab. 2007. Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory*, edited by T. L. Jones and K. A. Klar, pp. 215-228. Altimira Press, New York.
- California Geological Survey (CGS). 2002. *California Geomorphic Provinces*, Note 36.

- City of Long Beach Development Services Department and Historic Resources Group. 2009. Existing Conditions Report for Historic Preservation Element General Plan, City of Long Beach. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/historic-preservation/historic-pres-docs/existing-conditions-report---oct-1-2009>. Accessed December 2019.
- Engstrand, Iris H.W. 2000. Rancho Los Cerritos: A Southern California Legacy Preserved. *Southern California Quarterly*. v. 82, no. 1, p. 1-42.
- GPA Consulting. 2019. 3917 Long Beach Boulevard Historical Resource Evaluation Report. Appendix D.
- Jefferson, G.T. 1985. Review of the Late Pleistocene avifauna from Lake Manix, central Mojave Desert, California. *Contributions in Science, Natural History Museum of Los Angeles County*, 362, p. 1-13.
- _____. 1989. Late Cenozoic tapirs (Mammalia: Perissodactyla) of western North America. *Natural History Museum of Los Angeles County, Contributions in Science* 406, p. 1-22.
- _____. 1991. A catalogue of late Quaternary vertebrates from California. Part two, mammals. *Natural History Museum of Los Angeles County Technical Report* 7, p. 1-129.
- Kroeber, Alfred J. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78. Originally published 1925, Smithsonian Printing Office, Washington, D.C. Unabridged reprint 1976, Dover Publications, Inc. New York.
- Maguire, K.C. and P.A. Holroyd. 2016. Pleistocene vertebrates of Silicon Valley (Santa Clara County, California). *PaleoBios* v., 33, no. 1, p.1-14.
- McCulloh, T. H., and L. A. Beyer. 2004. Mid-Tertiary isopach and lithofacies maps for the Los Angeles region, California: templates for palinspastic reconstruction to 17.4 Ma. *United States Geological Survey, Professional Paper* 1690, p. 1–32.
- McLeod, S. 2015. Letter response to request for unpublished museum collections records. Los Angeles County Museum of Natural History, dated April 8, 2015.
- Merriam, J.C. 1911. The Fauna of Rancho La Brea; Part I: Occurrence. *Memoirs of the University of California*, v. 1, no. 2, p. 197-213.
- Norris, R. M. and Webb, R. W. 1990. *Geology of California*. John Wiley and Sons, Inc. New York.
- Polly, David P. 2003. Paleophylogeography: The Tempo of Geographic Differentiation in Marmots (*Marmota*). *Journal of Mammalogy*, v. 84, no. 2. [https://doi.org/10.1644/1545-1542\(2003\)084<0369:PTTOGD>2.0.CO;2](https://doi.org/10.1644/1545-1542(2003)084<0369:PTTOGD>2.0.CO;2). Accessed February 2020.
- Reynolds, R.E., R.L. Reynolds, and A.F. Pajak, III. 1991. Blancan, Irvingtonian, and Rancholabrean land mammal age faunas from western Riverside County, California. In M.O. Woodburne, R.E. Reynolds, and D.P. Whistler (eds.) *Inland southern California: the last 70 million years*. *San Bernardino County Museum Association Quarterly*, v. 38, no. 3-4, p. 37-40.
- Rincon Consultants, Inc. (Rincon). 2019. Peer Review and Cultural Resources Study, 3917 Long Beach Boulevard. Appendix D.
- Saucedo, G.J., Greene, H.G., Kennedy, M.P., and Bezore, S.P. 2003. Geologic map of the Long Beach 30' x 60' quadrangle, California: A digital database. *California Geological Survey, Preliminary Geologic Maps*, scale 1:100,000.

