Manhattan Beach Unified School District

MIRA COSTA HIGH SCHOOL FIELD RENOVATION, LIGHTING IMPROVEMENT, AND FACILITIES MASTER PLAN PROJECT

January 2026 | Draft Environmental Impact Report

State Clearinghouse No. 2025090918



PLACEWORKS

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for Manhattan Beach Unified School District

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This executive summary has been prepared in compliance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. This Draft Environmental Impact Report (EIR) addresses the environmental effects associated with the implementation of the proposed Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan Project. CEQA requires that local government agencies consider the environmental consequences before acting on projects over which they have discretionary approval authority. An EIR analyzes potential environmental consequences to inform the public and support informed decisions by local and State governmental agency decision makers. This document focuses on impacts determined to be potentially significant in the Initial Study completed for this project (see Appendix A, *NOP and Scoping Comments, and Initial Study*).

This EIR has been prepared pursuant to the requirements of CEQA and the Manhattan Beach Unified School District's (MBUSD or District) CEQA procedures. The District, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on the District technical personnel from other departments and review of all technical subconsultant reports.

ES.2 ENVIRONMENTAL PROCEDURES

This EIR has been prepared pursuant to CEQA and the CEQA Guidelines to assess the environmental effects associated with implementation of the proposed project as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.

2. Identify ways to avoid or reduce environmental damage.

3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.

4. Disclose to the public reasons for agency approval of projects with significant environmental effects.

5. Foster interagency coordination in the review of projects.

6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR, determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a statement of overriding considerations if significant impacts cannot be avoided.

ES.2.1 Draft EIR Organization

Executive Summary. Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues that need to be resolved, and the potential environmental impacts and recommended mitigation measures identified for the project.

Chapter 1: Introduction. Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

Chapter 2: Project Description. Provides a detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 3: Environmental Analysis. Each environmental topic is analyzed in a separate section that discusses: the applicable regulatory framework; existing conditions; the significance criteria used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the potential adverse and beneficial effects of the project; the level of impact significance with and without mitigation; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed projects in the area.

Chapter 4: Alternatives to the Proposed Project. Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative, Restricted Hours Alternative, and No Lighting on the West Field Alternative.

Chapter 5: Other CEQA Considerations. Provides a discussion of effects found not to be significant, significant and unavoidable impacts, significant irreversible changes to the environment, and growth-inducing effects.

Chapter 6: Report Preparers and Organizations Consulted. Includes a list of people and organizations that prepared or were contacted during the preparation of this Draft EIR.

Appendices. The appendices for this document include the following supporting documents:

- Appendix A. NOP and Scoping Comments, and Initial Study
- Appendix B. Lighting Photometrics
- Appendix C. Air Quality Analysis
- Appendix D. Biological Resources Report
- Appendix E. Cultural Resources Report
- Appendix F. Paleontological Resources Report
- Appendix G. Soil Summary
- Appendix H. Noise Analysis
- Appendix I. Transportation

ES.2.2 Type and Purpose of this Draft EIR

As described in the CEQA Guidelines, different types of EIRs are used for different situations and intended uses.

This Draft EIR has been prepared as a "Project EIR," which is defined in CEQA Guidelines Section 15161 (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR must examine all phases of the project, including planning, construction, and operation.

ES.3 PROJECT LOCATION

The project site is in the city of Manhattan Beach. Manhattan Beach is a coastal city in southwestern Los Angeles County. It lies along the Pacific Ocean and is part of the South Bay region, bordered by El Segundo to the north, Hermosa Beach to the south, and Hawthorne and Redondo Beach to the south and east. Regional access to the project site is provided by Interstate (I-) 405, I-105, and State Route (SR-) 91.

ES.4 SUMMARY OF THE PROPOSED PROJECT

The project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also include the installation of two new e-bike parking areas on campus as well as various improvements identified in the District's Mira Costa High School FMP. The project site includes the entire 37-acre campus. The proposed project would not increase student enrollment or capacity at the athletic fields or on the main campus and would not include improvements to the fields or athletic amenities beyond the proposed new field lighting. The proposed project would not result in significant changes to programming except to extend current practice times into evening hours, but not beyond 10:00 pm.

ES.5 SUMMARY OF PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6(a) states that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives in this Draft EIR were based, in part, on their potential to reduce or eliminate the impacts determined to be potentially significant for implementation of the proposed project (see Table ES-1, *Summary of Significant Environmental Impacts and Mitigation Measures*). The project alternatives were not reviewed for financial feasibility. Project alternatives are assessed in further detail in Chapter 4, *Alternatives to the Proposed Project*.

ES.5.1 No Project Alternative

The No Project Alternative would not include any ground-disturbing activities and would eliminate the proposed project's potentially significant impacts on cultural resources, geology and soils, and tribal cultural resources associated with the discovery of archaeological and paleontological resources. This alternative would not create new sources of light or cause light spill as a result of installing light poles. Additionally, all impacts related to construction for the proposed project would be avoided with this alternative. Overall, this alternative would result in reduced impacts across all environmental topics. However, the No Project Alternative would not meet any of the project objectives.

ES.5.2 Restricted Hours Alternative

The Restricted Hours Alternative would have the same construction and operation characteristics as the proposed project, except field use would be required to stop at 8:00 pm, and lights would turn off at 9:00 pm instead of 10:00 pm. This alternative would also reduce nighttime use at Waller Stadium by one hour, as compared to existing conditions. Under this alternative, impacts to air quality, cultural resources, geology and soils, hazardous materials, hydrology and water quality, transportation, tribal cultural resources, and utilities and service systems would be similar to those of the proposed project. However, because this alternative would reduce the duration of light and noise, impacts to aesthetics and noise would be slightly reduced and would remain less than significant, as with the proposed project. The Restricted Hours Alternative would not meet Objective 2, provide lighting to allow night use of the athletic fields to accommodate school-related events and activities and community events. The field's use would be reduced by one hour, which would limit some on-campus games and events.

ES.5.3 No Lights on West Field Alternative

The No Lights on West Field Alternative would slightly reduce construction and operation of lighting from the proposed project. Under this alternative, impacts related to air quality, cultural resources, geology and soils, hazardous materials, hydrology and water quality, transportation, tribal cultural resources, and utilities and service systems would be similar to those of the proposed project. However, this alternative would reduce the amount of light spill and glare and operational noise at adjacent residential properties; therefore, impacts to aesthetics and noise would be slightly reduced and would remain less than significant, as with the proposed project. The No Lighting on West Field Alternative would not meet Objective 1, provide adequate athletic facilities to accommodate school sport games, other school events and community events; and Objective 2, provide updated lighting to allow night use athletic fields to accommodate school-related events, sport games, and community events. Under this alternative, no lighting would be installed on the West Field, which is adjacent to residential properties. This would limit some on-campus games and events and community events hosted on campus.

ES.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR disclose issues to be resolved, including the choice among alternatives and how to mitigate significant impacts. For the proposed project, the major issues to be resolved include decisions by the lead agency regarding:

1. Whether this EIR adequately describes the environmental impacts of the project.

2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the mitigation measures identified in the EIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

ES.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public. Prior to preparation of the Draft EIR, the District issued a Notice of Preparation (NOP) on September 22, 2025, beginning the CEQA-mandated scoping period for this EIR, which was between September 22, 2025, and October 21, 2025. During the scoping period, interested agencies and the public could submit comments about the potential environmental impacts of the proposed project, and the District received comment letters from state agencies, local agencies, and members of the public. Appendix A, *NOP and Scoping Comments, and Initial Study*, of this Draft EIR contains the NOP as well as the comments received by the District in response to the NOP.

Issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process are listed here. Though every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive; rather, it attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Several members of the community raised concerns regarding lighting impacts, traffic safety, operational noise, and impacts on wildlife.
- The Gabrieleño Band of Mission Indians-Kizh Nation requested government-to-government consultation with the District pursuant to Assembly Bill 52.

ES.8 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Based on the analysis in the Initial Study (see Appendix A), it was determined that the proposed project would not result in significant environmental impacts related to agriculture and forestry resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire.

Table ES-1, *Summary of Significant Environmental Impacts and Mitigation Measures*, summarizes the conclusions of the environmental analysis in this DEIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance with imposition of the mitigation measures is also presented.

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
AESTHETICS			
AES-d: The proposed project could expose people on- or off-site to substantial light or glare which would adversely affect day or nighttime views in the area.	Potentially Significant	**Mitigation Measure AES-1:** To minimize potential lighting and glare impacts on nearby sensitive receptors, the District shall ensure that all exterior lighting associated with the project is designed and installed to avoid spillover lighting, glare, or increases in ambient illumination levels beyond of 0.9 fc. Real-world lighting conditions can vary based on factors such as ambient darkness, weather, surface reflectivity, and the positioning of nearby structures or vegetation. Because these conditions may influence how lighting is perceived off-site, potential impacts could occur even when fixtures are designed to meet technical specifications. To address this, the District shall incorporate best-practice lighting design, including full cutoff or fully shielded fixtures, downward-directed lighting, and timers or motion controls where appropriate. Following installation of the lighting system, the District shall conduct nighttime field measurements at the residences along the shared private driveway north of west field to verify lighting levels. If the District's post-installation survey identifies lighting levels at these residences that exceed 0.9 foot-candles at the building façade, the District shall implement additional measures as identified in Mitigation Measure AES-2.	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		Mitigation Measure AES-2: If the District's post-installation survey identifies that residences along the shared private driveway are impacted by light levels exceeding 0.9 foot-candles at the building façade, these residences will be eligible for compensation for window treatments designed to reduce interior light levels. Within three months of completion of field lighting installation, the District shall have a licensed contractor provide an estimate for installing light-blocking mechanisms (shutters, blinds, etc.) and provide the cost estimate to the District for their review. Only windows that are exposed to light levels that exceed 0.9 foot-candles shall be accounted for in the cost estimates. A homeowner's refusal to accept payment shall not be considered the District's failure to accomplish this mitigation payment. The District shall pay up to $4,000 per impacted house for mitigation.	
BIOLOGICAL RESOURCES			
BIO-a: The proposed project could have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or	Potentially Significant	**Mitigation Measure BIO-1:** Light installation activities at the football stadium will be conducted outside of the monarch overwintering season. If work must occur during this period, avoidance of the Eucalyptus spp. stand and an associated 150-foot buffer must be observed.	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.			
BIO-c: The proposed project could have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	Potentially Significant	**Mitigation Measure BIO-2:** When feasible, construction activities within 500 feet of potential aquatic resources shall be scheduled during the dry season (typically May through October) to reduce the risk of hydrologic disruption and erosion. If work must occur outside of the dry season (November through April), enhanced sediment and erosion controls should be utilized as necessary (e.g., two rows of silt fencing or wattles, sediment traps, etc.) as determined by the contractor. Disturbed soils shall be stabilized as soon as practicable following construction through native seed mixes, erosion control blankets, or equivalent methods as approved by agencies. **Mitigation Measure BIO-3:** To ensure compliance with BIO-2, a qualified monitor must conduct a detailed site inspection at least once per week, or as frequently required by the project-specific SWPPP, during active construction occurring outside the dry season and within 500 feet of aquatic features, and within 24 hours following any rainfall event. Monitoring shall include inspection of all erosion and sediment control measures, photo documentation of work areas, and verification of adherence to	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		avoidance and minimization measures. A weekly monitoring report summarizing site conditions, compliance status, and any corrective actions taken shall be submitted to the lead agency and maintained in the project file. The qualified monitor shall have the authority to halt work if noncompliance is observed until corrective measures are implemented.	
BIO-d: The proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites	Potentially Significant	**Mitigation Measure BIO-4:** Vegetation clearing or ground disturbing activities shall be conducted during the non-breeding season (September 1 to February 14) in order to limit impacts to nesting birds. If vegetation clearing or ground disturbing activities need to take place during breeding season (February 15 through August 31), a pre-construction nesting bird survey(s) will be required in order to remain in compliance with the Migratory Bird Treaty Act. The survey should be conducted no more than three days prior to the start of work.	Less Than Significant
CULTURAL RESOURCES			
CUL-b: The proposed project could cause a substantial adverse change in the significance of an archaeological resource	Potentially Significant	**Mitigation Measure CUL-1**: Prior to the commencement of grading activities, the District shall ensure that an archaeologist who meets the Secretary of the Interior's (SOI) standards for professional archaeology has been retained for the proposed project and will be on-call during all grading and other significant ground-disturbing activities that would occur	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
pursuant to CEQA Guidelines Section 15064.5.		beneath the existing artificial fill. The qualified archaeologist shall ensure that the following measures are followed for the proposed project: ▪ Prior to any ground disturbance, the Qualified Archaeologist will conduct a preconstruction Cultural Resources Awareness Training (CRAT) to familiarize the members of the construction team overseeing or conducting ground-disturbing activities with the archaeological sensitivity of the project area, the potential to encounter archaeological resources, the types of archaeological material that could be encountered, and procedures to follow if archaeological deposits and/or artifacts are encountered during construction. The SOI-qualified archaeologist shall prepare and distribute a brochure describing the appropriate actions to take if any archaeological resources are encountered. ▪ Prior to any ground disturbance, the (SOI)-qualified archaeologist shall prepare an Archaeological and Tribal Monitoring Plan that outlines the methods to be undertaken during monitoring and the steps to be taken in the event of an archaeological discovery. ▪ In the event that a prehistoric archeological site indicators (such as obsidian and chert flakes and chipped stone tools; grinding and mashing implements [e.g., slabs and hand stones, and mortars and pestles]; bedrock outcrops and boulders with mortar cups; and locally darkened midden	

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		soils) or a historic-period archaeological site indicators (such as fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits [e.g., wells, privy pits, dumps]), is uncovered during grading or other construction activities, all ground-disturbing activity within 50 feet of the discovery shall be halted. The District shall be notified of the potential find and a qualified archeologist shall be retained to investigate its significance (CEQA Guidelines15064.5[f]). If significant Native American cultural resources are discovered for which a treatment plan must be prepared, the District or the archaeologist on-call shall contact the applicable Native American tribal representative(s). If requested by the Native American tribe(s), the District or archaeologist on call shall, in good faith, consult on the discovery and its disposition (e.g., avoidance, preservation, reburial, re-turn of artifacts to tribe).	
GEOLOGY AND SOILS			
GEO-f: The proposed project may indirectly destroy a unique paleontological resource.	Potentially Significant	**Mitigation Measure GEO-1**: In the event of any fossil discovery, ground disturbing activities shall halt within a 50-foot radius of the find until its significance can be determined by a qualified paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		standards of the Society of Vertebrate Paleontology. The most likely repository is the Natural History Museum of Los Angeles County. The repository shall be identified, and a curatorial arrangement shall be signed as part of a Paleontological Impact Mitigation Plan.	
TRIBAL CULTURAL RESOURCES			
TCR-a: (i) The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource 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). (ii) The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1	Potentially Significant	**Mitigation Measure TCR-1:** Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities. (a) The Manhattan Beach Unified School District (MBUSD) shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. (b) A copy of the executed monitoring agreement shall be submitted to the Manhattan Beach Unified School District (MBUSD) prior to the earlier of the commencement of any ground-disturbing activity, or the	Less Than Significant

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		issuance of any permit necessary to commence a ground-disturbing activity. (c) The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the Manhattan Beach Unified School District (MBUSD) upon written request to the Tribe. (d) On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the Manhattan Beach Unified School District (MBUSD) that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the	

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		Manhattan Beach Unified School District (MUSD) that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs. **Mitigation Measure TCR-2:** Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) (a) Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes. **Mitigation Measure TCR-3:** Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects (a) 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 Public	

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
		Resources Code Section 5097.98, are also to be treated according to this statute. (b) If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed. (c) Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). (d) Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.	

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1. INTRODUCTION

1.1 PURPOSE OF THE EIR

The California Environmental Quality Act (CEQA), Public Resources Code (PRC) Sections 21000 et seq., requires that all State and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. The Environmental Impact Report (EIR) is the public document designed to provide the lead agency, decision makers, and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage, and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects. This Draft EIR has been prepared to satisfy the requirements of the CEQA Statute and CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 et seq.).

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (PRC Section 21067). The Manhattan Beach Unified School District (MBUSD or District) has the principal responsibility for approval of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan project (proposed project). For this reason, the District is the CEQA lead agency for this project.

The intent of the Draft EIR is to provide sufficient information on the potential environmental impacts of the proposed project to allow the District to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the District are described in Section 2.7, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, Title 14, §§ 15000 et seq.)

The overall purpose of this Draft EIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed project. This Draft EIR addresses effects that may be significant and

adverse, evaluates alternatives to the project, and identifies mitigation measures to reduce or avoid adverse effects.

1.2 ENVIRONMENTAL REVIEW PROCESS

1.2.1 Notice of Preparation

The District determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) on September 22, 2025, for a 30-day public review period from September 22, 2025 to October 21, 2025 (see Appendix A). The NOP process helps determine the scope of the environmental issues to be addressed in the Draft EIR. As a part of the NOP process, the District conducted a public scoping meeting on October 6, 2025, from 6:00 p.m. to 7:00 p.m. at 325 S. Peck Avenue Manhattan Beach, CA 90266. The scoping meeting purpose was to present the proposed project, environmental process, and receive public comments and suggestions regarding the proposed project. There were 18 attendees at the scoping meeting.

CEQA Guidelines Section 15807(a) requires that the NOP be published in at least one of the following procedures: a local newspaper, posting on and offsite in the area where the project is located, or direct mailing to the owners and occupants of properties contiguous to the project site. It is common practice to distribute the NOP to residents and/or property owners within a 300-foot radius of the project site. However, for this project, PlaceWorks provided noticing to all residents and property owners within a 500-foot radius of the entire campus, on behalf of the District, which exceeds common practice and the requirements of CEQA Guidelines Section 15087(a)(3) (See Figure 1-1, *500-foot Radius Mailing List*). The NOP was sent via certified mail to state and local agencies, and Native American Tribes that are historically familiar with the area.

The NOP was also posted for public review on the District's website, posted to the local newspaper, the Governor's Office of Land Use and Climate Innovation CEQAnet Web Portal, and the Los Angeles County Clerk-Recorder Department. Additionally, the NOP was made available online at the District's website and hard copies were available at the District's office at 325 South Peck Avenue, CA 90266.

Comments received during the NOP public review period and the scoping meeting, held on October 6, 2025, are provided in Appendix A. The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered potentially significant are addressed in this DEIR, and issues identified to result in no impacts or less than significant impacts are addressed in Chapter 5, *Other CEQA Considerations*, of this DEIR.



Source: ParcelQuest 2025.

Figure 1-1
500-foot Radius Mailing List

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1.2.2 Draft EIR

The scope of the Draft EIR was partly determined based on the comments received in response to the NOP. Pursuant to CEQA Guidelines, Sections 15126.2 and 15126.4, the Draft EIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 2, *Project Description*, of this Draft EIR, establishes the basis for analyzing the proposed project-related environmental impacts.

IMPACTS CONSIDERED LESS THAN SIGNIFICANT

The District determined that 12 environmental impact categories were not significantly affected by or did not affect the proposed project. Per CEQA Guideline 15063, topics found to not have a significant impact were evaluated in the Initial Study, see Appendix A. These categories are not discussed in detail in this DEIR.

- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

The District determined that eight environmental factors have potentially significant impacts if the proposed project is implemented. These categories are discussed in detail in Chapter 3, *Environmental Analysis*, in this DEIR.

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources

- Geology and Soils
- Noise
- Transportation
- Tribal Cultural Resources

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. However, this DEIR did not identify any significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project.

1.2.3 Final EIR Certification

This DEIR is being circulated for public review for 45 days, in the month of January 2026. Interested agencies and members of the public are invited to provide written comments on the DEIR to the District address shown on the title page of this document. Upon completion of the 45-day review period, the District will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the MBUSD Board of Trustees for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the MBUSD Board of Trustees.

The DEIR is available to the general public for review at the following locations:

- Manhattan Beach Unified School District, 325 S. Peck Avenue, Manhattan Beach, CA 90266
- Mira Costa High School, 1401 Artesia Boulevard, Manhattan Beach, CA 90266
- Manhattan Beach Unified School District website:
  https://www.mbusd.org/apps/pages/index.jsp?uREC_ID=141534&type=d&pREC_ID=2702259

1.3 MITIGATION MONITORING

CEQA Statute Section 21081.6 requires that the lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for any project for which it has made findings pursuant to CEQA Statute Section 21081 or adopted a Negative Declaration pursuant to CEQA Statute Section 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. If mitigation measures are required, the MMRP for the proposed project will be completed congruently as part of the Final EIR process.

1.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference into this Draft EIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at the District Office.

- City of Manhattan Beach Municipal Code
- City of Manhattan Beach General Plan

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2. PROJECT DESCRIPTION

2.1 INTRODUCTION

The purpose of this chapter is to describe to the public, reviewing agencies, and decision makers the proposed field lighting, e-bike parking areas and various improvements in the District's Mira Costa High School Facilities Master Plan (FMP) (proposed project). Pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 15124), an environmental impact report (EIR) should contain a description of the proposed project that includes:

(a) The precise location and boundaries of the proposed project;

(b) A statement of the objectives sought by the proposed project, including the underlying purpose of the project;

(c) A general description of the proposed project's technical, economic, and environmental characteristics; and

(d) A statement briefly describing the intended uses of the EIR, including a list of the agencies that are expected to use the EIR in their decision making, a list of permits and other approvals required to implement the proposed project, and a list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies.

This Draft Environmental Impact Report (DEIR) has been completed in accordance with CEQA, which requires that State and local public agencies analyze proposed projects to determine potential impacts on the environment and disclose any such impacts. The Manhattan Beach Unified School District (MBUSD or District) is the lead agency for the environmental review of the proposed project.

An adequate project description should not supply extensive detail beyond that needed for evaluation and review of environmental impacts. Accordingly, this chapter describes the necessary details of the proposed project that are critical in assessing the direct, indirect, long-term, and temporary impacts associated with project implementation. This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the project site, as well as the project objectives, the principal project components, and required permits and approvals.

2.2 PROJECT BACKGROUND

During the 2024–2025 school year, District staff began to explore the addition of field lighting at Mira Costa High School to better serve after-school activities and the community as a whole. The field lighting is anticipated to be utilized throughout the year for school-related activities and community sports groups.

On March 11, 2025, District staff held a Community Feedback meeting at Mira Costa HS regarding the potential new field lights. The intent of the meeting was to solicit feedback and gather information from the community.

Measure RLS, a $200 million bond measure, was approved on November 5, 2024, which will be used support the District's quality educational programs by repairing and upgrading aging classrooms and labs; repairing and replacing leaky roofs and outdated and deteriorating electrical and plumbing systems; improving fire and earthquake safety; removing asbestos/lead, and keeping schools and drinking water safe and clean. These improvements will be based on the District's updated Facilities Master Plan (FMP), developed in 2024.

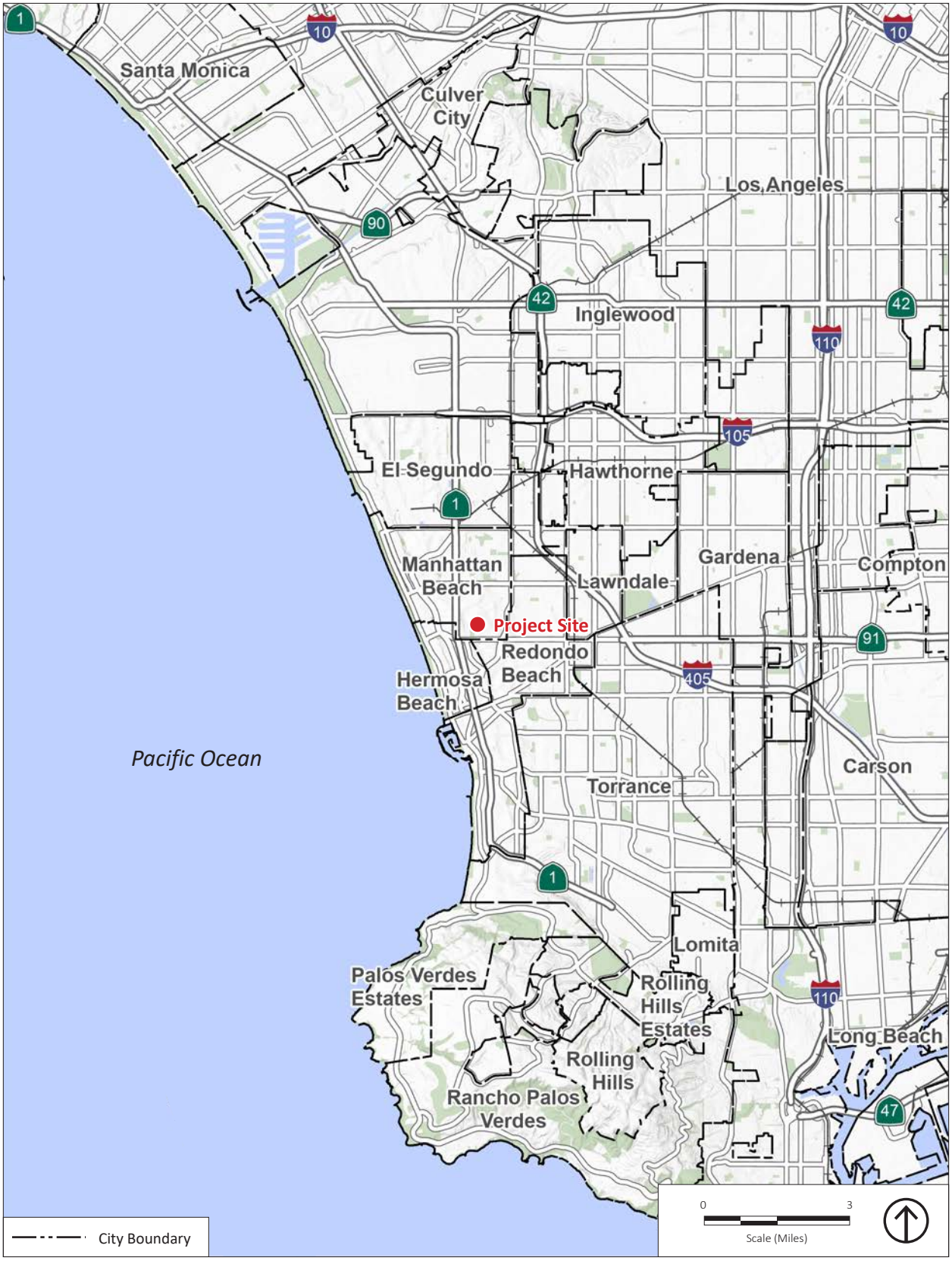
2.3 PROJECT LOCATION

2.3.1 Regional Setting

The project site is in the city of Manhattan Beach (see Figure 2-1, *Regional Location*). Manhattan Beach is a coastal city in the southwestern portion of Los Angeles County. It lies along the Pacific Ocean and is part of the South Bay region, bordered by El Segundo to the north, Hermosa Beach to the south, and Hawthorne and Redondo Beach to the south and east. Regional access to the project site would be provided by Interstate(I-) 405, I-105, State Route (SR-) 91 and SR-1.

2.3.2 Local Setting

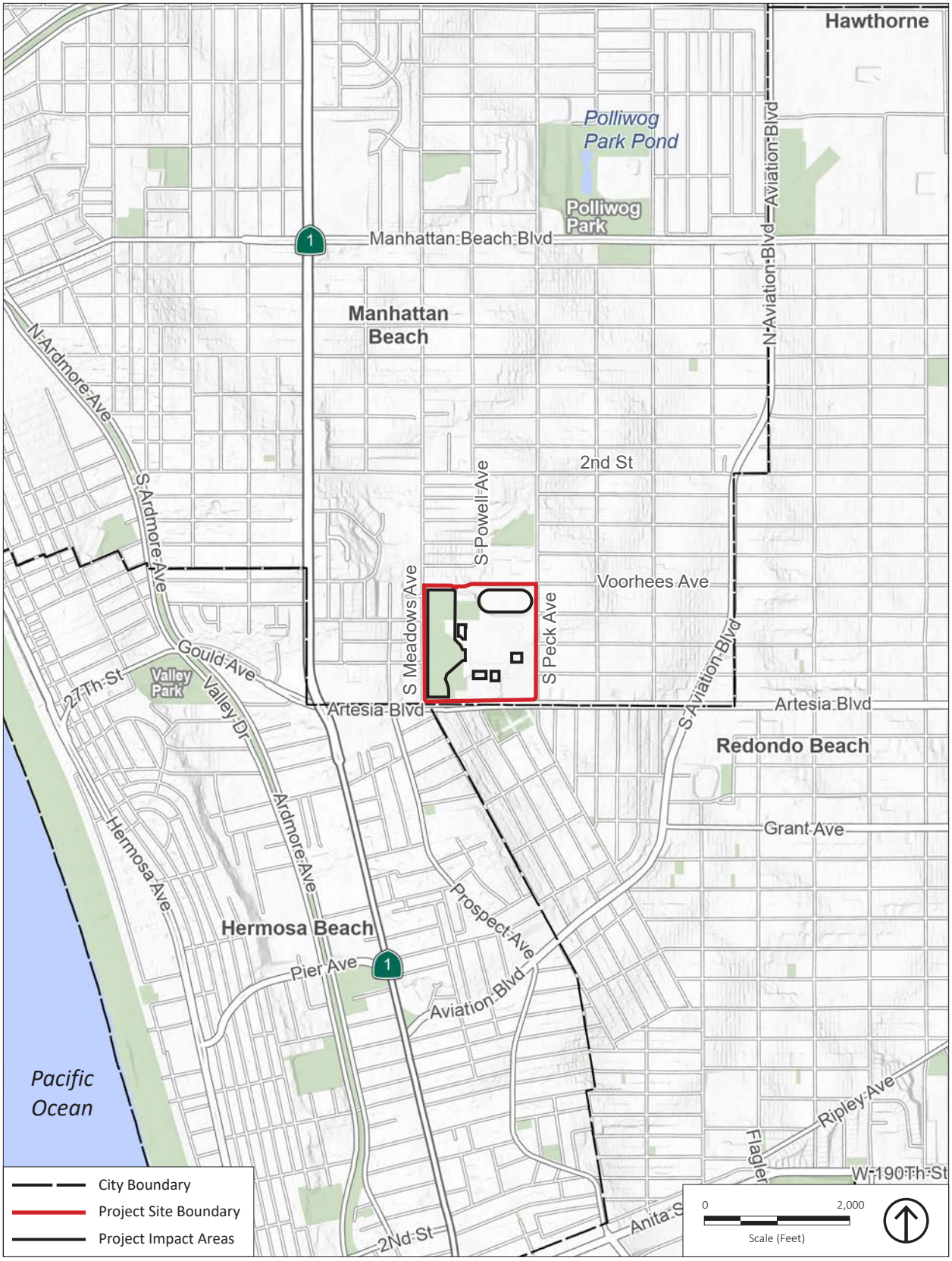
The Mira Costa High School campus (campus) is at 1401 Artesia Boulevard (Assessor’s Parcel Number 4168-002-906) in Manhattan Beach (project site). The project site is bounded by Artesia Boulevard to the south, S. Peck Avenue to the east, S. Meadows Avenue to the west, and residential homes and the Manhattan Beach Unified School District building to the north. The campus is mainly surrounded by residential neighborhoods to the north, south, east, and west (see Figure 2-2, *Local Vicinity*).



Source: Generated using ArcMap 2025.

Figure 2-1
Regional Location

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Source: Generated using ArcMap 2025.

Figure 2-2
Local Vicinity

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2.4 ENVIRONMENTAL SETTING

2.4.1 Existing Land Use

The project site is zoned and has a General Plan land use designation of Public Facilities (PF). The existing campus serves 9th through 12th graders and had a student enrollment of 2,568 for the 2023-2024 academic year (CDE 2025). The campus consists of general academic buildings, a multipurpose and food service building, athletic complex and gymnasium, Waller Stadium and West Field, baseball/softball fields, auditorium and small theater, tennis courts, a swimming pool, an administration building, and a central quad with an amphitheater. See Figure 2-3, *Aerial Photograph*; Figure 2-4, *Campus Site Photos*; and Figure 2-5, *Field Site Photos*.

2.4.2 Surrounding Land Use

Residential neighborhoods surround the project to the north, south, east, and west. The MBUSD office building is directly north of the project site. Parcels to the north are zoned for Planned Development (PD) and Residential Single-Family (RS). Parcels to the east and west are zoned RS. Parcels to the south are in Redondo Beach and are zoned Single Family Residential and Parks and Open Space.

2.4.3 Existing Conditions

EXISTING ATHLETIC FACILITIES

The project site consists of an existing football stadium, soccer fields and softball/baseball fields. The existing Waller Stadium is used primarily for football and track and field games and practices. The stadium consists of synthetic turf field. The West Field is a multi-purpose turf field with fencing along the perimeter and is designed for soccer, lacrosse, and some track and field events. The project site also consists of dedicated baseball/softball fields. Additional athletic amenities on campus include tennis courts, a swimming pool, and an athletic complex.

EXISTING ATHLETIC/EVENTS SCHEDULE AND LIGHTING

Mira Costa HS hosts various sports events and other school events. The existing sports events and schedule are shown in Table 2-1, *Mira Costa High School Existing Athletics/Events Schedule*, No changes to events and schedule are proposed at Waller Stadium. Waller Stadium currently has eight existing light poles and fixtures surrounding the perimeter of the stadium. The West Field and softball/baseball fields do not have existing light poles or fixtures.

Table 2-1 Mira Costa High School Existing Athletics/Event Schedule

Activity/Use	Number of Events	Months of the Year	Days of the Week	Start Time	End Time	Attendance
Waller Stadium						
Summer Athletics/MBX	24	2	4	2 PM	6 PM	400
Adult Soccer	28	7	1	9 am	1 pm	50
Youth Football: BCS	90	10	7	Various	Various	75
Band/Guard	30	3	3	Various	Various	75
Youth Soccer: Sand and Surf	50	12	7	Various	Various	50
Football	20	3	2	6 pm	8 pm	1,000
Lacrosse	25	5	5	6 pm	8 pm	100
Lacrosse	16	4	1	6 pm	8 pm	100
Rugby	10	12	1	Various	Various	200
Soccer Games	20	4	2	6 pm	8 pm	150
Youth Soccer Practice	40	12	2	6 pm	8 pm	75
Youth Lacrosse Games and Practice	25	12	2	Various	Various	50
Elite 11	1	1	3	Various	Various	600
Summer Soccer	6	3	5	8 am	2 pm	100
Summer Football	4	3	5	8 am	2 pm	100
ULAX Lacrosse	20	10	4	8 pm	10 pm	50
Special Events:						
Northrop Challenge	10	3	2	8 am	11 am	75
Fundraiser Events	5	5	2	8 am	12 pm	200
Track Meets	3	2	1	8 am	4 pm	750
Graduation	1	1	1	4 pm	8 pm	3,000
Total Existing Events	***428***	-	-	-	-	-
End Cap						
Soccer Practices	80	10	2	9 am	11 am	20
Baseball Practice	6	3	2	Various	Various	40
Lacrosse Practice	40	9	4	6pm	8 pm	30
Soccer Practices	45	9	4	6 pm	8 pm	30
Total Existing Events	***171***	-	-	-	-	-
West Field						
Youth Football: BCS	60	10	2	9 am	6 pm	60
Lacrosse: LA Select	40	6	4	6 pm	8 pm	40
Soccer Practice: Sand	40	6	4	6 pm	8 pm	40

Table 2-1 Mira Costa High School Existing Athletics/Event Schedule

Activity/Use	Number of Events	Months of the Year	Days of the Week	Start Time	End Time	Attendance
Soccer Practice: Beach	40	6	4	6 pm	8 pm	40
Soccer Games: Sand	36	8	2	9 am	4 pm	60
Soccer Games: Beach	20	8	2	9 am	6 pm	60
Summer Athletics/MBX	24	2	4	2 pm	6 pm	400
Special Events	8	6	3	Various	Various	450
Adult Soccer	28	7	1	9 am	1 pm	50
Band/Guard	20	4	3	Various	Various	165
Summer Camp	2	2	4	9 am	2 pm	100
Total Existing Events	***318***	-	-	-	-	-

Source: MBUSD 2025.

2.5 STATEMENT OF PROJECT OBJECTIVES

Section 15124(b) of CEQA Guidelines requires a project description to include a statement of the objectives of a project that address the underlying purpose. The following specific objectives have been identified for the proposed project:

- Provide adequate athletic facilities at Mira Costa HS to accommodate school sport games, other school events, and community events at the campus.
- Provide updated lighting to allow night use athletic fields to accommodate school-related events and activities as well as community events.
- Upgrade buildings and facilities on campus consistent with the FMP to support current needs and to guide future growth, renovations, and improvements.

2.6 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

> ... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)…enactment and amendment of zoning ordinances, and the adoption and amendment of local

General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

2.6.1 Description of the Project

The project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also include the installation of two new e-bike parking areas on campus and include various improvements identified in the District's Mira Costa High School FMP. The project site includes the entire 37-acre campus. The proposed project would not increase student enrollment or capacity at the athletic fields or on the main campus and would not include improvements to the fields beyond the proposed new field lighting. The proposed project would not result in significant changes to programming beyond extending current practice times into evening hours, which would not extend beyond 10:00 pm. Below is a discussion of each component of the proposed project.

2.6.2 Lighting Improvements

The project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. See Figure 2-6, *Waller Stadium Lighting Plans*; Figure 2-7, *West Field Lighting Plans*; and Figure 2-8, *Softball/Baseball Field Lighting Plans*.

Waller Stadium encompasses 3.6 acres with a 15,000-square-foot (sf) seating section. Existing lights at Waller Stadium would be removed and replaced with 48 new lighting fixtures on four existing poles that range from 90 to 100 feet in height (see Figure 2-6, *Waller Stadium Lighting Plans)*.

West Field is approximately 3.1 acres and would include the installation of eight new lighting poles that would hold 36 new lighting fixtures. Heights for the new poles would range from 60 to 70 feet (see Figure 2-7, *West Field Lighting Plans)*.

At the baseball/softball fields, four new lighting poles would be installed on the southwest baseball/softball field that would hold 20 new lighting fixtures. Heights for the new poles would range from 60 to 70 feet. On the northwest baseball/softball field, eight new lighting poles would be installed that would hold 48 new light fixtures. Heights for the new poles would range from 70 to 80 feet (see Figures 2-8 and 2-9, *North* and *South Softball/Baseball Field Lighting* Plans, respectively). The softball/baseball fields encompass 4.6 acres.



Source: Nearmap 2025.

Figure 2-3
Aerial Photograph

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Photo 1 – From the southern end of campus, looking north at the Administration building on the project site.



Photo 2 – From the western end of the student quad, looking northeast at the student quad and classroom buildings.



Photo 3 – From the southern end of the student quad, looking south at the library and classroom building.



Photo 4 – From the northern end of the student quad, looking northeast at the classroom buildings.



Photo 5 – From east of the Mira Costa Student Store, looking east at a student quad, student newspaper and MB-X building.



Photo 6 – From the northern portion of the eastern staff parking lot, looking south at the Math and Science classroom building, and the loading dock to the cafeteria building, and the eastern staff parking lot.



Photo 7 – From northern portion of campus, looking east at the old and new history classroom buildings (V and U), and the facilities and operations/ ceramics/ media classroom building.



Photo 8 – From the northern end of the campus swimming pool, looking southeast at the campus swimming pool.



Photo 9 – From the western end of the southeastern student/staff parking lot, looking west at the auditorium.

Source: PlaceWorks 2025.

Figure 2-4
Campus Site Photographs

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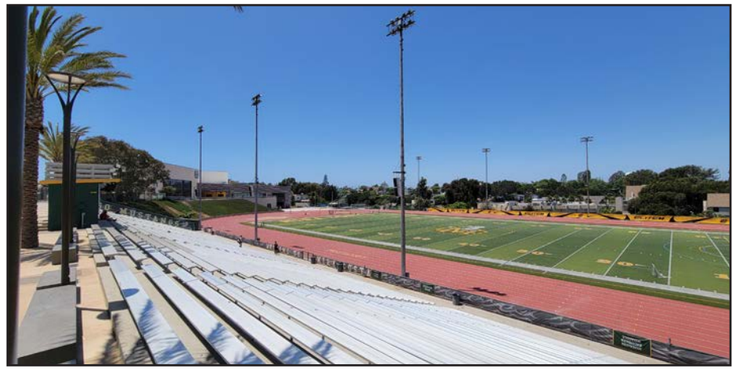


Photo 10 – From north of the facilities and operations building, looking northwest looking at the track and field on the project site, and the gymnasium.