- _____. 2016. Geologic Map of the Long Beach 30'x60' Quadrangle, California. Department of Conservation, California Geologic Survey, Regional Geologic Map Series, scale 1:100,000.
- Savage, D.R. 1951. Late Cenozoic vertebrates of the San Francisco Bay region. University of California Publications, Bulletin of the Department of Geological Sciences, v. 28, p. 215-314.
- Savage, D.E., T. Downs, and O.J. Poe. 1954. Cenozoic land life of southern California in R.H. Jahns ed., *Geology of Southern California*. California Division of Mines and Geology, 170, Ch. III, p. 43-58.
- Scott, E. and S.M. Cox. 2008. Late Pleistocene distribution of Bison (Mammalia; Artiodactyla) from the Mojave Desert of southern California and Nevada. In X. Wang and L.G. Barnes (eds.) *Geology and vertebrate paleontology of western and southern North America: Contributions in Honor of David P. Whistler*. Natural History Museum of Los Angeles County, Science Series, v. 41, p. 359-82.
- Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.
- Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray. 2009. The Diamond Valley Lake local fauna: Late Pleistocene vertebrates from inland southern California. In Albright, L.B. III (ed.) *Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne*. Museum of Northern Arizona Bulletin, v. 65, p. 217-36.
- Tomiya, S., J.L. McGuire, R.W. Dedon, S.D. Lerner, R. Setsuda, A.N. Lipps, J.F. Bailey, K.R. Hale, A.B. Shabel, and A.D. Barnosky. 2011. A report on late Quaternary vertebrate fossil assemblages from the eastern San Francisco Bay region, California. *PaleoBios* v. 30, no. 2, p. 50-71.
- Wilkerson, G., T. Elam, and R. Turner. 2011. Lake Thompson Pleistocene mammalian fossil assemblage, Rosamond. In Reynolds, R.E. (ed.) *The Incredible Shrinking Pliocene. The 2011 Desert Symposium Field Guide and Proceedings*, California State University Desert Studies Consortium.
- Winters, H.H. 1954. The Pleistocene fauna of the Manix Beds in the Mojave Desert, California. Master's Thesis, California Institute of Technology.
- University of California Museum of Paleontology (UCMP) Online Database. 2020. UCMP specimen search portal, <http://ucmpdb.berkeley.edu/>. Accessed January 2020.
- Yerkes, R.F., J. E. McCulloh, J. E. Schoellhamer, and J. G. Vedder. 1965. *Geology of the Los Angeles Basin California-An Introduction*, United States Department of the Interior, Geology Survey, Professional Paper 420-A

Greenhouse Gas Emissions and Energy

- Association of Environmental Professionals (AEP). 2016. Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California. https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf. Accessed April 2020.

California Air Pollution Control Officers Association. 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed January 2020.

_____. 2017. California Emissions Estimator Model User Guide: Version 2016.3.2. Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. <http://www.aqmd.gov/docs/default-source/caleemod/user's-guide---october-2017.pdf?sfvrsn=6>. Accessed January 2020.

California Air Resources Board (CARB). 2013. Mobile Source Emission Inventory – EMFAC2011 Frequently Asked Questions. <https://www.arb.ca.gov/msei/sg-faqs.docx>. Accessed January 2020.

_____. 2014. First Update to the Climate Change Scoping Plan. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed January 2020.

_____. 2015. CA-GREET 2.0 Supplemental Document and Tables of Changes. <https://www.arb.ca.gov/fuels/lcfs/ca-greet/CA-GREET2-suppdoc-060415.pdf>. Accessed January 2020.

_____. 2017a. California's 2017 Climate Change Scoping Plan. https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 2020.

_____. 2017b. 2020 BAU Emissions Projection. https://www.arb.ca.gov/cc/inventory/data/tables/2020_bau_forecast_by_scoping_category_2014-05-22.pdf. Accessed May 2019

_____. 2017c. AB 32 Scoping Plan Website. <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed May 2019.

_____. 2018. California Greenhouse Gas Emissions for 2000 to 2016. https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-16.pdf. Accessed January 2020.

_____. 2019a. California Greenhouse Gas Emissions for 2000 to 2017. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed January 2020.

_____. 2019b. Advanced Clean Cars. <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-cars>. Accessed February 2020.

California Climate Action Registry (CCAR). 2009. General Reporting Protocol. https://sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf. Accessed January 2020.

California Climate Change Center (CCCC). 2006. Climate Scenarios for California. July 2006.

_____. 2009. The Impacts of Sea-Level Rise on the California Coast. Available online at: <http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF>.