Photo 11 – From the southern end, looking southwest at the track and field, gymnasium, and multi-purpose room on the far right.



Photo 12 – From the south end of the gymnasium, looking northwest at the soccer field, and storage containers at the West Field.



Photo 13 – From the southern end of the West Field, looking northeast at the baseball field, fencing, and soccer fields.



Photo 14 – Looking southeast from the baseball field, looking southeast at the baseball field on the project site.

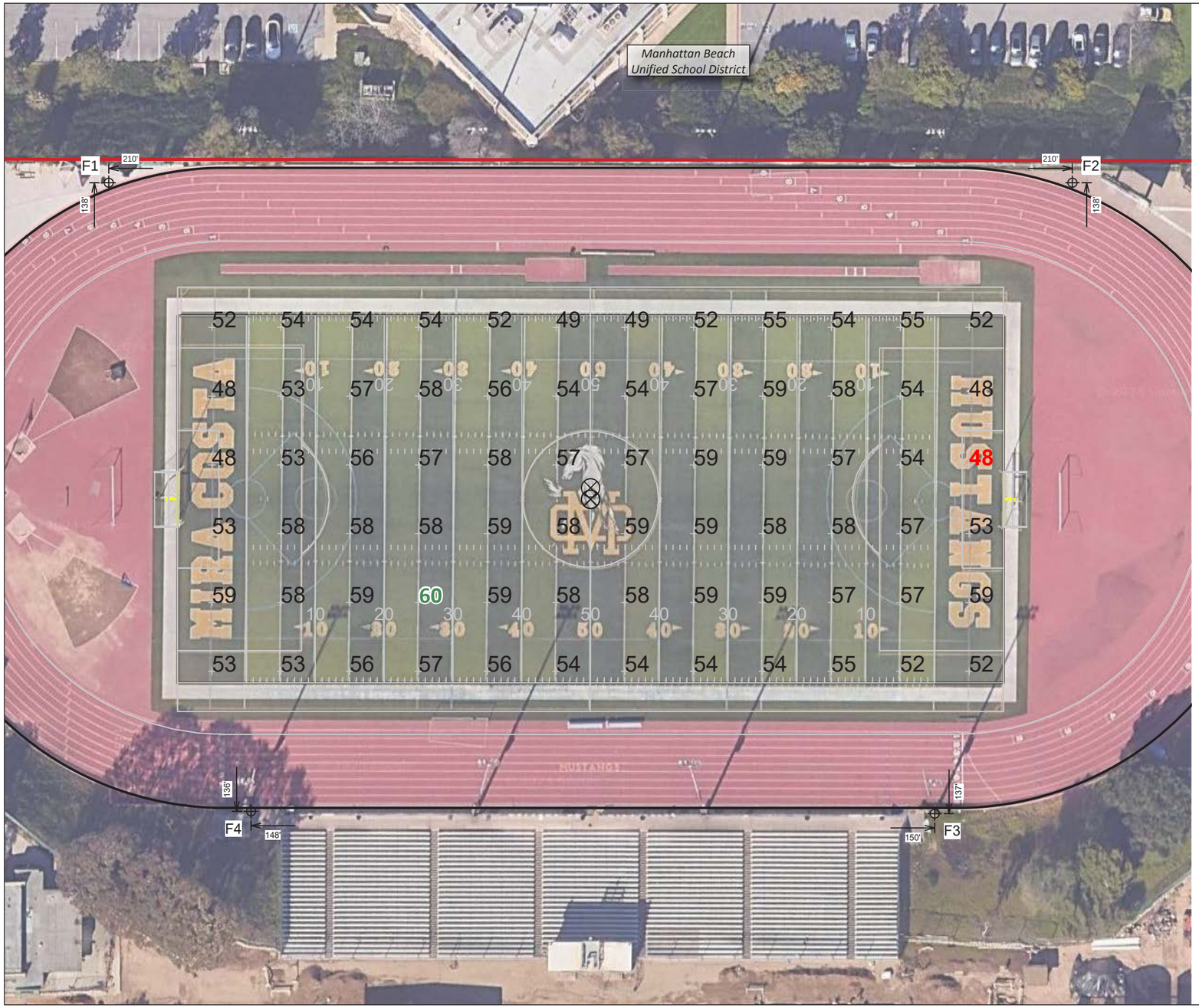


Photo 15 – On the southern end of the baseball field, looking southwest at the softball field.

Source: PlaceWorks 2025.

Figure 2-5
Field Site Photographs

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Mira Costa High School Football Stadium

Manhattan Beach,CA

Grid Summary

Name	**Football**
Size	360' x 160'
Spacing	30.0'
Height	3.0' above grade

Illumination Summary

	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Guaranteed Average	**50**
Scan Average	55.5
Maximum	60
Minimum	48
Avg/Min	1.16
Guaranteed Max/Min	**2**
Max/Min	1.25
UG (adjacent pts)	1.13
CU	0.51
No. of Points	72
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	**44**
Total Load	55.36 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Equipment List For Areas Shown

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-1500	9	9	0
				15.5'	TLC-BT-575	2	2	0
1	F3	90'	3'	93'	TLC-LED-1500	9	9	0
				93'	TLC-LED-550	2*	0	2
				18.5'	TLC-BT-575	2	2	0
1	F4	90'	-	90'	TLC-LED-1500	9	9	0
				90'	TLC-LED-550	2*	0	2
				15.5'	TLC-BT-575	2	2	0
4	Totals					48	44	4

*Above Grade level relative to the field.
*This structure utilizes a back-to-back mounting configuration.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Project Site Boundary

0 50
Scale (Feet)

Source: MUSCO 2024.

Figure 2-6
Waller Stadium Lighting Plans

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Mira Costa High School North Field

Manhattan Beach, CA

Grid Summary

Name	**Soccer**
Size	360' x 210'
Spacing	30.0' x 30.0'
Height	3.0' above grade

Illumination Summary

	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average	**21.5**
Maximum	26.7
Minimum	11.0
Avg/Min	1.96
Max/Min	**2.43**
UG (adjacent pts)	1.43
CU	0.63
No. of Points	84
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	**28**
Total Load	22.68 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Equipment List For Areas Shown

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	S1 S8	70'	-	70'	TLC-LED-900	2	2	0
2	S2 S7	70'	-	70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-900	2	2	0
				16'	TLC-BT-575	2	2	0
2	S3 S6	70'	-	70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-550	1	1	0
				70'	TLC-LED-900	1	1	0
				16'	TLC-BT-575	2	2	0
2	S4-S5	60'	-	60'	TLC-LED-900	2	2	0
8	Totals					28	28	0

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Project Site Boundary

0 60
Scale (Feet)

Source: MUSCO 2023.

Figure 2-7
West Field Lighting Plans

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Mira Costa High School Baseball/ Softball
Manhattan Beach,CA

GRID SUMMARY	
Name:	**Baseball**
Size:	Irregular 260' / 345' / 306'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	**50**	**30**
Scan Average:	51.45	32.36
Maximum:	60	47
Minimum:	38	25
Avg / Min:	1.35	1.30
Guaranteed Max / Min:	**2**	**2.5**
Max / Min:	1.57	1.88
UG (adjacent pts):	1.40	1.53
CU:	0.72	
No. of Points:	25	96
LUMINAIRE INFORMATION		
Applied Circuits:	A	
No. of Luminaires:	**48**	
Total Load:	50.57 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	70'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	3	3	0
1	B1	80'	-	80'	TLC-LED-900	1/1*	2	0
				15.5'	TLC-BT-575	1	1	0
				80'	TLC-LED-1500	5	5	0
1	B2	80'	-	80'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	1	1	0
				80'	TLC-LED-1500	5	5	0
2	C1-C2	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	3	3	0
2	D1-D2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	4	4	0
8	TOTALS					48	48	0

*This structure utilized a back-to-back mounting configuration.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Project Site Boundary

0 60
Scale (Feet)

Source: MUSCO 2022.

Figure 2-8
Softball/Baseball Lighting Plans North

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Mira Costa High School Baseball/ Softball
Manhattan Beach,CA

GRID SUMMARY	
Name:	**Softball**
Size:	Irregular 202' / 217' / 193'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	**50**	**30**
Scan Average:	51.20	33.32
Maximum:	58	46
Minimum:	38	20
Avg / Min:	1.35	1.68
Guaranteed Max / Min:	**2**	**2.5**
Max / Min:	1.54	2.33
UG (adjacent pts):	1.29	1.56
CU:	0.64	
No. of Points:	25	76
LUMINAIRE INFORMATION		
Applied Circuits:	B	
No. of Luminaires:	**20**	
Total Load:	22.5 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A3-A4	60'	-	60'	TLC-LED-1200	1	1	0
				15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-900	2	2	0
2	B3-B4	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	5	5	0
4	TOTALS					20	20	0

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Project Site Boundary

0 40
Scale (Feet)

Source: MUSCO 2022.

Figure 2-9
Softball/Baseball Lighting Plans South

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Design elements for light control and reduced spill lighting include mounting height and steep aiming angles, various lighting modes, visors and shielding, reflective housing around the luminaires, number of luminaires, split circuits, and appropriate light levels. The proposed light poles incorporate all these elements, and each element can be arranged individually to control and minimize any potential spill lighting.

E-BIKE PARKING

The proposed project would also include the installation of two new electric bike (e-bike) parking areas, which would be to the east of the existing baseball/softball field and west of the existing fire lane and would accommodate 384 e-bikes. In addition, a smaller space in the entry courtyard near the administration building and to the west of the auditorium would accommodate an additional 38 e-bikes. The addition of e-bike parking areas is not anticipated to increase the number of e-bikes on campus but would provide a safe, central area for e-bike parking, which currently does not exist on campus.

2.6.3 Facilities Master Plan

A facilities master plan is a long-term strategic plan that outlines the vision for the physical development of a school campus. It serves as a blueprint to guide future growth, renovations, and improvements over a period of time. The proposed project would make various improvements identified in the District's Mira Costa High School FMP, which includes demolition, new construction, modernization, and renovation of buildings and facilities on campus as well as other site improvements (see Figure 2-10, *Facilities Master Plan*).

As listed in Table 2-2, *Proposed Changes to Campus Buildings*, the buildings from the FMP that would be evaluated within the scope of this EIR would include the demolition of the existing one-story library and the construction of a new one-story library; the renovation of 2 one-story buildings, the renovation of the existing swimming pool, and the renovation of the existing one-story multipurpose room and food service building. The food service building would also allow for the District's Central Kitchen, which prepares meals for the District's elementary schools, to relocate from Manhattan Beach Middle School to Mira Costa High School. No changes to operation, capacity, or service to the Central Kitchen would occur due to relocation. The proposed FMP would not increase student enrollment or capacity.

Table 2-2 Proposed Changes to Campus Buildings

Buildings	Type of Construction	Square Feet
Existing Buildings		
One-Story Library	Demolition	10,500
2 One-Story Classroom Buildings	Renovation	11,600 (5,800 each)
One-Story Multi-purpose and Food Service Building	Renovation	29,500
Swimming Pool	Renovation	8,800
Proposed Buildings		
One-Story Library	New Construction	20,000
2 One-Story Classroom Buildings	Renovation	11,600 (5,800 each)
One-Story Multi-purpose and Food Service Building (Central Kitchen)	Renovation	32,000
Swimming Pool	Renovation	8,800

Source: MBUSD 2025.

2.6.4 Field Use and Scheduling

No changes to the event schedule or activity use would occur at Waller Stadium, only upgrades to the existing field lighting fixtures. Similarly, no changes to the number or types of events at the softball/baseball fields are proposed. Table 2-3, *Proposed Event Schedule with Proposed Lighting*, shows the additional activities and number of events at the West Field in addition to the number of existing events.

Currently the southern portion of the West Field—called the "End Cap"—accommodates 171 events per year, 7 days a week, 12 months out of the year, with start and end times ranging from 9:00 am to 8:00 pm and attendance ranging from 20 to 30 people per event. Under the proposed project, the End Cap would accommodate an additional 320 events per year, 7 days a week, 12 months of the year, with start and end times from 9:00 am to 9:00 pm, and attendance would range from 20 to 40 people per event. In summary, the number of events at the End Cap would increase by 320 events, and end times would extend from 8:00 pm to 9:00 pm under the proposed project. Additionally, events occurring on the West Field and End Cap between 6:00 pm and 9:00 pm would not occur simultaneously. The three West Field activities (lacrosse, football, and soccer) all use the same field and their events would be scheduled on different days.

Table 2-3 Proposed Event Schedule with Proposed Lighting

Activity/Use	Number of Events	Months of the Year	Days of the Week	Start Time	End Time	Attendance
End Cap						
Soccer Practices	80	6	5	7 pm	9 pm	30
Soccer Games	40	6	5	7 pm	9 pm	40
Lacrosse Practice	40	6	5	7 pm	9 pm	40
Soccer Practices	80	6	5	6 pm	9 pm	30
Soccer Games	40	6	2	6 pm	9 pm	40
Lacrosse Practice	40	9	2	6 pm	9 pm	40
Total Proposed Events	**320**	-	-	-	-	-
Existing Events	***171***	-	-	-	-	-
Total Events	**491**	-	-	-	-	-
West Field						
Youth Football: BCS	40	6	5	7 pm	9 pm	40
Lacrosse: LA Select	40	6	5	7 pm	9 pm	40
Soccer: Sand and Surf	40	6	5	7 pm	9 pm	40
Youth Football: BCS	40	6	5	6 pm	9 pm	40
Lacrosse: LA Select	40	6	5	6 pm	9 pm	40
Soccer: Sand and Surf	40	6	5	6 pm	9 pm	40
Youth Football: BCS	6	6	2	7 pm	9 pm	40
Lacrosse: LA Select	6	6	2	7 pm	9 pm	40
Soccer: Sand and Surf	6	6	2	7 pm	9 pm	40
Youth Football: BCS	6	6	2	6 pm	9 pm	40
Lacrosse: LA Select	6	6	2	6 pm	9 pm	40
Soccer: Sand and Surf	6	6	2	6 pm	9 pm	40
Total Proposed Events	**276**	-	-	-	-	-
Existing Events	***318***	-	-	-	-	-
Total Events	**594**	-	-	-	-	-

Source: MBUSD 2025.

Currently, West Field (not including the End Cap) accommodates 318 events per year, one to seven days a week, 12 months of the year, with start and end times from 9:00 am to 9:00 pm and attendance from 40 to 400 people. Under the proposed project, West Field would accommodate 276 additional events per year, seven days a week, 12 months of the year, with start and end times from 9:00 am to 9:00 pm and attendance from 40 to 400 people. In summary, the numbers of events at West Field would increase by 276 events, and end times would extend from 8:00 pm to 9:00 pm under the proposed project. Attendance at the new events proposed in the West Field would average 40 people per event.

2.6.5 Construction

The proposed lighting improvements to Waller Stadium, West Field, and the softball/baseball field would be installed in one phase within a three-month period. Selected projects proposed under the FMP would be constructed over the next five years (see Table 2-2, *Proposed Changes to Campus Buildings*).

2.7 INTENDED USES OF THE EIR

2.7.1 Responsible and Trustee Agencies

LEAD AGENCY

The Manhattan Beach Unified School District is the Lead Agency under CEQA and has the approval authority over the proposed project. Discretionary actions for the proposed project would include: (1) certification of the environmental document and (2) approval of the proposed project.

OTHER AGENCY ACTION REQUESTED

The District would require approval and/or coordination from the following agencies to implement the proposed project.

STATE AGENCIES

The District would seek approval of the proposed project from the Division of the State Architect (DSA). Since the project would not receive state funding, California Department of Education (CDE) and DTSC approvals are not required.

LOCAL AGENCIES

No local agency approval would be needed for the proposed project.

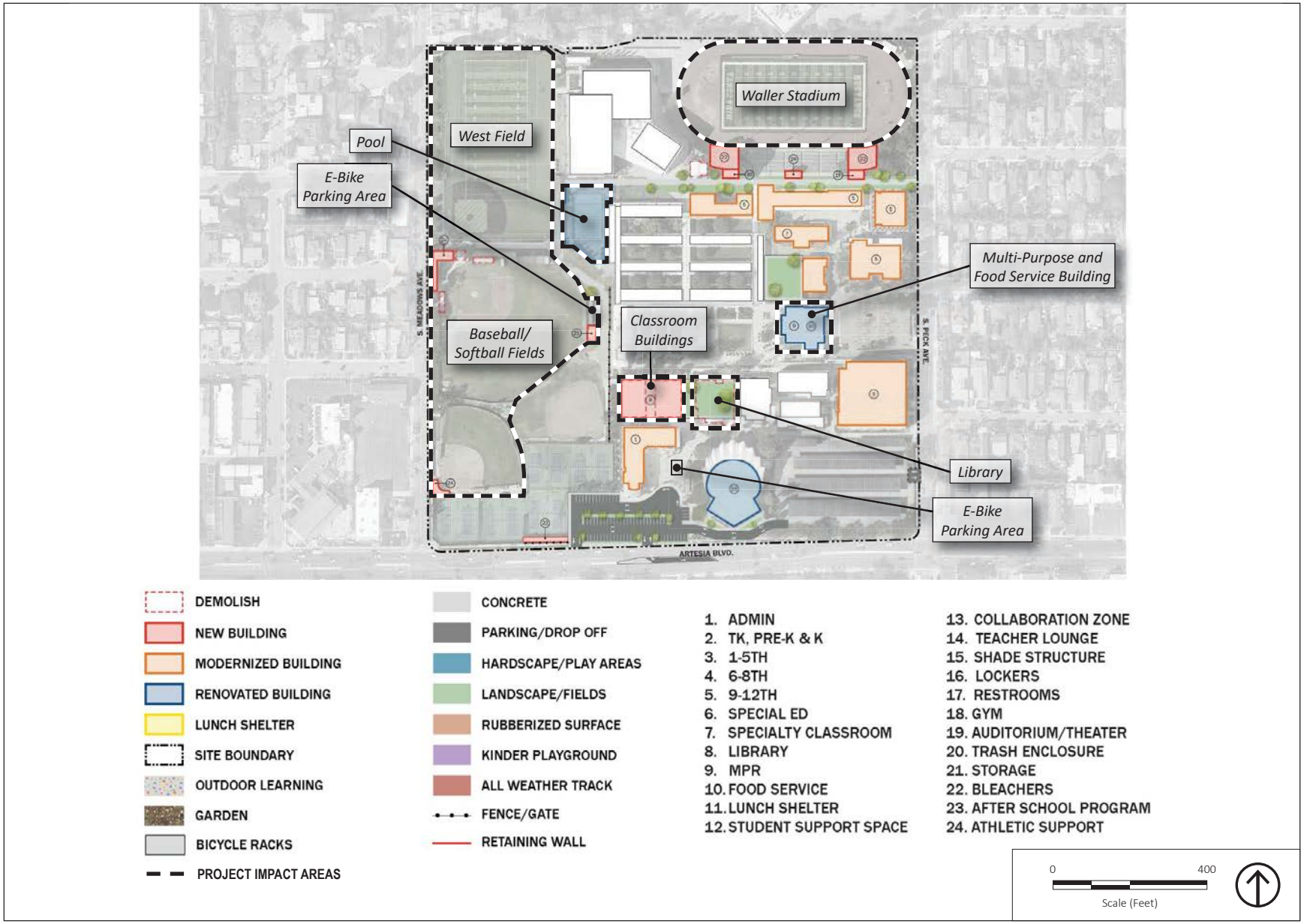


Figure 2-10
Facilities Master Plan

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2.7.2 Required Permits and Approvals

This is a project Draft EIR that examines the environmental impacts of the proposed project. This Draft EIR also addresses various actions by the District to approve and implement the proposed project. It is the intent of this Draft EIR to evaluate the environmental impacts of the proposed project, thereby enabling the District, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated discretionary actions required for this project are listed in Table 2-4, *Actions Required*.

Table 2-4 Actions Required

Lead Agency	Action
Manhattan Beach Unified School District	• Adopt the Final Environmental Impact Report • Adopt the Mitigation Monitoring and Reporting Program • Approval of the project
Responsible Agencies	**Action**
Department of General Services, Division of State Architect (DSA)	• Approval construction drawings

2.7.3 Related Review and Consultation Requirements

In accordance with Public Resources Code Section 21080.1(d), a lead agency is required to provide formal notification of intended development projects to Native American tribes that have requested to be on the lead agency's list for receiving such notification. The formal notification is required to include a brief description of the proposed project and its location, lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The proposed project is subject to Public Resources Code Section 21080.1(d) and would provide formal notification of the proposed project to Native American tribes that have requested to be on the lead agency's list for receiving notification. The CEQA process for the proposed project included tribal consultation pursuant to Assembly Bill (AB) 52 as summarized in Section 3.8, *Tribal Cultural Resources*, of this DEIR.

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3. ENVIRONMENTAL ANALYSIS

This chapter examines the environmental setting of the proposed project, analyzes the effects of the proposed project and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental topic.

The proposed project is analyzed for potential significant impacts in accordance with Appendix F, "Energy Conservation," and Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines. Environmental topics and their corresponding sections and abbreviations are:

3.1 Aesthetics (AES)
3.2 Air Quality (AIR)
3.3 Biological Resources (BIO)
3.4 Cultural Resources (CUL)
3.5 Geology and Soils (GEO)
3.6 Noise (NOI)
3.7 Transportation (TRA)
3.8 Tribal Cultural Resources (TCR)

As stated in the NOP, the proposed project is not expected to impact agriculture and forestry, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. These resources are evaluated in Chapter 5, *Other CEQA Considerations*.

ORGANIZATION OF ENVIRONMENTAL ANALYSIS

To assist the reader with comparing information between environmental issues, each section is organized under the same major headings:

- **Regulatory Framework** offers an overview of applicable laws, regulations, plans, and policies relevant to each environmental topic.
- **Existing Conditions** offers a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared.
- **Standards for Analysis** refer to the quantitative or qualitative standards, performance levels, thresholds, or criteria used to evaluate whether an impact is significant. These standards are based primarily on the CEQA Guidelines unless otherwise noted. This section also provides

an overview of key methods, assumptions, and considerations that inform the impact analysis.

- **Project Impact Analysis** provides a detailed discussion of the potential direct and indirect impacts of the proposed project. Mitigation measures are included as necessary.
- **Cumulative Impact Analysis** provides an overview of the geographic setting and cumulative projects considered in the cumulative impact assessment. Significant cumulative impacts are identified and mitigation measures are included as necessary.
- **References** are provided for information sources used in the development of the discussion.

LEVELS OF SIGNIFICANCE

The level of significance is identified for each impact in this Draft EIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would result in no adverse effect on the environment.
- **Less than significant.** The project would not exceed the established significance criteria.
- **Significant.** The project would exceed the established significance criteria. For each significant impact, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measures would reduce the impact to a less-than-significant level successfully, this is stated in the EIR.
- **Significant and unavoidable.** The project would exceed the established significance criteria, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.

SCOPING COMMENTS RECEIVED

The 30-day NOP review period for the proposed project EIR opened on September 22, 2025, and ending October, 21, 2025. The comments received cover a various CEQA Guidelines Appendix G topics, including aesthetics, biological resources, cultural resources, transportation and tribal cultural resources. Comment letters received during the public review period are summarized in Table 3-1, *NOP Scoping Comments Summary*, below. A total of 19 letters were received consisting of five agencies, two tribes and 12 individuals. .

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
Native American Heritage Commission (NAHC)	9/22/25	▪ Recommends tribal consultation under Assembly 52 (AB 52) and Senate Bill 18 (SB 18) pursuant to NAHC's recommendation for conducting cultural resources assessments. ▪ Provides guidance and recommendations on how to conduct tribal consultation pursuant to AB52 and SB18.	▪ Section 3.4, *Cultural Resources* ▪ Section 3.8, *Tribal Cultural Resources*
Gabrielino Tongva Indians of California	9/22/25	▪ Request cultural reports conducted for the proposed project.	▪ Section 3.4, *Cultural Resources* ▪ Section 3.8, *Tribal Cultural Resources*
Gabrieleño Band of Mission Indians-Kizh Nation	9/24/25	▪ Request formal consultation for the proposed project.	▪ Section 3.4, *Cultural Resources* ▪ Section 3.8, *Tribal Cultural Resources*
Department of Toxic Substance Control (DTSC)	9/26/25	▪ Comment requires that the proposed project comply with the requirements of Education Code, if the district plans to use California Department of Education State funding. ▪ The comment states that all imported soil/fill should be tested to assess any contaminants.	▪ Section 3.5, *Geology and Soils* ▪ Section 5, *Other CEQA Considerations* ▪ Appendix A, NOP and Scoping Comments, and Initial Study
Scott Schumacher	9/25/25	▪ Requests clarification regarding the proposed lighting fixtures. ▪ Raises concerns regarding light spill and glare onto nearby residential homes. ▪ Requests clarification on light operation and hours. ▪ Asks for comparison of existing and proposed light measurements.	▪ Section 3.1, *Aesthetics*

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
Jaqueline and Michael Sanders	10/04/25	▪ Raises concerns regarding light glare and spill onto adjacent residential properties. ▪ Requests that existing lighting be evaluated compared to proposed lighting measurements. ▪ Requests a parking study be conducted for the displacement of parking into residential streets and pedestrian safety. ▪ Requests cumulative impacts be analyzed. ▪ Requests alternatives that consider a no-project alternative, alternate sites, reduced height, and number of poles. ▪ Requests that mitigation measures be enforceable.	▪ Section 3.1, *Aesthetics* ▪ Section 3.7, *Transportation* ▪ Section 4, *Alternatives*
Jacqueline and Michael Sanders	10/08/25	▪ Raises concerns regarding nighttime lighting and the effects of exposure to artificial lighting. ▪ Raises concerns regarding traffic and noise impacts on the quality of life. ▪ Raises concerns regarding nighttime lighting impacts on wildlife. ▪ Raises concerns on the impacts of lighting pole heights disturbing neighborhood character.	▪ Section 3.1, *Aesthetics* ▪ Section 3.3, *Biological Resources* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
Sally Andrade	10/12/25	▪ Raises concerns regarding hours of operation and the impact on traffic, parking, and noise. ▪ Raises concerns regarding light spill and glare and the mitigation measures that would be implemented. ▪ Raises concerns on public facilities such as restrooms and trash.	▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
California Department of Transportation (Caltrans)	10/15/25	▪ Recommends implementation of multi-modal infrastructure along and within school boundaries for safety. ▪ Recommends implementation of Transportation Deman Management (TDM) strategies. ▪ Recommends limiting large truck travel and construction traffic to off-peak commute hours.	▪ Section 3.7, *Transportation*
Nicole LoSasso	10/17/25	▪ Raises concerns about light pollution, traffic, noise, and the overall impact on the neighborhood's quality of life. ▪ Raises concerns regarding outreach of public noticing for the proposed project.	▪ Section 1, *Introduction* ▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
California Department of Fish and Wildlife	10/17/25	▪ Recommends the project proponent retain a qualified biologist to conduct survey for California Endangered Species Bumble Bee. CDFW also recommends a discussion of habitat suitability in the DEIR. ▪ Recommends that the DEIR discuss potential impacts and include mitigation measures for project impacts on Species of Special Concern. ▪ Recommends a survey for rare plants and that the DEIR evaluate the project's potential direct, indirect, and cumulative impacts on monarchs and overwintering habitat during the construction and operational phase of the project. ▪ Recommends the DEIR evaluate lighting impacts, especially nighttime lighting, on wildlife	▪ Section 3.3, *Biological Resources*

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
		species and biological resources within the Project area during the construction and operational phases. ▪ Recommends the DEIR evaluate the Project's potential cumulative impacts on biological resources.	
Beth Orozco	10/20/25	▪ Raises concerns regarding light spill and glare. ▪ Raises concerns regarding traffic, parking, and safety. ▪ Requests an established and enforceable hour of operation for lighting. ▪ Raises concerns regarding trash and maintenance. ▪ Raises concerns regarding event scheduling for the athletic fields.	▪ Section 2, *Project Description* ▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
Howard Sofen	10/20/25	▪ Raises concerns regarding light pollution, noise, and traffic and parking.	▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
Jacqueline and Luis Sherman	10/20/25	▪ Raises concerns for neighborhood character and light spill and glare. ▪ Raises concerns regarding traffic, noise and parking congestion. ▪ Raises concerns regarding nighttime lighting impacts on wildlife.	▪ Section 3.1, *Aesthetics* ▪ Section 3.3, *Biological Resources* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
Jamie Spyra	10/20/25	▪ Raises concerns regarding light glare and hours of operations.	▪ Section 3.1, *Aesthetics*

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
Sonia Nazario	10/20/25	▪ Raises concerns regarding light pollution, spill, and glare. ▪ Raises concerns regarding excessive noise associated with field events. ▪ Raises concerns regarding traffic and parking safety.	▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
Cindy and Steve Bandel	10/21/25	▪ Raises concerns regarding light pollution, noise, traffic, and parking.	▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation*
City of Manhattan Beach, Community Development Department	10/21/25	▪ Requests photometric studies be conducted, extending 300 feet beyond the school's property lines to determine what, if any, light spill would occur onto nearby residential properties, and that appropriate measures be implemented to mitigate the impacts of said light spill. ▪ Requests that a Noise Study be conducted to determine anticipated noise levels at adjacent sensitive land uses during proposed events, and that appropriate measures be implemented to mitigate the impacts of said noise. ▪ Requests consideration of demand for public services, police and fire, associated with events. ▪ The City's traffic engineer requests the opportunity to review and collaborate on the scope of traffic and parking studies prior to their preparation. ▪ Requests to be on the list to receive all future notices related to environmental reports, public	▪ Section 3.1, *Aesthetics* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation* ▪ Section 5, *Other CEQA Considerations* ▪ Appendix A, NOP and Scoping Comments, and Initial Study

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
		meetings, and public hearings for the project.	
Jacqueline and Michael Sanders	10/21/25	▪ Requests the District provide lighting simulations and glare studies from multiple neighborhood vantage points, including rear yards and second-story windows of adjacent homes. ▪ Requests that the EIR include a clear analysis of projected noise levels after dark and compare them with current baseline conditions ▪ Requests that the EIR conduct additional weekend traffic studies to accurately reflect the real impact of field lighting and extended facility use. ▪ Requests that the District specify where additional vehicles will park, how overflow parking will be managed, and whether resident-only parking zones will be considered as mitigation. ▪ States that the EIR must include a sanitation and maintenance plan before approval. ▪ Requests that the EIR assess whether other schools in the district can accommodate evening use with less impact. ▪ Requests that the EIR clearly distinguish between student-related use and external rental or revenue-generating activities, and evaluate their cumulative impacts. ▪ Requests the EIR to disclose the financial motivations behind this project.	▪ Section 3.1, *Aesthetics* ▪ Section 3.3, *Biological Resources* ▪ Section 3.6, *Noise* ▪ Section 3.7, *Transportation* ▪ Section 4, *Alternatives*

Table 3-1 NOP Scoping Comments Summary

Commenting	Date	Comment Summary	Issue Addressed In:
		▪ Requests the District to release that prior report and explain what conditions have changed to justify reversing that earlier determination. ▪ Requests the EIR to include studies addressing the biological and health effects of extended nighttime lighting exposure.	

EVALUATION METHODOLOGY

Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved to the discretion of the lead agency, based on substantial evidence in the record as a whole, including views held by members of the public. An ironclad definition of significant effect is not always possible because the significance of an activity may vary based on the setting. Pursuant to CEQA Guidelines Section 15064(b), the analysis in this Draft EIR is based on scientific and factual data that has been reviewed by the lead agency and represents the lead agency's independent judgment and conclusions.

Baseline

This EIR evaluates the impacts of the proposed project relative to existing conditions as required by CEQA Guidelines Section 15126.2. Unless otherwise noted, the baseline represents the existing conditions on the ground (i.e., physical conditions) at the time that the Notice of Preparation was issued September 22, 2025.

Potential Effects of the Project on the Environment

The California Supreme Court concluded in *California Building Industry Association vs. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." The *CBIA vs. BAAQMD* ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted:

1. If the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried).

2. If the project qualifies for certain specified exemptions—certain housing projects and transportation priority projects pursuant to Public Resources Code (PRC) Sections 21159.21 (f),(h); 21159.22 (a),(b)(3); 21159.23 (a)(2)(A); 21159.24 (a)(1),(3); or 21155.1 (a)(4),(6).

3. If the project is exposed to potential noise and safety impacts on projects due to proximity to an airport (pursuant to PRC Section 21096).

4. School projects require specific assessment of certain environmental hazards (pursuant to PRC Section 21151.8).

Therefore, the evaluation of the significance of project impacts under CEQA focuses on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Existing environmental hazards in the project include, but are not limited to, geological hazards. Therefore, while the effects of these hazards on the proposed project are generally not subject to CEQA review following the *CBIA vs. BAAQMD* case, a discussion of the project's potential to exacerbate these hazardous conditions is provided in Section 3.4, *Geology and Soils*, of this Draft EIR and Section IX, Hazards and Hazardous Materials, of the Initial Study (see Appendix A).

CUMULATIVE IMPACTS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. CEQA Guidelines Section 15130 requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Cumulative effects could occur when future development under the project is combined with development in the surrounding area or, in some instances, in the entire region.

Pursuant to CEQA Guidelines Section 15130(a)(3), where a cumulative impact is significant when compared to baseline conditions, the analysis must address whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant, and no mitigation for the project's contribution is required.

CEQA Guidelines Section 15130(b)(1) states that the information used in the analysis of cumulative impacts should come from one or two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or

B. A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

The cumulative impact analyses in this EIR use method A

The cumulative discussions in Sections 3.1 through 3.7 explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, air basin), which depends on the environmental topic being analyzed. For example, in assessing macroscale air quality impacts, all development in the air basin contributes to regional emissions of criteria pollutants, and basinwide projections of emissions are the best tool for determining the cumulative impact. In assessing aesthetic impacts, however, only development in the local area of change would contribute to a cumulative visual effect because the area of change is only visible near that area.

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3.1 AESTHETICS

This section of the Draft Environmental Impact Report (Draft EIR) discusses the potential impacts to the visual character of the City of Manhattan Beach from implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) project (proposed project), including scenic vistas, scenic resources, consistency with policies and programs related to visual resources, and light and glare.

During the scoping period for the DEIR, written and oral comments were received from agencies, organizations, and the public (Appendix A). Table 3-1, *NOP Scoping Comments Summary*, in Chapter 3, *Environmental Analysis*, includes a summary of all comments received during the scoping comment period.

3.1.1 Regulatory Framework

STATE

California State Scenic Highways Program

California's Scenic Highway Program was created by the State legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highways Program are found in the Streets and Highways Code, Sections 260 through 263.

When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. Scenic corridors consist of land that is visible from the highway right of way and is comprised primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries. The city or county must also adopt ordinances, zoning and/or planning policies to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances and/or policies make up the Corridor Protection Program. The status of a proposed State scenic highway changes from “eligible” to “officially designated” when the local governing body applies to the California Department of Transportation (Caltrans) for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

California Building Code

The State of California provides a minimum standard for building design through the California Code of Regulations (CCR), Title 24, Part 2, commonly referred to as the California Building Code (CBC). The CBC is updated on a three-year cycle. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules

prescribed by the State Building Standards Commission. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

CALGreen

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen. As part of the CBC, CALGreen is in the California Code of Regulations Title 24, Part 11. CALGreen establishes building standards aimed at enhancing the design and construction of buildings through the use of building concepts that reduce negative impacts and increase positive environmental impacts by encouraging sustainable construction practices. Specifically, Section 5.106.8, Light Pollution Reduction, establishes backlight, uplight, and glare ratings to minimize the effects of light pollution for nonresidential development. The local building permit process enforces the mandatory provisions of CALGreen.

LOCAL

Manhattan Beach General Plan

The current General Plan's Land Use (LU) Element includes design and development goals and policies that aim to convey the visual character of development of various land uses and streetscapes within the City. The LU Element includes the following land use goals and policies that are relevant to the aesthetics of the project:

Goal LU-1: Maintain the low-profile development and small-town atmosphere of Manhattan Beach.

- **Policy LU-1.1.** Limit the height of new development to three stories where the height limit is 30 feet, or to two stories where the height limit is 26 feet, to protect the privacy of adjacent properties, reduce shading, protect vistas of the ocean, and preserve the low-profile image of the community.

- **Policy LU-1.2.** Require the design of all new construction to utilize notches, balconies, rooflines, open space, setbacks, landscaping, or other architectural details to reduce the bulk of buildings and to add visual interest to the streetscape.

Goal LU-3: Achieve a strong, positive community aesthetic.

- **Policy LU-3.1.** Continue to encourage quality design in all new construction.

- **Policy LU-3.2:** Promote the use of adopted design guidelines for new construction in Downtown, along Sepulveda Boulevard, and other areas to which guidelines apply.

- **Policy LU-3.5:** Ensure that the sign ordinance provides for commercial signage that is attractive, non-intrusive, safe, and consistent with overall City aesthetic goals.

Goal LU-5: Protect residential neighborhoods from the intrusion of inappropriate and incompatible uses.

- **Policy LU-5.1.** Require the separation or buffering of residential areas from businesses which produce noise, odors, high traffic volumes, light or glare, and parking through the use of landscaping, setbacks, or other techniques.
- **Policy LU-5.2.** Work with all commercial property owners bordering residential areas to mitigate impacts and use appropriate landscaping and buffering of residential neighborhoods.

Manhattan Beach Municipal Code

The Manhattan Beach Municipal Code (MBMC) does not specifically regulate the use of athletic field lighting. The following section is discussed for informational purposes only.

MBMC Chapter 10 sets development standards for parking, building heights, setbacks, density, lot coverage, open space requirements, and signs. The project site is currently zoned CG (General Commercial); no changes to the existing zoning are proposed. Chapter 10.16.030 regulates height of roof structures for commercial zones; Chapter 10.16.030(K) regulates the walls and fences in commercial zones; and Section 10.72.050 includes the sign requirements and regulations for commercial zones, such as the height of signs and types of signs that are permitted.

MBMC Section 10.60.120(D)(1) prohibits covering more than 20 percent of a building surface visible from a street with mirror or highly reflective glass unless the applicant can demonstrate to the satisfaction of the Community Development Director that use of such glass would not significantly increase glare visible from adjacent streets or pose a hazard for moving vehicles.

MBMC Section 10.60.120(D)(2) states that security lighting may be indirect or diffused or shall be shielded or directed away from a residential (R) district within 200 feet.

3.1.2 Existing Conditions

VISUAL CHARACTER

The project site is in the City of Manhattan Beach along Artesia Boulevard. The surrounding neighborhood is primarily residential uses. The visual character of the Mira Costa High School campus is formed by its institutional and recreational land uses, consisting of modern and mid-century school buildings, parking areas, athletic fields, and landscaped open spaces.

The area surrounding the campus is predominantly residential, with single-family homes to the south and west, typically one or two stories in height and characterized by a mix of architectural styles (e.g., contemporary, ranch, Mediterranean). To the north, across Artesia Boulevard, land uses include commercial and light institutional uses, such as small businesses, offices, and community facilities. The overall visual environment is urban, with tree-lined streets, sidewalks, and moderate vehicular activity.

SCENIC VISTAS

A scenic vista is generally considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Panoramic views are usually associated with vantage points over a section of urban or natural area that provides a geographic orientation not commonly available. The topography in Manhattan Beach consists of rolling hills and coastal areas. The beaches provide direct scenic vistas of the developed coastline. However, there are no designated scenic vistas or other scenic resources in Manhattan Beach (Manhattan Beach 2003). No significant scenic resources (e.g., coastal views, notable ridgelines, or historic visual features) are present on or adjacent to the campus. Views in the project area include residential neighborhoods and other school facilities.

LIGHT AND GLARE

Sources of light and glare on and surrounding the campus include outdoor lighting associated with parking areas, pathways, and athletic facilities. The football stadium lighting can be visible from surrounding areas during evening events but is consistent with typical lighting levels for large high school campuses. The broader area experiences moderate levels of nighttime illumination, typical of suburban neighborhoods. Other sources of nighttime light and glare include streetlights and vehicular traffic along roadways.