- California Department of Water Resources (DWR). 2008. Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water. Available online at: https://www.water.ca.gov/LegacyFiles/pubs/planning/managing_an_uncertain_future_climate_change_adaptation_strategies_for_california's_water/managing_an_uncertain_future.pdf
- California Energy Commission (CEC). 2009. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature.
- _____. 2015. 2016 Building Energy Efficiency Standards. https://ww2.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf. Accessed January 2020.
- _____. 2017. Transportation Energy Demand Forecast, 2018-2030. <https://efiling.energy.ca.gov/GetDocument.aspx?tn=223241>. Accessed January 2020.
- _____. 2018a. Toward A Clean Energy Future, 2018 Integrated Energy Policy Report Update Volume I. <https://efiling.energy.ca.gov/getdocument.aspx?tn=224216>. Accessed January 2020.
- _____. 2018b. 2019 Building Energy Efficiency Standards. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf. Accessed January 2020.
- _____. 2019a. Total System Electric Generation: The Year in Review. https://ww2.energy.ca.gov/almanac/electricity_data/total_system_power.html. Accessed January 2020.
- _____. 2019b. 2018 Electricity Consumption by Entity: Southern California Edison. <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>. Accessed January 2020.
- _____. 2019c. 2018 Natural Gas Consumption by Entity: Long Beach Gas Department. <https://ecdms.energy.ca.gov/gasbyutil.aspx>. Accessed January 2020.
- _____. 2019d. 2018 Integrated Energy Policy Report Update, Volume II - Adopted February 20, 2019. <https://efiling.energy.ca.gov/getdocument.aspx?tn=227391>. Accessed January 2020.
- _____. 2019e. 2019 Integrated Energy Policy Report. https://ww2.energy.ca.gov/2019_energypolicy/. Accessed January 2020.
- California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. https://planning.lacity.org/eir/8150Sunset/References/4.E.%20Greenhouse%20Gas%20Emissions/GHG.23_CalEPA%202006%20Report%20to%20Governor.pdf. Accessed February 2020.
- _____. 2010. Climate Action Team Biennial Report. Final Report. April 2010.
- Energy Star. 2020. About Energy Star Webpage. <https://www.energystar.gov/about>. Accessed January 2020.
- Intergovernmental Panel on Climate Change (IPCC). 2007. Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

- _____. 2014. Summary for Policymakers. In: Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Long Beach, City of. 2010. Sustainable City Action Plan. <http://www.longbeach.gov/globalassets/sustainability/media-library/documents/nature-initiatives/action-plan/scap-final>. Accessed April 2020.
- _____. 2019. Draft Climate Action and Adaptation Plan: Greenhouse Gas Emissions, Forecasts, and Targets. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/caap/caap-greenhouse-gas--ghg--emissions-forecasts-and-targets--draft-released-053119-logos>. Accessed February 2020.
- National Highway Traffic Safety Administration (NHTSA). 2019. "Corporate Average Fuel Economy." <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>. Accessed September 2019.
- Parmesan, C. August 2006. Ecological and Evolutionary Responses to Recent Climate Change.
- South Coast Air Quality Management District (SCAQMD). 2008. Final Localized Significance Threshold Methodology. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-1st-methodology-document.pdf>. Accessed December 2019.
- Southern California Association of Governments (SCAG). 2016. 2016-2040 Regional Transportation Plan Sustainable Communities Strategy. <http://scagrtpsc.net/Pages/FINAL2016RTPSCS.aspx>. Accessed January 2020.
- _____. 2016b. 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction. http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf. Accessed February 2020.
- United States Environmental Protection Agency (U.S. EPA). 2017a. Understanding Global Warming Potentials. Available online at: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>.
- _____. 2017b. Criteria Air Pollutants. Available online at: <https://www.epa.gov/criteria-air-pollutants>.
- _____. 2018. NHTSA and EPA Proposed SAFE Vehicle Rule. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100V26O.pdf>. Accessed February 2020.
- United States Department of Transportation. 2018. Bureau of Transportation Statistics. National Transportation Statistics. <https://www.bts.gov/topics/national-transportation-statistics>. Accessed December 2019.
- United States Energy Information Administration (EIA). 2020. California Natural Gas Consumption by End Use. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm. Accessed January 2020.

United States Environmental Protection Agency (U.S. EPA). 2018. Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines in MOVES2014b. <https://nepis.epa.gov/Exe/ZyNET.exe/P100UXEN.txt?ZyActionD=ZyDocument&Client=EPA&Index=2016%20Thru%202020&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C16THRU20%5CTXT%5C00000008%5CP100UXEN.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=3>. Accessed January 2020.

Hazards and Hazardous Materials

ASTM. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

California Department of Transportation (Caltrans). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf. Accessed June 2019.

Health Science Associates (HSA). 2017d. Limited Bulk Asbestos and Lead-based Paint Survey of Specific Ceiling and Walls of the City of Long Beach Fire Station No. 9. Appendix B.

Long Beach, City of. 1975. Long Beach General Plan Public Safety Element. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/public-safety>. Accessed January 2020.