On November 5, 2025, existing conditions of the project site were documented (see Figure 3.1-1, *Existing Light Conditions*). Light measurements were taken at 105 locations while football stadiums lights were on. Measurements were taken along the residential property line to obtain the maximum light spill under existing stadium conditions. The 105 locations were along S. Peck Ave near the football stadium, S Meadow Ave along the baseball and West field, along the northern campus property boundary adjacent to the residential uses north of the West Field, and along residential streets north of the campus along Vorhees Ave.

For the purpose of documenting existing conditions at the project site, horizontal illuminance measurements (foot-candles) were used to quantify light spill at the property line, consistent with municipal standards, while vertical illuminance measurements were used to characterize glare and line-of-sight visibility from windows and building façades. Both metrics were recorded to capture the current extent of light spill and visual intrusion on surrounding residential properties.

Maximum measured light levels along S. Peck Avenue follow. Location 72, 0.7 fc horizontal / 0.2 fc vertical (directly below a street light); Location 92, 0 fc horizontal / 0.8 fc vertical; and Location 94, 1.3 fc horizontal / 0.2 fc vertical (directly below a street light). Along S. Meadow Avenue, Location 26 (near a street light) measured 0.6 fc horizontal / 0.7 fc vertical.

Along the northern campus boundary adjacent to the West Field, the maximum horizontal and vertical illumination was 1.0 fc horizontal / 2.3 fc vertical at Location 49, located on campus near the football stadium and approximately 100 feet from the nearest residential sensitive receptor. The maximum horizontal measurement along the northern boundary was 1.0 fc. Maximum measured light levels adjacent to the nearest sensitive residential receptor were at Location 56, 0.2 fc horizontal / 0.8 fc vertical (see Figure 3.1-1), which is the existing light spill currently experienced at homes along the northern property line.

Maximum measured light levels along Voorhees Ave were at Location 62, 0.2 fc horizontal / 0.5 fc vertical.

3.1.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that, "except as provided in Public Resources Code Section 21099," the proposed project would result in a significant aesthetic impact if it would:

a) Have a substantial adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

d) Expose people on- or off-site to substantial light or glare, which would adversely affect day or nighttime views in the area.

The Initial Study, included as Appendix A, substantiates that no impacts would occur associated with the following thresholds:

- Threshold (a)
- Threshold (b)

THRESHOLD GUIDANCE

To determine the impact significance of spill light (threshold d), an industry standard of 0.9 foot-candle (fc) during pre-curfew hours and 0.2 fc during post-curfew hours were used for a significance determination. As discussed below, the 0.9 fc standard was selected because it is below the level of typical street lights (1.0 to 5.0 fc) and below the light level at twilight (1.0 fc), which ensures that bedrooms are not subjected to sleep-depriving light intrusion. In addition, pursuant to California Government Code Section 53094, the District is exempt from the City's zoning ordinance, and the provisions of MBMC Chapter 10 would not be applicable to the proposed project.

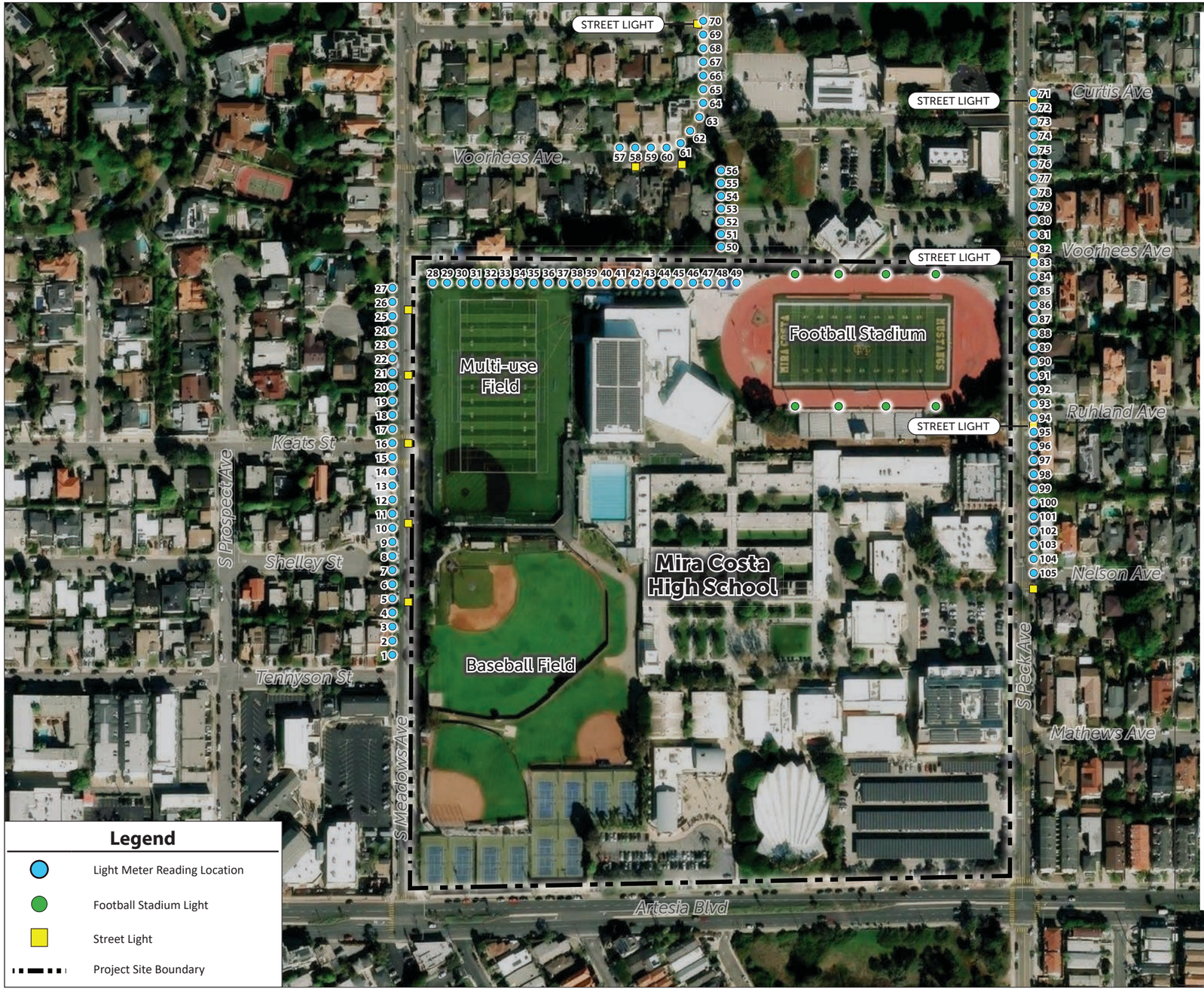
Regulatory and Industry Standards

Municipal Code

The City of Manhattan Beach does not establish a significant threshold for light spill for outdoor lighting near residential areas for field lighting and recreational use areas. The City of Manhattan Beach Municipal Code (MBMC) does identify minimum light thresholds for buildings as adopted by the California Building Code (CBC) (MBMC Chapter 10.64.170). Pursuant to pursuant to California Government Code Section 53094, the District is exempt from the City's zoning ordinance, and the provisions of MBMC Chapter 10 would not be applicable to the proposed project.

A "Night Sky Ordinance" is a common policy set by local municipalities that regulates outdoor lighting to reduce light pollution and other adverse effects. A Night Sky Ordinance was also not found within the City's General Plan, Municipal Code, and website.

The proposed project would include typical light and glare control practices, such as lights needing to be directed, controlled, screened, or shaded so as not to shine directly on surrounding properties; lighting needing to be controlled to prevent glare; and prohibiting the use of unshaded clear bulbs in exterior lighting. These are typical light control practices, and it is assumed that the proposed project's lighting would be directed, controlled, screened, or shaded to not shine directly on surrounding properties.



Summary Table

Location	Vertical Spill Light (foot-candles)	Horizontal Spill Light (foot-candles)	Location (Continued)	Vertical Spill Light (foot-candles)	Horizontal Spill Light (foot-candles)
1	0	0	54	0.1	0
2	0	0	55	0.8	0.2
3	0	0	56	0	0
4	0	0	57	0	0
5	0	0	58	0	0
6	0	0.1	59	0	0
7	0	0	60	0.2	0
8	0	0	61	0.3	0
9	0.2	0.1	62	0.5	0.2
10	0.5	0.3	63	0.4	0.1
11	0.2	0.1	64	0.3	0.1
12	0	0	65	0.2	0
13	0	0	66	0	0
14	0.1	0	67	0	0
15	0.2	0.1	68	0	0
16	0.3	0.2	69	0	0.1
17	0.2	0.2	70	0	0.5
18	0	0	71	0.5	0.2
19	0	0	72	0.2	0.7
20	0.2	0.1	73	0.1	0.2
21	0.4	0.3	74	0	0
22	0.4	0.2	75	0	0
23	0.2	0.1	76	0	0
24	0.2	0.2	77	0.2	0
25	0.6	0.5	78	0.1	0
26	0.7	0.6	79	0.3	0.1
27	0.6	0.2	80	0	0
28	0	0	81	0.3	0.1
30	0	0	82	0.3	0.2
31	0	0	83	0	0.2
32	0	0	84	0	0.2
33	0	0	85	0	0
34	0	0	86	0.2	0.1
35	0	0	87	0.3	0
36	0	0	88	0.1	0
37	0	0	89	0.4	0
38	0	0	90	0	0
39	0	0	91	0.7	0
40	0	0	92	0.8	0
41	0	0	93	0.3	0.3
42	0	0	94	0.2	1.3
43	0.2	0	95	0.2	0.1
44	0.9	0.5	96	0.1	0
45	0.7	0.1	97	0.2	0
46	0.9	0.2	98	0.4	0
47	1.2	0.3	99	0.3	0
48	1.6	0.4	100	0	0
49	2.3	1	101	0	0
50	0	0	102	0	0
51	0.1	0	103	0	0
52	0.4	0	104	0	0
53	0.3	0.1	105	0	0

Source: PlaceWorks 2025.

Figure 3.1-1
Existing Lighting Conditions

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Industry Standards

The International Commission on Illumination (CIE) *Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations* (2nd edition) provides quantitative metrics to analyze the impact of light and glare (CIE 2017). The Guide identifies lighting thresholds based on five environmental lighting zones (E0, intrinsically dark, to E4, high district brightness). Environmental Lighting Zone E3, medium district brightness (such as well inhabited rural and urban settlements), would be most applicable to the proposed project's urban context. Environmental Lighting Zone E3 establishes the following lighting thresholds:

- Pre-curfew Mixed-Use/Suburban = 0.9 foot-candle
- Post-curfew Mixed-Use/Suburban = 0.2 foot-candle

The Illuminating Engineering Society (IES) and the DarkSky International, formerly the International Dark-Sky Association (IDA)'s Model Lighting Ordinance (MLO) provides guidance for communities to develop effective lighting control ordinances (IES 2011). The MLO provides the following light spill thresholds:

- Rural/Low Density = 0.1 foot-candle
- Mixed-Use/Suburban Density = 0.3 foot-candle
- City/Urban = 0.8 foot-candle

Establishing an Appropriate Threshold

Since the City of Manhattan Beach does not identify a light spill threshold for athletic uses, industry standards were used to establish an appropriate light spill threshold. Of the two industry standards identified above, the CIE's 0.9 fc pre-curfew threshold for Environmental fLighting Zone E3 most closely matches the urban context of the proposed project from among the thresholds presented above. In addition, this threshold was selected because it includes both pre- and post-curfew standards that consider the time of day, an important consideration for lighting associated with the proposed project.

Curfew hours are defined by the MBMC Chapter 4.56.030, Curfew hours, which sets a curfew of 10:00 PM to 6:00 AM the following day. The following discussion evaluates the potential for 0.9 fc and 0.2 fc; any residential/suburban property receiving 0.9 fc of spill light or greater before curfew hours and 0.2 fc or greater after curfew hours would be considered impacted.

To determine the impact significance of spill light (threshold d), an industry standard of 0.9 foot-candle (fc) during pre-curfew hours and a 0.2 fc during post-curfew hours were used. As discussed above, the 0.9 fc standard was selected because it is below the level of typical street lights (1.0 to 5.0 fc) and below the light level at twilight (1.0 fc), which ensures that bedrooms are not subjected to sleep-depriving light intrusion. Although the City of Manhattan Beach

establishes a threshold of 0.5 fc, as discussed in Section 3.1-1, Regulatory Framework, the District is exempt from this zoning ordinance.

METHODOLOGY

Nighttime illumination and glare impacts refer to the effects of a project's exterior lighting on adjacent land uses and surrounding areas. These impacts are assessed by comparing existing lighting conditions to the proposed lighting plan or applicable lighting policies. To establish an appropriate evaluation threshold, the Manhattan Beach Municipal Code and relevant industry standards were reviewed, with lighting levels measured in foot-candles.

Using the District's Sports Field Lighting Plans prepared by Musco (Appendix B), foot-candle levels were modeled along roadways or adjacent residential building façades when no public roadway was present. Modeled light levels were compared against the identified thresholds to determine whether the proposed lighting would result in exceedances. The nearest sensitive receptors consist of residential properties directly north of and adjacent to the West Field.

Excessive light or glare can cause annoyance to residents, disrupt sensitive land uses, create visual discomfort or hazards for drivers, and adversely affect wildlife or community character. When a project has the potential to generate spill light onto adjacent sensitive receptors or produce glare visible from surrounding areas, mitigation measures can be incorporated to reduce or avoid such impacts.

The following section provides definitions of key lighting terminology referenced in this analysis.

A lighting illumination summary was prepared for the proposed project based on computer calculations and includes a grid summary of the minimum and maximum maintained horizontal and vertical foot-candles for the football stadium, west field, and softball/baseball field and immediately adjacent areas, this summary is included in Appendix B of this DEIR (Musco 2025).

Terminology

The **foot-candle (fc)** is a unit based on English measurements. Although foot-candles are considered obsolete in some scientific circles, they are nevertheless used because many existing light meters are calibrated in foot-candles. Moonlight produces approximately 0.01 fc, and sunlight can produce up to 10,000 fc. The general benchmarks for light levels are shown in Table 3.1-1, *General Light Levels Benchmark*.

Table 3.1-1 General Light Levels Benchmark

Outdoor Light	Foot-Candles
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Dusk	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Moonless Night	0.0001
Overcast Night	0.00001
Gas station canopies	25–30
Typical neighborhood streetlight and parking garage	1.0–5.0

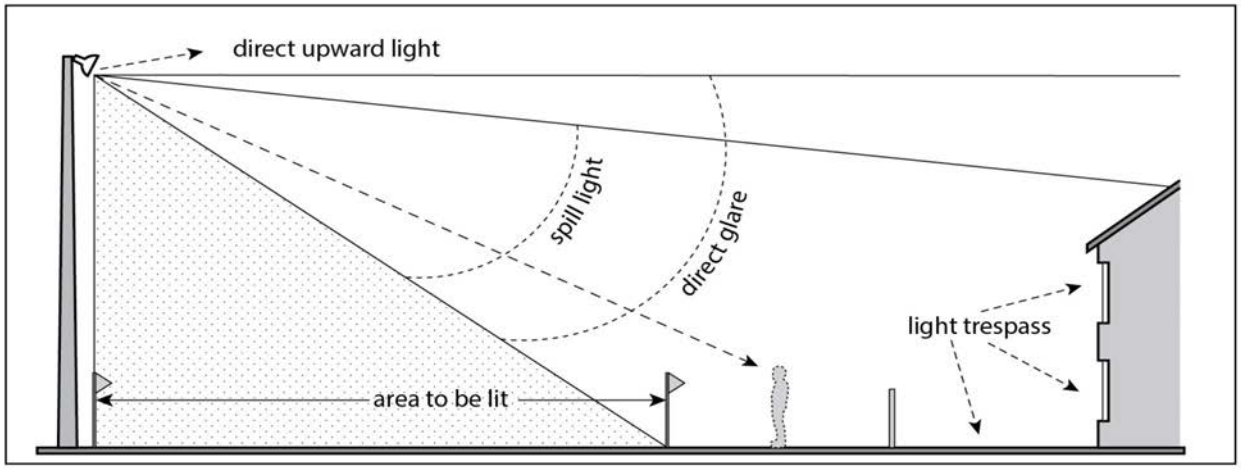
Horizontal foot-candle. The amount of light received on a horizontal surface such as a roadway or parking lot pavement.

Vertical foot-candle. The amount of light received on a vertical surface such as a billboard or building façade.

Glare means lighting entering the eye directly from a light fixture or indirectly from reflective surfaces that causes visual discomfort or reduced visibility. Glare can be generated by building-exterior materials, surface-paving materials, vehicles traveling or parked on roads and driveways, and sports lights. Any highly reflective façade material is a concern because buildings can reflect bright sunrays. The concepts of spill light, direct glare, and light trespass are illustrated in Exhibit A, Spill Light, Direct Glare, and Light Trespass, adapted from the Institution of Lighting Engineers (ILE 2003).

Direct glare is caused by looking at an unshielded lamp or a light at maximum candlepower. Direct glare is dependent on the brightness of the light source, the contrast in brightness between the light source and the surrounding environment, the size of the light source, and its position.

Exhibit A: Spill Light, Direct Glare, and Light Trespass



Illuminance is the amount of light on a surface or plane, typically expressed in a horizontal plane (e.g., on the ground) or in a vertical plane (e.g., on the side of a building).

Lumen means the unit of measure used to quantify the amount of visible light produced by a light source or emitted from a luminaire (as distinct from "watt," a measure of power consumption).

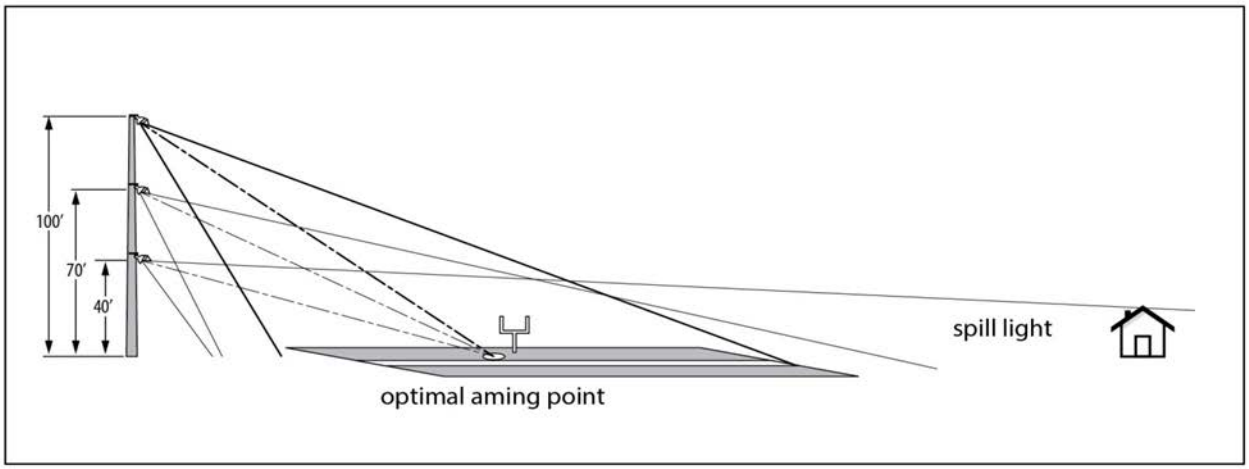
Luminaire means outdoor electrically powered illuminating devices that include a light source, outdoor reflective or refractive surfaces, lenses, electrical connectors and components, and all parts used to mount the assembly, distribute the light, and/or protect the light source, whether permanently installed or portable. An important component of luminaires is their shielding:

- Fully shielded. A luminaire emitting no light above the horizontal plane.
- Shielded. A luminaire emitting less than 2 percent of its light above the horizontal plane.
- Partly shielded. A luminaire emitting less than 10 percent of its light above the horizontal plane.
- Unshielded. A luminaire that may emit light in any direction.

Light trespass means light that falls beyond the property on which it originates. The amount of trespass is expressed in foot-candles and is measured in the vertical plane at five feet above grade at the property line of the site on which the light(s) is located. If the adjacent property is a street, alley, or sidewalk, the point at which trespassing light is measured is the center of the street, alley, sidewalk, or right-of-way. Field measurements to determine light trespass compliance do not include the effect of light produced by streetlights.