_____. 2005. Long Beach Airport Terminal Area Improvement Project Draft Environmental Impact Report No. 37-03. http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/approvedcertified-part-2/phase-ii-airport-terminal-improvement-project/eir-37-03_draft-eir. Accessed January 2020.

_____. 2013. Low Impact Development (LID). <http://www.longbeach.gov/lbds/planning/environmental/lid/>. Accessed January 2020.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2014. Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City of Long Beach. https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/ms4_permits/long_beach/2014/LB_MS4_Permit_final.pdf. Accessed January 2020.

National Association of Clean Water Agencies. 2018. MS4 Stormwater Permitting Guide. https://www.nacwa.org/docs/default-source/news-publications/white-papers/2018-03-07permittinguide.pdf?sfvrsn=29e1f761_4. Accessed April 2020.

Rincon Consultants, Inc. (Rincon). 2020. Hazardous Materials Technical Study. Appendix E.

Noise

- California Department of Transportation (Caltrans). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2)
http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf (accessed June 2019).
- _____. 2020 *Transportation and Construction Vibration Guidance Manual* (CT-HWANP-RT-13-069.25.3). April. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf> (accessed April 2020).
- Crocker, Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
- Federal Highway Administration (FHWA). 2006. *FHWA Highway Construction Noise Handbook*. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02).
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/ (accessed June 2019).
- _____. 2011. *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA-HEP-10-025).
https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (accessed June 2019).
- _____. 2017. *Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System*.
https://www.fhwa.dot.gov/policyinformation/pubs/pl18003/hpms_cap.pdf (accessed July 2019).
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*.
https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed June 2019).
- Illington & Rodkin. 2009. Environmental Noise Assessment for a Wal-Mart Expansion in Antioch. Document.
- Kinsler, Lawrence E. and R. Frey, Austin and B. Coppens, Alan and V. Sanders, James. 1999. *Fundamentals of Acoustics*, 4th Edition. ISBN 0-471-84789-5. Wiley-VCH, December 1999.
- Long Beach, City of. 2005. Long Beach Airport Terminal Area Improvement Project Draft Environmental Impact Report No. 37-03.
http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/approvedcertified-part-2/phase-ii-airport-terminal-improvement-project/eir-37-03_draft-eir. Accessed January 2020.
- _____. 2014. 2014 Citywide Traffic Flow. <http://www.longbeach.gov/globalassets/pw/media-library/documents/resources/general/maps-and-gis/2014-citywide-traffic-flow>. Accessed January 2020.
- Salter. 2017. Loading Dock Noise Study. <https://www.sanjoseca.gov/DocumentCenter/View/28907> (accessed June 2019).

State Water Resources Control Board (SWRCB). 1999. General Waste Discharge Requirements for Biosolids Land Application Draft Statewide Program EIR – Appendix G. Background Information on Acoustics.
http://www.waterboards.ca.gov/water_issues/programs/biosolids/deir/appendices/app_g.pdf (accessed June 2019).

Effects Found Not to be Significant

California Department of Conservation (DOC). 1982. Mineral Land Classification Map: Plate 4-21.

_____. 2016. California Important Farmland Finder. <http://maps.conservation.ca.gov/dlrp/ciff/>. Accessed December 2019.

_____. 2019. Earthquake Zones of Required Investigation Map. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Accessed December 2019.

California Department of Finance (DOF). 2019. E-1 Cities, Counties, and the State Population Estimates with Annual Percent Change — January 1, 2018 and 2019. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/>. Accessed December 2019.

California Department of Fish and Wildlife (CDFW). 2019. Biogeographic Information and Observation System (BIOS). Available at: www.wildlife.ca.gov/data/BIOS. Accessed December 2019.

California Department of Forestry and Fire Protection (CalFire). 2011. Cal Fire, Very High Fire Hazard Severity Zones in LRA. http://frap.fire.ca.gov/webdata/maps/los_angeles/LosAngelesCounty.pdf. Accessed December 2019.

_____. 2019. Fire Hazard Severity Zones (FHSZ) Viewer. <https://egis.fire.ca.gov/FHSZ/>. Accessed December 2019.

California Department of Transportation (Caltrans). 2017. Map of Eligible and officially designated State Scenic Highways. <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a>. Accessed December 2019.

California Geological Survey (GCS). 2020. CGS Information Warehouse: Tsunami. <https://maps.conservation.ca.gov/cgs/informationwarehouse/tsunami/>. Accessed January 2020.