As a general rule, taller poles allow fixtures to be aimed more directly on the playing surface, which reduces the amount of light spilling into surrounding areas. Proper fixture angles ensure even light distribution across the playing area and reduce spill light, as shown in Exhibit B, Pole Heights and Lighting Angles.

Exhibit B: Pole Heights and Lighting Angles



Sky Glow is light that reflects into the night sky and reduces visibility of the sky and stars. It is a concern in many jurisdictions, especially those with observatories.

3.1.4 Project Impact Analysis

c) In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Mira Costa High School is in the fully urbanized City of Manhattan Beach, surrounded by established residential neighborhoods and commercial uses. The site and its surroundings are characterized by built structures, paved roadways, and landscaped areas typical of suburban Southern California communities. The area does not contain open space or natural visual resources typically associated with nonurbanized settings. The project site is designated PF (Public Facilities) under the City of Manhattan Beach General Plan and Zoning Ordinance, which allows public educational and recreational uses, including outdoor athletic fields and associated lighting.

PROPOSED FIELD LIGHTING IMPROVEMENTS

The proposed project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus.

Field lighting improvements would include new and upgraded fixtures that would be designed with directional shielding and cutoff technology to limit light spill and glare at adjacent residential areas. Daytime visual changes (lighting poles up to 70 to 80 feet in height) would be noticeable but contextually consistent with the scale of the athletic field and stadium infrastructure, and would not obstruct scenic views or vistas.

The proposed project would operate during limited evening hours for athletic and community events. The proposed project would adhere to the Division of State Architecture (DSA) site plan review and comply with state building code requirements. Additionally, the proposed project field lighting improvements would be reviewed by District staff to ensure compliance with these design, height, and lighting regulations.

PROPOSED FACILITIES MASTER PLAN

The project would also include the installation of two new e-bike parking areas and improvements identified in the District's Mira Costa High School FMP, which includes demolition, new construction, modernization, and renovation of buildings and facilities on campus, as identified in Table 2-1, *Proposed Changes to Campus Buildings*, of Section 2.6.4, *Facilities Master Plan*. The buildings from the FMP that would be evaluated within the scope of this EIR would include the demolition of the existing one-story library and the construction of a new one-story library; the renovation of 2 one-story buildings, the renovation of the existing swimming pool, and the renovation of the existing one-story multipurpose room and food service building, which would allow for the relocation of the District's Central Kitchen from Manhattan Beach Middle School to Mira Costa High School. The proposed FMP would not increase student enrollment or capacity.

Future project development facilities under the FMP would occur entirely within the existing developed campus. Building heights and massing would remain generally consistent with existing structures (primarily one to two stories), ensuring visual compatibility with nearby buildings. The proposed project would undergo DSA approval, ensuring consistency with all applicable design and safety regulations.

CONCLUSION

Both project components would not conflict with applicable zoning or scenic quality regulations. As the project site is already developed with athletic facilities, the proposed project would have

a similar use in the same location, and therefore would not result in a substantial change in the visual character of the site and surrounding area. In addition, given the urbanized nature of the project area and the intervening development and landscaping, the proposed lights would be consistent with the vertical elements in the project area. Therefore, the project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor would it conflict with applicable zoning and scenic regulations.

Therefore, this impact is **less than significant**.

d) Would the project expose people on- or off-site to substantial light or glare which would adversely affect day or nighttime views in the area?

The two major causes of light pollution are glare and spill light. Spill light is caused by misdirected light that illuminates outside the intended area. Glare is light that shines directly or is reflected from a surface into a viewer's eyes. Spill light and glare impacts are effects of a project's exterior lighting on adjoining uses and areas.

The project would replace existing field lights at the Waller Football Stadium, install new field lights at the West Field, and install new field lights on the softball/baseball fields. The project would also include the installation of two new e-bike parking areas on campus as well as various improvements identified in the District's Mira Costa High School FMP.

Waller Stadium encompasses 3.6 acres with a 15,000-square-foot (sf) seating section. Existing lights at Waller Stadium would be removed and replaced with 48 new lighting fixtures on four existing poles that are 90 to 100 feet in height (see Figure 2-6, *Waller Stadium Lighting Plans*). West Field is approximately 3.1 acres and would include the installations of eight new lighting poles with 36 new lighting fixtures. Heights for the new poles would range from 60 to 70 feet (see Figure 2-7, *West Field Lighting Plans)*.

At the baseball/softball fields, four new lighting poles would be installed on the southwest baseball/softball field with 20 new lighting fixtures. Heights for the new poles would range from 60 to 70 feet. On the northwest baseball/softball field, eight new lighting poles would be installed with 48 new light fixtures. Heights for the new poles would range from 70 to 80 feet (see Figures 2-8 and 2-9, *North* and *South Softball/Baseball Field Lighting Plans*).

For the purposes of this analysis, a standard of 0.9 fc was used for a significance determination because it is below the level of typical street lights (1.0 to 5.0 fc) and below twilight levels (1.0 fc), which ensures that bedrooms are not subjected to sleep-depriving light intrusion. Additionally, industry best practices recommend that exterior lighting levels be further reduced to 0.2 fc or less after curfew hours to further reduce impacts on human circadian rhythms, nighttime wildlife activity, and general skyglow (IDA 2020).

Existing on-site sources of artificial light include light emanating from building interiors, building and security lights, sidewalks, parking lots, and lighting at Waller Stadium. Existing off-site lighting sources include street lighting, vehicular lighting, and exterior lighting on existing residential uses. The nearest light-sensitive receptors are the single-family residences north of the Mira Costa HS campus, adjacent to the West Field. The proposed project would install field lighting required to effectively illuminate the Waller Football Stadium, the West Field, and the softball/baseball field for Mira Costa HS student and community use. The installation of two new e-bike parking areas on campus and proposed improvements identified in the District's Mira Costa High School FMP would not significantly increase light or glare as uses would be consistent with existing campus conditions.

WEST FIELD

The northern boundary of the West field is a shared property line between the school and residential properties. The private shared driveway adjacent to the school is 15 ft below grade and does not allow for proper indication of the lighting impacts. Therefore, the best locale of measurement to understand proposed lighting level impacts is residential building façade of properties directly north of the field. Measurements were taken at different elevations to measure proposed lighting levels that a person at the front of their residence would be exposed to, at both first story windows and second story windows. Table 3.1-2 shows the horizontal and vertical fc measurements modeled at the three different elevations. The highest lighting levels that a resident would experience would be at 5 afg, first-story windows, with a 0.20 max vertical fc measurement (see Figure 3.1-2, *West Field Northern House Spill Measurements*). This is below the 0.9 fc threshold and therefore would not have a significant impact. Although the District is not required to comply with City zoning ordinances, the highest light spill measurement would still be lower than the 0.5 fc threshold established in the City's municipal code that restricts lighting of off-street parking and loading areas by requiring that all light fixtures possess sharp cut-off qualities at all property lines and shielding as necessary. The maximum illumination level is prohibited from exceeding 0.5 foot-candles at residential property line in a residential (R) district.

Table 3.1-2 Elevation Light Measurements

Elevation Above Foot Ground (afg)	Max Horizontal fc	Max Vertical fc
West Field		
5 afg (first-story windows)	0.16	0.20
10 afg (second story windows)	0.12	0.16
15 afg (second story windows)	0.09	0.13

Source: Musco 2025. (Appendix B)

Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	2'	72'	TLC-LED-1200	4	4	0
				17.5'	TLC-BT-575	1	1	0
2	A3-A4	60'	-	60'	TLC-LED-1200	1	1	0
				60'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	1	1	0
1	B1	80'	2'	82'	TLC-LED-1500	5	5	0
				82'	TLC-LED-900	1/1*	2	0
				17.5'	TLC-BT-575	1	1	0
1	B2	80'	2'	17.5'	TLC-BT-575	1	1	0
				82'	TLC-LED-900	3	3	0
				82'	TLC-LED-1500	3	3	0
				82'	TLC-LED-1200	1	1	0
1	B3	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-900	2	2	0
				70'	TLC-LED-1500	3	3	0
1	B4	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-1500	4	4	0
1	C1	70'	2'	72'	TLC-LED-1200	2	2	0
				72'	TLC-LED-900	1	1	0
				17.5'	TLC-BT-575	2	2	0
1	C2	70'	2'	72'	TLC-LED-1200	3	3	0
				17.5'	TLC-BT-575	2	2	0
1	D1	70'	2'	72'	TLC-LED-1500	1	1	0
				72'	TLC-LED-1200	1	1	0
				72'	TLC-LED-900	1	1	0
				17.5'	TLC-BT-575	1	1	0
1	D2	70'	2'	17.5'	TLC-BT-575	1	1	0
				72'	TLC-LED-1500	1	1	0
				72'	TLC-LED-1200	2	2	0
2	F1-F2	100'	-	15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
1	F3	90'	3'	93'	TLC-LED-1500	9	9	0
				93'	TLC-LED-550	2*	2	0
				18.5'	TLC-BT-575	2	2	0
1	F4	90'	-	90'	TLC-LED-1500	9	9	0
				90'	TLC-LED-550	2*	2	0
				15.5'	TLC-BT-575	2	2	0
2	S1 S8	70'	-	70'	TLC-LED-900	2	2	0
2	S2 S7	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-900	2	2	0
2	S3 S6	70'	-	70'	TLC-LED-900	1	1	0
				70'	TLC-LED-550	1	1	0
				70'	TLC-LED-1200	1	1	0
				15.5'	TLC-BT-575	2	2	0
2	S4-S5	60'	-	60'	TLC-LED-900	2	2	0
24	Totals					140	140	0



Mira Costa High School North Field

Manhattan Beach, CA

Grid Summary

Name:	**North House Spill @ 5' AFG**
Spacing:	30.0' x 10.0'
Height:	-5.0' above grade

Illumination Summary

	MAINTAINED MAX VERTIC
	Entire Grid
Scan Average:	**0.1**
Maximum:	0.2
Minimum:	0.0
Avg/Min:	10.93
Max/Min:	**28.54**
UG (adjacent pts):	0.00
CU:	0.00
No. of Points:	12
FIXTURE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Fixtures:	**140**
Total Load:	147.07 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Project Site Boundary

Above Grade level is height of fixtures above area shown.
*This structure utilizes a back-to-back mounting configuration.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

0 100
Scale (Feet)

Source: MUSCO 2025.

Figure 3.1-2
West Field Northern House Spill Measurements

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Softball/Baseball Field

The baseball field would have a maximum infield illumination of 66 fc and 51 fc on the outfield. The bullpen adjacent to the baseball field would have a maximum illumination of 46 fc. The softball field would have a maximum infield illumination of 68 fc and 52 fc on the outfield. The bullpen adjacent to the softball field would have a maximum illumination of 50 fc. Light spill was measured at the western property line along S. Meadows Ave. The highest light spill measured was 0.50 fc (see Figure 3.1-3, *Softball/Baseball Field Western House Spill Measurements*). Therefore, the proposed light spill for the softball/baseball fields would be below the 0.9 fc threshold. As seen in Figure 3.1-1, *Existing Light Conditions*, the highest fc measured along the softball/baseball fields is 0.50 fc. Therefore, proposed lighting impacts would be less than significant.

Waller Stadium

The proposed maximum field illumination level at Waller Stadium would be approximately 60 fc on the field. Illumination along the track/field would be an average of approximately 45 fc. Illumination on the bleachers would be approximately 12 fc. Lighting on the track and field and bleachers is installed as a safety measure for exiting events at nighttime and in the event of a power failure. Light spill was measured at the eastern property line along S. Peck Ave. The highest light spill measured was 0.20 fc, below the 0.9 threshold (see Figure 3.1-4, *Waller Stadium Eastern House Spill Measurements*). As shown in Figure 3.1-1, *Existing Light Conditions*, the highest existing horizontal illuminance measured off campus and along S. Peck Avenue was 1.3 fc. The proposed lighting improvements for Waller Stadium would not exceed these existing levels and are designed to reduce light spill, thereby minimizing the lighting impacts experienced by adjacent residential properties (see Figures 3.1-1 and 3.1-4).

Light Spill Impacts

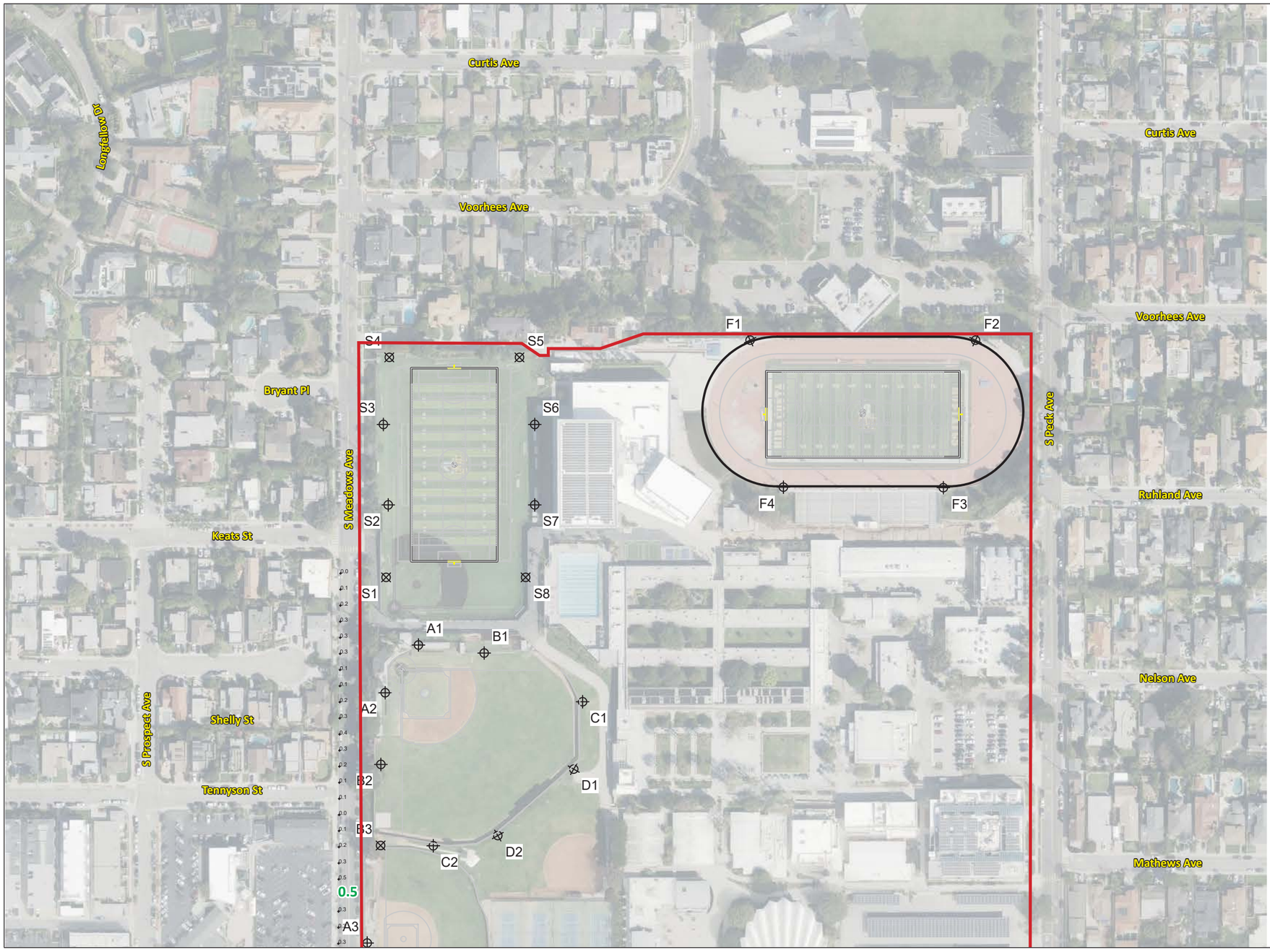
Some of the design elements for light control and reduced spill lighting include mounting height and steep aiming angles, various lighting modes, visors and shielding, reflective housing around the luminaires, number of luminaires, split circuits, and appropriate light levels. The proposed light poles incorporate all these elements, and each element can be arranged individually to control and minimize any potential spill lighting impacts.

Measurements were modeled adjacent to sensitive receptors, along residential property boundaries on S. Meadows Avenue, S. Peck Avenue, and at the shared private driveway along and residential building facade on the northern property boundary line adjacent to West Field. The highest light spill measurements along S. Meadows Avenue and S. Peck Avenue were under the 0.9 fc threshold. Lighting levels at Waller Stadium would decrease substantially from existing after the installation of the proposed new lights. The northern property line along the West Field is directly below where the proposed lights would be installed and therefore would not be an accurate representation of impacts to residential properties. Figure 3.1-5, *West Field North*

Driveway Measurements, shows that the highest light measurement along the shared private driveway was 0.8 fc. This is under the 0.9 fc threshold. Additionally, the highest light spill measurement taken for the northern residential building façade was 0.2 fc, which is below the 0.9 fc threshold of significance and at the 0.2 fc measurement for after curfew. Additionally, the light levels modeled on the northern end of S. Meadow Avenue near the West Field were found to be 0 fc (see plan sheet 15 in Appendix B). Therefore, residential properties along Meadows Ave would not experience light spill due to the proposed field lighting coming from the West Field. Since the increased mounting heights of the proposed lights allow the lamps to be directed down to the playing surface and not at a right angle across the fields. No residential properties would experience measurable increase in lighting as a result of the project. Therefore, the project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be **less than significant**.

Generation of Glare

The design elements for glare control include mounting height, visors and shielding, aim, and reflective housing around the lamp. The project would also use 900W fixtures, resulting in maximum spill control. In general, all school activities are scheduled to end by 9:00 pm, and lights would be on a controlled timer to automatically turn off at 10:00 pm. The proposed lights utilize shielding and increased mounting heights, allowing lamps to be directed downward onto the playing surface. The use of shielding on the selected (Musco) LED modern stadium light fixtures is a fixture-housing design feature that effectively controls and harnesses the light beam, ensuring light is directed downward precisely onto the intended fields, and significantly minimizes and blocks light spill and glare onto neighboring properties. This control is achieved through Musco's extended full cut-off visor and directional optics and internal reflectors and baffles within the housing to block light emitted above the horizontal plane, thereby eliminating sky-glow and preventing light trespass. By concealing the light source from the horizontal line of sight, the shielding minimizes direct glare for residents, allowing lighting measurements at the property boundary to remain at or below regulatory thresholds, ensuring the project's lighting impact is less than significant.



Mira Costa High School North Field

Manhattan Beach, CA

Grid Summary

Name:	**West Project Spill @ -8ft.(1)**
Spacing:	30.0'
Height:	-8.0' above grade

Illumination Summary

	INITIAL MAX VERTIC
	Entire Grid
Scan Average:	**0.175**
Maximum:	0.501
Minimum:	0.000
CU:	0.00
No. of Points:	33
FIXTURE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Fixtures:	**140**
Total Load:	147.07 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Project Site Boundary

Above Grade level is height of fixtures above area shown.
*This structure utilizes a back-to-back mounting configuration.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

0 200
Scale (Feet)

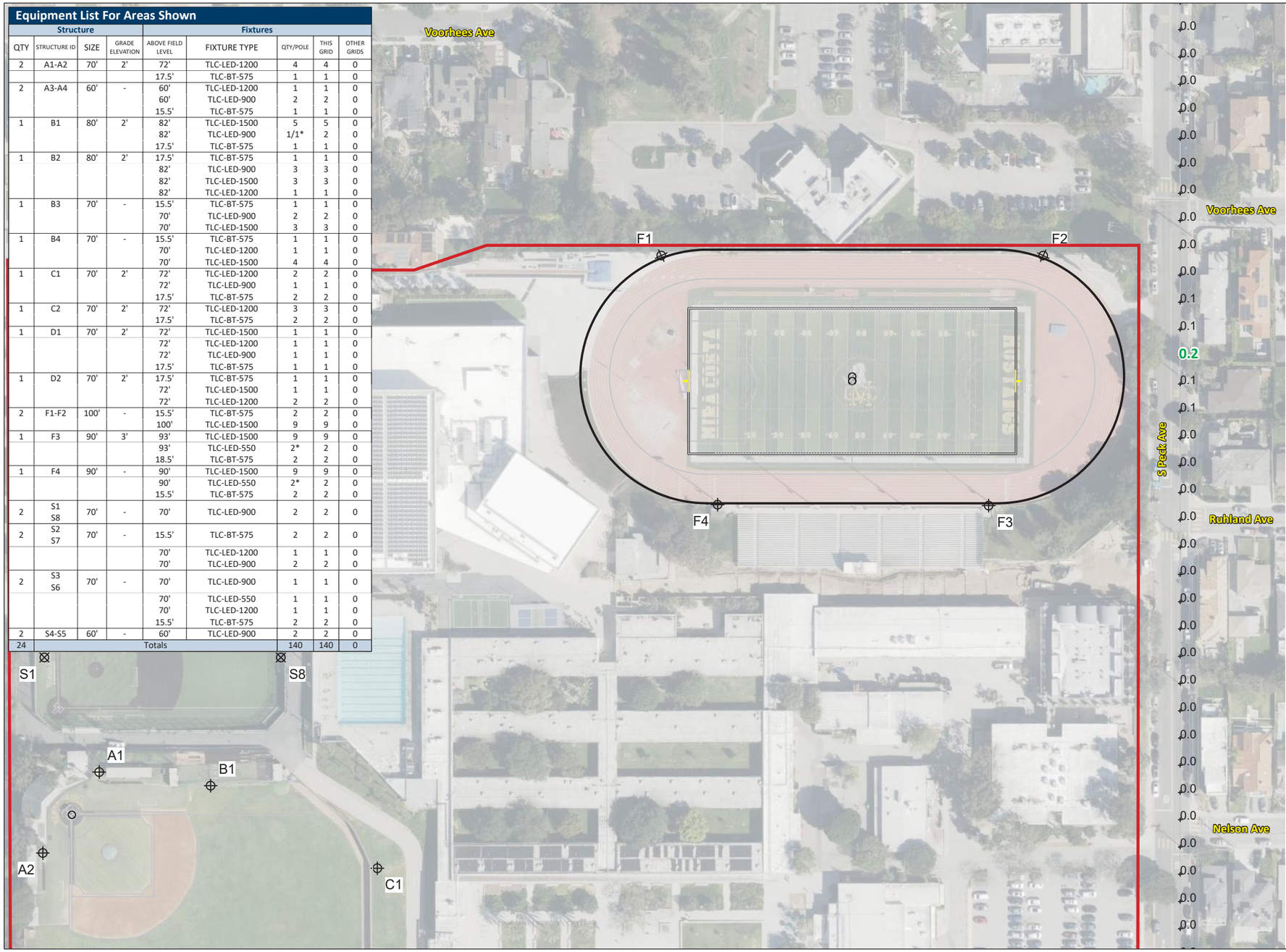
Source: MUSCO 2025.

Figure 3.1-3
Softball/Baseball Field Western House Spill Measurements

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Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	2'	72'	TLC-LED-1200	4	4	0
				17.5'	TLC-BT-575	1	1	0
2	A3-A4	60'	-	60'	TLC-LED-1200	1	1	0
				60'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	1	1	0
1	B1	80'	2'	82'	TLC-LED-1500	5	5	0
				82'	TLC-LED-900	1/1*	2	0
				17.5'	TLC-BT-575	1	1	0
1	B2	80'	2'	17.5'	TLC-BT-575	1	1	0
				82'	TLC-LED-900	3	3	0
				82'	TLC-LED-1500	3	3	0
				82'	TLC-LED-1200	1	1	0
1	B3	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-900	2	2	0
				70'	TLC-LED-1500	3	3	0
1	B4	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-1500	4	4	0
1	C1	70'	2'	72'	TLC-LED-1200	2	2	0
				72'	TLC-LED-900	1	1	0
				17.5'	TLC-BT-575	2	2	0
1	C2	70'	2'	72'	TLC-LED-1200	3	3	0
				17.5'	TLC-BT-575	2	2	0
1	D1	70'	2'	72'	TLC-LED-1500	1	1	0
				72'	TLC-LED-1200	1	1	0
				72'	TLC-LED-900	1	1	0
				17.5'	TLC-BT-575	1	1	0
1	D2	70'	2'	17.5'	TLC-BT-575	1	1	0
				72'	TLC-LED-1500	1	1	0
				72'	TLC-LED-1200	2	2	0
2	F1-F2	100'	-	15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
1	F3	90'	3'	93'	TLC-LED-1500	9	9	0
				93'	TLC-LED-550	2*	2	0
				18.5'	TLC-BT-575	2	2	0
1	F4	90'	-	90'	TLC-LED-1500	9	9	0
				90'	TLC-LED-550	2*	2	0
				15.5'	TLC-BT-575	2	2	0
2	S1 S8	70'	-	70'	TLC-LED-900	2	2	0
2	S2 S7	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-900	2	2	0
2	S3 S6	70'	-	70'	TLC-LED-900	1	1	0
				70'	TLC-LED-550	1	1	0
				70'	TLC-LED-1200	1	1	0
				15.5'	TLC-BT-575	2	2	0
2	S4-S5	60'	-	60'	TLC-LED-900	2	2	0
24	Totals					140	140	0



Mira Costa High School North Field

Manhattan Beach, CA

Grid Summary

Name:	**East Project Spill @ 5ft.**
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary

	INITIAL MAX VERTIC
	Entire Grid
Scan Average:	**0.014**
Maximum:	0.158
Minimum:	0.000
CU:	0.00
No. of Points:	55
FIXTURE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Fixtures:	**140**
Total Load:	147.07 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Project Site Boundary

Above Grade level is height of fixtures above area shown.
*This structure utilizes a back-to-back mounting configuration.

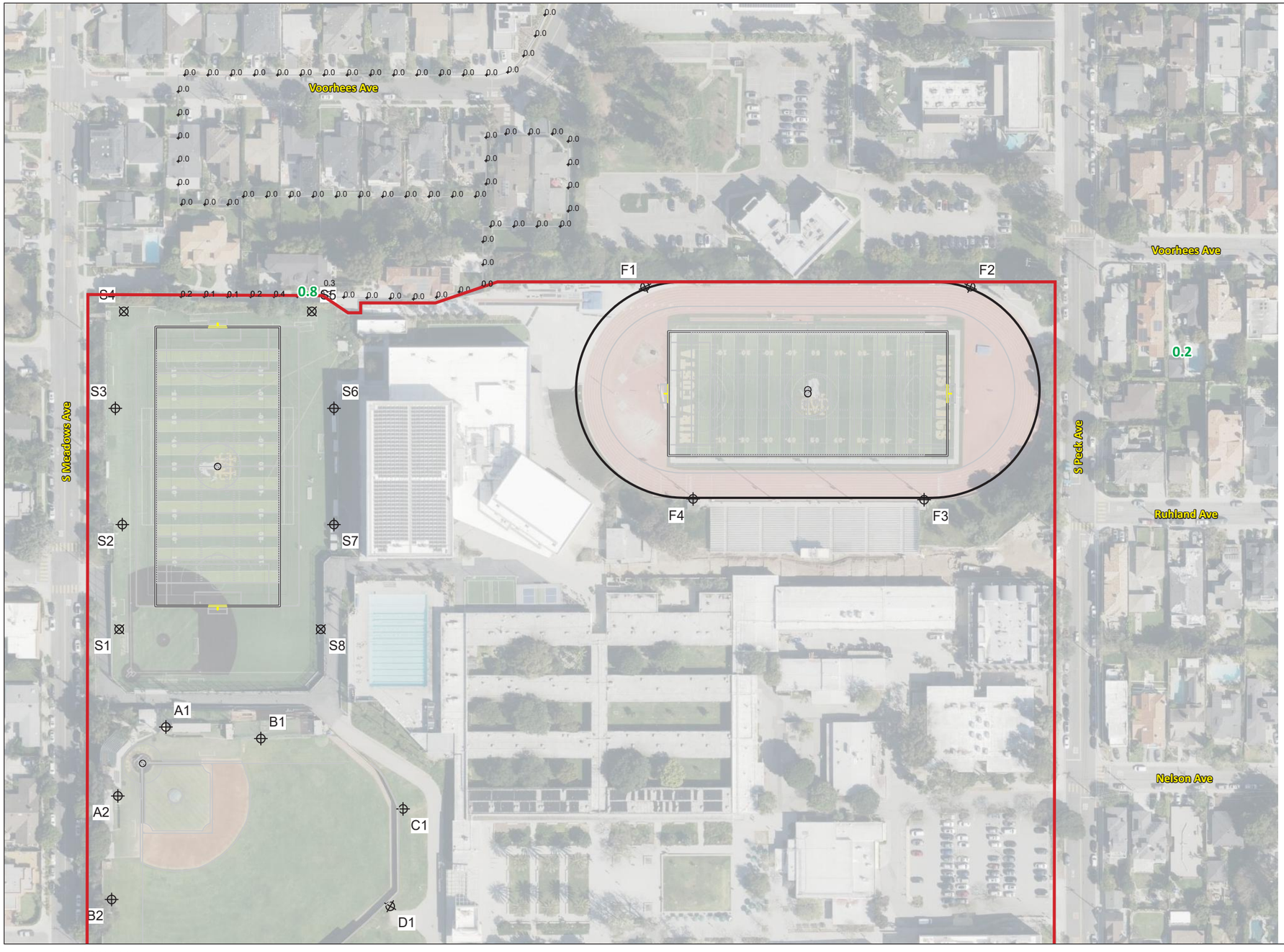
Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

0 120
Scale (Feet)

Source: MUSCO 2025.

Figure 3.1-4
Waller Stadium Eastern House Spill Measurements

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Mira Costa High School North Field

Manhattan Beach, CA

Grid Summary

Name:	**Farthest North Project Spill @ 3ft.(1)**
Spacing:	30.0'
Height:	3.0' above grade

Illumination Summary

INITIAL HORIZONT

	Entire Grid
Scan Average:	**0.025**
Maximum:	0.824
Minimum:	0.000
CU:	0.00
No. of Points:	89
FIXTURE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Fixtures:	**140**
Total Load:	147.07 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Project Site Boundary

Above Grade level is height of fixtures above area shown.
*This structure utilizes a back-to-back mounting configuration.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

0 140
Scale (Feet)

Source: MUSCO 2025.

Figure 3.1-5
West Field Northern Driveway Measurements

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To ensure that no receptors are exposed to illumination above the identified threshold of 0.9 fc, the District shall conduct post-installation investigations, including field measurements of horizontal and vertical light levels, to verify compliance and implement corrective measures if necessary. Therefore, implementation of Mitigation Measure (MM) AES-1 would ensure exterior lighting does not result in a substantial adverse effect on nighttime visual character or create lighting or glare impacts on surrounding uses. MM AES-1 would require the District to conduct light measurements after installation of new light fixtures to ensure thresholds are not exceeded. If lighting measurements exceed the threshold of 0.9 fc at any sensitive receptor, lighting adjustments will be made at lighting fixtures to better control glare, and residences that are impacted will be eligible for compensation for window treatments designed to reduce interior light levels. Although the proposed lighting would have a less than significant impact, due to real-world conditions, impacts related to glare would be potentially significant.

Significance without Mitigation: Potentially Significant.

Impact AES-1: The proposed project would have a substantial impact related to light and glare.

Mitigation Measure AES-1: To minimize potential lighting and glare impacts on nearby sensitive receptors, the District shall ensure that all exterior lighting associated with the project is designed and installed to avoid spillover lighting, glare, or increases in ambient illumination levels beyond of 0.9 fc.

Real-world lighting conditions can vary based on factors such as ambient darkness, weather, surface reflectivity, and the positioning of nearby structures or vegetation. Because these conditions may influence how lighting is perceived off-site, potential impacts could occur even when fixtures are designed to meet technical specifications. To address this, the District shall incorporate best-practice lighting design, including full cutoff or fully shielded fixtures, downward-directed lighting, and timers or motion controls where appropriate.

Following installation of the lighting system, the District shall conduct nighttime field measurements at the residences along the shared private driveway north of west field to verify lighting levels. If the District's post-installation survey identifies lighting levels at these residences that exceed 0.9 foot-candles at the building façade, the District shall implement additional measures as identified in Mitigation Measure AES-2.

Mitigation Measure AES-2: If the District's post-installation survey identifies that residences along the shared private driveway are impacted by light levels exceeding 0.9 foot-candles at the building façade, these residences will be eligible for compensation

for window treatments designed to reduce interior light levels. Within three months of completion of field lighting installation, the District shall have a licensed contractor provide an estimate for installing light-blocking mechanisms (shutters, blinds, etc.) and provide the cost estimate to the District for their review. Only windows that are exposed to light levels that exceed 0.9 foot-candles shall be accounted for in the cost estimates. A homeowner's refusal to accept payment shall not be considered the District's failure to accomplish this mitigation payment. The District shall pay up to $4,000 per impacted house for mitigation.

3.1.5 Significance with Mitigation: Less Than Significant Cumulative Impact Analysis

Would the project have a cumulative effect related to aesthetics?

The proposed project, in combination with other past, present, and reasonably foreseeable projects in the surrounding community, would contribute to cumulative light and glare impacts in the area. However, similar to the proposed project, each related project would be expected to prepare a site-specific analysis of impacts, implement mitigation measures if needed, and comply with applicable regulatory compliance measures. The proposed project's lighting would be limited to school-related activities and community events, would not operate past 10:00 pm, and would be directed away from neighboring residential areas to the extent feasible, thereby minimizing its role in long-term cumulative visual impacts. The proposed project would not result in significant impacts related to nighttime light spill to the properties immediately to the north, west, and east. Therefore, the project's contribution to cumulative nighttime lighting impacts would be less than cumulatively considerable, and the project's impacts would be less than significant.

In addition, similar to the proposed project, all new projects in Manhattan Beach are reviewed for consistency with adopted land use plans and policies by the City. As such, all development in the City would be consistent with applicable General Plan policies, zoning ordinance requirements, and other development standards or be subject to an allowable exception. The related projects would be subject to CEQA compliance and standards in the MBMC.

Therefore, this impact is **less than significant.**

Significance without Mitigation: Less than significant.

3.1.6 References

ILE (Institution of Lighting Engineers). 2003, May. Guidance Notes for the Reduction of Light Pollution. https://www.gov.je/SiteCollectionDocuments/Planning%20and%20building/SPG%20Lightpollution%202002.pdf.

Manhattan Beach, City of. 2003. *Manhattan Beach General Plan Final Environmental Impact Report*. https://www.manhattanbeach.gov/home/showpublisheddocument/48342/637714691472700000 .

Musco Lighting. 2025, November 3. Project Summary. Appendix B.

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3.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the field lighting improvements, e-bike parking areas, and various campus improvements as part of the Mira Costa High School Facilities Master Plan (FMP) to impact air quality in a local and regional context (collectively referred to as the proposed project). This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the proposed project is included in Appendix C of this DEIR.

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_X), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, nitrogen dioxide (NO_2), PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and NO_X are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects are described below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines and motor vehicles operating at slow speeds are the primary source of CO in the South Coast Air Basin (SoCAB), the highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005, 2022; US EPA 2025a). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance)[1] under the National AAQS (CARB 2025a).

[1] A maintenance area refers to a previously nonattainment area that has been redesignated to "maintenance" after it meets the standards and additional redesignation requirements in the Clean Air Act (Section 107(d)(3)(E)).

- **Volatile Organic Compounds (VOC)** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, South Coast AQMD has established a significance threshold (South Coast AQMD 2023). The health effects for ozone are described later in this section.

- **Nitrogen Oxides (**NO_X**)** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005, 2022; US EPA 2025a). The SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2025a).

- **Sulfur Dioxide (**SO_2**)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations, and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and

asthmatics (South Coast AQMD 2005, 2022; US EPA 2025a). The SoCAB is designated as attainment under the California and National AAQS (CARB 2025a).

- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤0.01 millimeter). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤0.002.5 millimeter). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (South Coast AQMD 2005, 2022). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.0001 millimeter) have human health implications because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2022). However, the US EPA and the California Air Resources Board (CARB) have not adopted AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1999, 2023d). Particulate matter can also cause environmental effects such as visibility impairment,[2] environmental damage,[3] and aesthetic damage[4] (South Coast AQMD 2005, 2022; US EPA 2023a). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2025a).[5]

- **Ozone (O_3)** is a key ingredient of "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest

[2] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[3] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[4] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[5] CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM_{10} standards from 2004 to 2007. The US EPA approved the State of California's request to redesignate the South Coast PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (South Coast AQMD 2005, 2022; US EPA 2025a). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2025a).

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005, 2022; US EPA 2024a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the US EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the US EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[6] As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2025a). However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD

[6] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

2012). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the proposed project.

Table 3.2-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 3.2-1 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	▪ Chest pain in heart patients ▪ Headaches, nausea ▪ Reduced mental alertness ▪ Death at very high levels	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O_3)	▪ Cough, chest tightness ▪ Difficulty taking a deep breath ▪ Worsened asthma symptoms ▪ Lung inflammation	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO_2)	▪ Increased response to allergens ▪ Aggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM_{10} and $PM_{2.5}$)	▪ Hospitalizations for worsened heart diseases ▪ Emergency room visits for asthma ▪ Premature death	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO_2)	▪ Aggravation of respiratory disease (e.g., asthma and emphysema) ▪ Reduced lung function	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	▪ Behavioral and learning disabilities in children ▪ Nervous system impairment	Contaminated soil

Source: CARB 2025b.

Toxic Air Contaminants

CARB has identified other air pollutants as toxic air contaminants (TACs), which are pollutants that may cause serious, long-term effects. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health

problems (US EPA 2025b). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the project being particulate matter from diesel-fueled engines.

DIESEL PARTICULATE MATTER

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10, Section 2485,** Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10, Section 2480**, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR Section 2477** and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Ambient air quality standards have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The proposed project is in the SoCAB and is subject to the rules and regulations imposed by the South Coast AQMD, the California AAQS adopted by CARB, and National AAQS adopted by the US EPA. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

3.2.1 Regulatory Framework

FEDERAL AND STATE

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 CAA amendments strengthened previous legislation and laid the foundation for

the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS as well as the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 3.2-2, *Ambient Air Quality Standards for Criteria Air Pollutants*. These pollutants are O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and Pb. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 3.2-2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.

Table 3.2-2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)[4]	Annual Arithmetic Mean	*	0.010 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	*	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[5,6]	Annual Arithmetic Mean	12 µg/m^3	9 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[7]	24 hours	25 µg/m^3	*	Industrial processes.

Table 3.2-2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2024, US EPA 2025c.

Notes: ppm: parts per million; µg/m3: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

1. California standards for O3, CO (except 8-hour Lake Tahoe), SO2 (1 and 24 hour), NO2, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than O3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

3. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

4. On December 27, 2024, the secondary annual SO2 standard was revised to an annual average, averaged over three consecutive years, with a level of 10 parts per billion (ppb).

5. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

6. On February 7, 2024, the national annual PM2.5 standard was lowered from 12 µg/m3 to 9 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary), secondary annual PM2.5 standard, and PM10 standards (primary and secondary) were retained.

7. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm. California has also adopted a host of other regulations that reduce criteria pollutant emissions:

- **Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces greenhouse gas emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.

- **Title 20 of California Code of Regulations (CCR): Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.

- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and nonresidential buildings adopted by the California Energy Resources

Conservation and Development Commission (now the California Energy Commission) in June 1977.

- **24 CCR, Part 11: Green Building Standards Code.** Establishes 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.[7]

California Air Resources Board

CARB is a part of the California Environmental Protection Agency (CalEPA) and responsible for the coordination and administration of both federal and state air pollution control programs in California. In this capacity, CARB conducts research, sets the California AAQS (see Table 3.2-2), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), working closely with the federal government and the local air districts. The SIP is required for the state to take over implementation of the federal CAA from the US EPA.

Nuisance Regulations

Health and Safety Code Section 41700 states,

> ... a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

This section also applies to objectionable odors.

Tanner Air Toxics Act and Air Toxics Hot Spot Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health" (17 CCR Section 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act

[7] The green building standards became mandatory in the 2010 edition of the code.

(42 US Code Section 7412[b]) is a TAC. Under State law, the CalEPA, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10 Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.** Regulation generally restricting on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR Chapter 10 Section 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.** Generally, restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- **13 CCR Section 2477 and Article 8:** Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate. Regulations established to control emissions associated with diesel-powered TRUs.

REGIONAL

Air Quality Management Planning

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). The AQMP is a regional strategy plan to achieve air quality standards by examining emissions, looking at

regional growth projections, and the impact of existing and proposed control measures to provide healthful air in the long-term. Since 1979, a number of AQMPs have been prepared.