Federal Emergency Management Agency (FEMA). 2008. FEMA Flood Map Service Center. <https://msc.fema.gov/portal/search?AddressQuery=3959%20temescal%20canyon%20rd#searchresultsanchor>. Accessed January 2020.

Institute of Transportation Engineers (ITE). 2017. *Trip Generation Manual, 10th edition*.

Long Beach, City of. 1973. General Plan Conservation Element. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/1973-conservation-element>. Accessed December 2019.

- _____. 1975. Scenic Routes Element of the General Plan.
<http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/scenic-routes-element>. Accessed December 2019.
- _____. 1988. General Plan Seismic Safety Element.
http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced. Accessed December 2019.
- _____. 2018. Zoning Districts Map. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/50-by-50-zoning-map-2018-september>. Accessed December 2019.
- Long Beach Department of Parks, Recreation and Marine (DPRM). 2019. About the Department web page. <http://www.longbeach.gov/park/business-operations/about/>. Accessed December 2019.
- Long Beach Development Services (LBDS). 2013. Low Impact Development Best Management Practices Design Manual. <http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/lid/lid-bmp-manual---2nd-ed--final--121813>. Accessed December 2019.
- Long Beach Police Department (LBPd). 2019. Fiscal Year 2020 Proposed Budget <http://www.longbeach.gov/globalassets/finance/media-library/documents/city-budget-and-finances/budget/budget-documents/fy-20-proposed-budget/31-police-v2>. Accessed December 2019.
- Long Beach Transit (LBT). 2020a. 51,52 Long Beach Boulevard: Service between Downtown Long Beach and Metro Blue Line Artesia Station. <https://ridelbt.com/wp-content/uploads/2020/02/5152.pdf>. Accessed June 2020.
- _____. 2020b. 61 Atlantic Avenue: Service between Downtown Long Beach and Metro Blue Line Artesia Station <https://ridelbt.com/wp-content/uploads/2020/02/61.pdf>. Accessed June 2020.
- Long Beach Water Department (LBWD). 2016. 2015 Urban Water Management Plan. <https://lbwater.org/wp-content/uploads/2019/09/LBWD-2015-UWMP-FINAL-Board-Adopted-3.pdf>. Accessed December 2019.
- Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey. <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed December 2019.
- Sanitation District of Los Angeles County (Districts). 2019. Joint Water Pollution Control Plant. <https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp>. Accessed December 2019.
- United States Fish and Wildlife Service (USFWS). 2019a. Information for Planning and Conservation (IPaC). <http://ecos.fws.gov/ipac/>. Accessed December 2019.
- _____. 2019b. Critical Habitat Portal. <http://criticalhabitat.fws.gov>. Accessed December 2019.
- _____. 2019c. National Wetlands Inventory. <http://www.fws.gov/wetlands/>. Accessed December 2019.
-

Other CEQA Considerations

- California Energy Commission (CEC). 2016b. Total Electricity System Power. [online]: http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html. Accessed June 2019.
- _____.2016c. Supply and Demand of Natural Gas in California. [online]: http://www.energy.ca.gov/almanac/naturalgas_data/overview.html. Accessed June 2019.
- _____.2016d. 2015 Integrated Energy Policy Report. [online]: http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN212017_20160629T154354_2015_Integrated_Energy_Policy_Report_Small_File_Size.pdf. Accessed July 2017.
- Department of Forestry and Fire Protection (Cal Fire). September 2011. Cal Fire, Very High Fire Hazard Severity Zones in LRA. http://frap.fire.ca.gov/webdata/maps/los_angeles/LosAngelesCounty.pdf. Accessed June 2019.
- Southern California Gas Company (So Cal Gas) 2016. <https://www.socalgas.com/smart-energy/benefits-of-natural-gas/affordable-abundant-domestic>. Accessed June 2019.

Alternatives

- Faithful + Gould, Inc. 2019. Facility Condition Assessment for City of Long Beach Fire Station No. 9. Appendix B.
- U.S. Department of the Interior. 2017. The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. <https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf>. Accessed April 2020.

8.2 List of Preparers

This EIR was prepared by the City of Long Beach, with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR are listed below.

RINCON CONSULTANTS, INC.

Deanna Hansen, AICP CEP, Principal
 Danielle Griffith, AICP, Project Manager
 Vanessa Villanueva, Associate Environmental Planner
 Emily Marino, Environmental Planner

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