The Clean Air Act requires CARB to develop a SIP that describes how an area will attain National AAQS. The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the SIP. Areas are classified as attainment or nonattainment areas for a particular pollutant depending on whether they meet the AAQS.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, as an update to the 2016 AQMP. On October 1, 2015, the US EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb) (2015 Ozone National AAQS). The SoCAB is currently classified as an "extreme" nonattainment for the 2015 Ozone National AAQS. Meeting the 2015 federal ozone standard requires reducing NO_X emissions, the key pollutant that creates ozone, by 67 percent more than is required by adopted rules and regulations by 2037. The only way to achieve the required NO_X reductions is through extensive use of zero emission (ZE) technologies across all stationary and mobile sources. South Coast AQMD's primary authority is over stationary sources which account for approximately 20 percent of NO_X emissions. The overwhelming majority of NO_X emissions are from heavy-duty trucks, ships, and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD's control. The region will not meet the standard without significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the standard. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low-NO_X technologies and (2) developing new ZE and ultra-low NO_X technologies for use in cases where the technology is not currently available. South Coast AQMD is prioritizing distribution of incentive funding in environmental justice areas and seeking opportunities to focus benefits on the most disadvantaged communities (South Coast AQMD 2022).

South Coast AQMD $PM_{2.5}$ Redesignation Request and Maintenance Plan

In 1997, the EPA adopted the 24-hour fine $PM_{2.5}$ standard of 65 µg/m^3. In 2006, this standard was lowered to a more health-protective level of 35 µg/m^3. The SoCAB is designated nonattainment for both the 65 µg/m^3 and 35 µg/m^3 24-hour $PM_{2.5}$ standards (24-hour $PM_{2.5}$ standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour $PM_{2.5}$ standards. The South Coast AQMD developed the "2021 Redesignation Request and Maintenance Plan" for the 1997 and 2006 24-hour $PM_{2.5}$ Standards for the SoCAB $PM_{2.5}$ Redesignation Request and Maintenance Plan, demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour $PM_{2.5}$ standards (South Coast AQMD 2021a).

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead (Pb) classification because of the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007 to 2009 period. The remainder of the SoCAB remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval and was approved in March 2014.

Assembly Bill 617, Community Air Protection Program

AB 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems are installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks (Community Air Protection Blueprint). Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

South Coast AQMD Rules and Regulations

All projects are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule

prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.

- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth-moving and grading activities.

- **Rule 445, Wood Burning Devices.** In general, the rule prohibits new developments from installing wood-burning devices. This rule is intended to reduce the emission of particulate matter from such devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operate a wood-burning device.

- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards in this rule.

- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to

maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

- **Rule 1166, Volatile Organic Compound Emissions from Decontaminated Soil.** Under this rule, an excavation plan is required, and excavation operations are required to be monitored for VOC concentrations.

- **Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants,** to minimize the amount of off-site fugitive dust emissions containing TACs by reducing particulate emissions in the ambient air as a result of earth-moving activities, including excavating, grading, handling, treating, stockpiling, transferring, and removing soil that contains applicable TACs. Components of the fugitive dust control plan are required to include the following measures: fencing that is a minimum of six feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of 50 ± 5 percent; monitoring; notification; signage; and recordkeeping.

3.2.2 Existing Conditions

SOUTH COAST AIR BASIN

The project site is in the South Coast Air Basin (SoCAB), which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

METEOROLOGY

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The lowest average temperature is reported at 47°F in December and the highest average temperature is 84.5°F in August (USA.Com 2025).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the

east and over the mountains. Rainfall averages 17.10 inches per year in the vicinity of the area (USA.Com 2025).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Periods of heavy fog are frequent, especially along the coast. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (South Coast AQMD 2005).

Wind

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the Project area (South Coast AQMD 2005).

SOCAB NONATTAINMENT AREAS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- ***Unclassified.*** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment.*** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment.*** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- ***Nonattainment/Transitional.*** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 3.2-3, A*ttainment Status of Criteria Air Pollutants in the South Coast Air Basin.*

Table 3.2-3 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM_{10}	Serious Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment[1]
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[2]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2025a.

1 The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM2.5 standards. The 2021 PM2.5 Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 µg/m3 and 35 µg/m3 24-hour PM2.5 standards. CARB submitted the 2021 PM2.5 Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).

2 In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas for lead in the SoCAB are unclassified. However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's SIP revision was submitted to the US EPA for approval.

MULTIPLE AIR TOXICS EXPOSURE STUDY V

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis, MATES I, began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was conducted in 2004 to 2006, with MATES IV following in 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been reexamined using current Office of Environmental Health Hazards Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since 2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. DPM continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chrome-plating facilities (South Coast AQMD 2021b).

MATES V identifies that the maximum cancer risk in the project area is 441 per million, which is 15 percent lower than that of the South Coast AQMD population (South Coast AQMD 2025).

EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project area are best documented by measurements taken by the South Coast AQMD. The proposed project is located within Source Receptor Area (SRA) 3 – Southwest Los Angeles

County Coastal. [8] The air quality monitoring station with the most recent data closest to the proposed project is the Compton-700 North Bullis Road Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.[9] This station monitors one-hour and eight-hour O_3, NO_2, and $PM_{2.5}$. Data for PM_{10} was supplemented by Los Angeles-North Main Street Monitoring Station. Table 3.2-4, *Ambient Air Quality Monitoring Summary*, shows that the area occasionally exceeds the state and federal one-hour and eight-hour O_3 standards, state PM_{10} standards and the federal $PM_{2.5}$ standards within the last three years.

Table 3.2-4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations[1,2]		
	2022	2023	2024
Ozone (O_3)			
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	1	0	0
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	1	1	0
Max. 1-Hour Conc. (ppm)	0.111	0.084	0.087
Max. 8-Hour Conc. (ppm)	0.085	0.071	0.064
Nitrogen Dioxide (NO_2)			
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppb)	0.0649	0.0534	0.0607
Coarse Particulates (PM_{10})			
State 24-Hour > 50 µg/m^3 (days exceed threshold)	0	1	2
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0
Max. 24-Hour Conc. (µg/m^3)	61.0	58.0	78.0
Fine Particulates ($PM_{2.5}$)			
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	6	2	7
Max. 24-Hour Conc. (µg/m^3)	52.8	54.6	57.4

Source: CARB 2025c.

Notes: ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter; * = Data not available

1 Data for O3, NO2, and PM2.5 from Compton-700 North Bullis Road Monitoring Station. Data for PM10 is supplemented from Los Angeles-North Main Monitoring Station.

2 Most recent data available as of September 2025.

[8] Per South Coast AQMD Rule 701, an SRA is defined as follows: "A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area." There are 37 SRAs within the South Coast AQMD's jurisdiction.

[9] Locations of the SRAs and monitoring stations are shown here: http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf.

EXISTING EMISSIONS

The existing high school operations currently generate criteria air pollutant emissions from area sources (e.g., use of landscaping equipment, maintenance activities such as architectural coating), energy use (i.e., natural gas used for heating), and mobile sources (i.e., student and staff trips to the campus, and outside commutes for community events).

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution (i.e., TACs) than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest off-site sensitive receptors are the residences surrounding the project site, Pennekamp Elementary School to the north, and Journey of Faith School to the west. The nearest on-site sensitive receptors are the Mira Costa High School students and staff on campus.

3.2.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that, "Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations." The proposed project would result in a significant air quality impact if it would:

a. Conflict with or obstruct implementation of the applicable air quality plan.

b. 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.

c. Expose sensitive receptors to substantial pollutant concentrations.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

CEQA allows the significance criteria established by the applicable air quality management district or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for air quality for construction activities and project operation in the SoCAB, as shown in Table 3.2-5, *South Coast AQMD Regional Significance Thresholds*. Table 3.2-5 lists thresholds that are applicable for all projects uniformly, regardless of size or scope. As previously discussed, there is growing evidence that although ultrafine particulate matter contributes a very small portion of the overall atmospheric mass concentration, it represents a greater proportion of the health risk from PM exposure. However, because the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter, South Coast AQMD has not developed thresholds for them.

Table 3.2-5 South Coast AQMD Regional Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs./day	55 lbs./day
Carbon Monoxide (CO)	550 lbs./day	550 lbs./day
Nitrogen Oxides (NO_X)	100 lbs./day	55 lbs./day
Sulfur Oxides (SO_X)	150 lbs./day	150 lbs./day
Particulates (PM_{10})	150 lbs./day	150 lbs./day

Source: South Coast AQMD 2023.

Health Outcomes Associated with the South Coast AQMD Regional Significance Thresholds

Projects that exceed the South Coast AQMD's regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Contributes to lower birth weight in newborns ($PM_{2.5}$) (South Coast AQMD 2015a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions thresholds shown in Table 3.2-5 are not correlated with concentrations of air pollutants, but mass emissions still contribute to the cumulative air quality impacts in the SoCAB. The thresholds are based on the trigger levels for the federal New Source Review Program, which was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed previously. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 3.2-5 would not violate regional air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emission levels presented in Table 3.2-5, then those emissions would cumulatively contribute to the nonattainment status of the air basin and would contribute to elevating health effects associated with these criteria air pollutants regionally. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would contribute to reducing possible health effects related to criteria air pollutants. However, for

projects that exceed the emissions in Table 3.2-5, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment because mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited previously.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. South Coast AQMD currently does not have methodologies that would provide the District with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.[10] Ozone concentrations are dependent on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, and the absence of modeling tools that could provide statistically valid data and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, it is not possible to link specific health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to the AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction

[10] In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 ("Friant Ranch") in the review and analysis of Proposed Projects under CEQA in Sacramento County. Consistent with the expert opinions submitted to the court in Friant Ranch by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum SMAQMD has provided methodology to address health impacts. However, a similar analysis is not available for projects within the South Coast AQMD region.

of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.[11] As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in years before the 2007 redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. Since South Coast AQMD currently does not have an adopted CO hotspot screening criteria, Bay Area Air District's recommended threshold was used in this analysis. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—to generate a significant CO impact (Bay Area Air District 2023).[12]

Localized Significance Thresholds

South Coast AQMD identifies localized significance thresholds (LST), shown in Table 3.2-6, *South Coast AQMD Localized Significance Thresholds*. Emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at a project site could expose sensitive receptors to substantial concentrations of criteria air pollutants. Off-site mobile-source emissions are not included in the LST analysis. A project would generate a significant impact if it generates emissions that, when added to the local background concentrations, violate the AAQS.

[11] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

[12] The CO hotspot analysis refers to the modeling conducted by the Bay Area Air District for its CEQA Guidelines because it is based on newer data and considers the improvement in mobile-source CO emissions. Although meteorological conditions in the Bay Area differ from those in the Southern California region, the modeling conducted by BAAQMD demonstrates that the net increase in peak hour traffic volumes at an intersection in a single hour would need to be substantial. This finding is consistent with the CO hotspot analysis South Coast AQMD prepared as part of its 2003 AQMP to provide support in seeking CO attainment for the SoCAB. Based on the analysis prepared by South Coast AQMD, no CO hotspots were predicted for the SoCAB. As noted in the preceding footnote, the analysis included some of Los Angeles' busiest intersections, with daily traffic volumes of 100,000 or more peak hour vehicle trips operating at LOS E and F (South Coast AQMD 2003).

Table 3.2-6 South Coast AQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
Annual Average PM_{10} Standard (South Coast AQMD)[1]	1.0 µg/m^3

Source: South Coast AQMD 2023.

ppm = parts per million; µg/m3 = micrograms per cubic meter

1 Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM10 and PM2.5, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (pounds per day) of emissions generated on-site that would trigger the levels shown in Table 3.2-6 for projects under five acres. These "screening-level" LST thresholds are the LSTs for all projects of five acres and less and are based on emissions over an 8-hour period; however, they can be used as screening criteria for larger projects to determine whether dispersion modeling may be required.

In accordance with South Coast AQMD's LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use, distance to sensitive receptors, and SRA. The screening-level construction LSTs for the project site in SRA 3 are shown in Table 3.2-7, *South Coast AQMD Screening-Level LSTs.* For the field lighting improvements, the screening-level LSTs are based on sensitive receptors within 82 feet (25 meters) for NO_X, CO, PM_{10}, and $PM_{2.5}$. For the building improvements under the proposed FMP, the screening-level

LSTs are based on sensitive receptors within 82 feet (25 meters) for NO_X and CO, and 285 feet (87 meters) for PM_{10} and $PM_{2.5}$.[13]

Table 3.2-7 South Coast AQMD Screening-Level LSTs

Acreage Disturbed	Threshold (lbs./day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Field Lighting Improvements[1]				
≤1.00-acre Disturbed Per Day	91	664	5.00	3.00
Proposed FMP[2]				
≤1.00 acre disturbed per day	91	664	24.32	7.95
1.44 acres disturbed per day	109	797	28.26	9.15
1.66 acres disturbed per day	117	864	30.26	9.76

Source: South Coast AQMD 2008, 2011, and 2023.

1 LSTs are based on sensitive receptors within 82 feet (25 meters) for NOX, CO, PM10 and PM2.5 in SRA 3.

2 LSTs are based on sensitive receptors within 82 feet (25 meters) for NOX and CO, who are assumed to not have 24-hour exposure, and residences within 285 feet (87 meters) for PM10 and PM2.5, which are assumed to have 24-hour exposure in SRA 3.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 3.2-8, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for construction and operation of a project. The type of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses (CARB 2005). Educational and recreational land uses do not use substantial quantities of TACs; thus, these thresholds are typically applied to new industrial projects' operations only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the project on the environment, not the significant effects of

[13] Based on South Coast AQMD guidance, screening-level LSTs are partially determined by the distance to sensitive receptors and exposure duration (South Coast AQMD 2008). These thresholds assume 24-hour exposure for particulate matter (PM_{10} and $PM_{2.5}$) and shorter exposure duration for nitrogen oxides (NO_X) and carbon monoxide (CO). Therefore, receptors assumed to have 24-hour exposure are used for evaluating PM_{10} and $PM_{2.5}$ impacts, while receptors with shorter exposure durations are used for NO_X and CO. Additionally, the field lighting improvements and the building improvements proposed under the FMP would disturb different areas of the campus; therefore, separate screening-level LSTs apply to each component.

the environment on the project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)).

Table 3.2-8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk (Project-Level)	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: South Coast AQMD 2023.

Draft Operational Cumulative Health Risk Thresholds

South Coast AQMD initiated a Working Group to identify operation-related cumulative health risk thresholds for development projects in order to address community concerns of health risk impacts of new projects being developed in areas where there is a higher pollution burden. The cumulative health risk threshold methodology first utilizes a screening approach to identify whether projects can qualitatively address cumulative health risk or quantitatively address health risk:

- **Low Cancer Risk Project Types.** Residential, commercial, recreational, educational, and retail.
- **Medium Cancer Risk Project Types.** Truck yards, gas stations, small industrial projects, and linear projects.
- **High Cancer Risk Project Types.** Industrial, major transportation projects (airports, port, railyard, bus/train station), and major planning projects.

For projects with low and medium cancer risks, like the proposed project, a quantitative analysis is not warranted. For projects with the potential to cause high cancer risk impacts, a quantitative analysis is recommended. The initial cumulative threshold is based on MATES V cancer risk percentile, which identifies a gradient of the effects of air pollution on cancer risk in the South Coast AQMD Region. If the project triggers additional criteria, the initial cumulative threshold should be adjusted as shown in Table 3.2-9, *MATES V–Adjusted Cumulative Significant Cancer Risk Thresholds*.

Table 3.2-9 MATES V–Adjusted Cumulative Significant Cancer Risk Thresholds

Project's Background MATES V Cancer Risk[1]	Revised Initial Thresholds based on Cancer Risk
Most Stringent	≥ 1 in 1 million
>90th Percentile	≥ 3 in 1 million
90th Percentile to 50th Percentile	≥ 5 in 1 million
50th Percentile to 30th Percentile	≥ 7 in 1 million
< 30th Percentile	≥ 10 in 1 million

Source: South Coast AQMD 2024.
1 Most current MATES V is based on 2018 data.

As stated previously, South Coast AQMD has identified that the initial thresholds in Table 3.2-9 should be adjusted if any of the following criteria apply:

- **Criteria #1, Post-2018 Projects with High Volume Diesel Fueled Trucks.** Post-2018 projects are not accounted for in MATES V. Therefore, if new warehousing projects along the truck route[14] have been constructed, then the initial thresholds will be adjusted to the next, more stringent level (e.g., cumulative threshold will adjust from 10 in one million to 7 in one million).
- **Criteria #2, Health Sensitive Population.** If the project site is within an SB 535 or AB 617 community, the initial thresholds will be adjusted to the next, more stringent level (e.g., cumulative threshold will adjust from 7 in one million to 5 in one million).

This type of project would be considered low to medium cancer risks; thus, an operational cancer risk analysis for the proposed project would not be warranted.

METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. South Coast AQMD's CEQA Air Quality Handbook and updates on its website are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and were used in this analysis.

[14] Truck route is from the project site to major freeway, within certain distance to sensitive receptors, add all diesel-fueled trucks from post-2018 projects.

Regional air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only). The following is a summary of the assumptions used for the proposed project's analysis.

Project Modeling for Proposed Field Lighting Improvements

Construction

The Manhattan Beach Unified School District (District) is replacing field lighting at the Waller Football Stadium and installing new field lighting at West Field and softball/baseball fields on Mira Costa High School campus. Construction associated with the field lighting improvements and new e-bike parking areas would start June 2026 and end September 2026. Construction activities would include site preparation, utility trenching, field lighting installation, and paving. Construction air pollutant emissions are based on the preliminary information provided by the District. The equipment mix, as well as construction worker and vendor trips, were based on CalEEMod default assumptions.

Operation

The new field lighting would allow for evening use for various nighttime events and increase the number of events at the End Cap and West Field (refer to Table 2-2, *Proposed Events Schedule with Proposed Lighting*). The additional field lighting would result in 143 average daily vehicle trips (refer to Appendix I). However, the proposed campus activities are currently held at other locations in Manhattan Beach and nearby South Bay communities. Therefore, the increase in locally serving sports activities and practices would relocate existing trips within the same general area rather than generate new vehicle trips (Appendix I). Additionally, the e-bike parking areas would encourage more students to commute to campus using e-bikes, which would likely reduce vehicle parking demand on campus.

Overall, the new field lighting would not increase the number of students, staff, or campus facilities. As a result, there would be no long-term increase in building energy use, water demand, or solid waste generation compared to existing conditions. The athletic field lights are anticipated to be utilized throughout the year for school events from dusk until 9:00 pm.

Project Modeling for Proposed Facilities Master Plan

Construction

The District is proposing various improvements identified in the FMP, including demolition, new construction, modernization and renovation of school buildings, and other site improvements (see Table 2-1, *Proposed Changes to Campus Buildings*).

Construction associated with the proposed FMP would start June 2027 and end December 2028. Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Construction air pollutant emissions are based on the preliminary information provided by the District. The equipment mix, as well as construction worker and vendor trips, were based on CalEEMod default assumptions.

Operation

The new one-story library, two one-story classroom buildings, renovation of existing swimming pool, two new e-bike parking areas and the renovated multi-purpose and food service building, which would allow for the relocation of the District's Central Kitchen from Manhattan Beach Middle School to Mira Costa High School, as proposed in the FMP, would not result in an increase student enrollment or capacity. Therefore, the proposed FMP would result in an increase in building energy consumption, but would not generate an increase in new vehicle trips, water demand, or solid waste generation compared to existing conditions.

Construction Health Risk Assessment

Guidance from the California Environmental Protection Agency (CalEPA), OEHHA, and California Air Pollution Control Officers Association (CAPCOA) recommend the completion of health risk assessments (HRA) to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. As a result, a site-specific construction HRA was prepared for the proposed project to evaluate the potential health impacts to nearby sensitive receptors from construction equipment exhaust (specifically diesel particulate matter or DPM) (see Appendix C).

Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck haul route. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days per year for each calendar year of construction. The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.73-mile haul route within 1,000 feet of the project site.

Air dispersion modeling is based on the EPA's AERMOD 13.0 air dispersion modeling program and the latest HRA guidance from the OEHHA to estimate excess lifetime cancer risks and

chronic noncancer hazard indices at the nearest maximum exposed off-site and on-site sensitive receptors (OEHHA 2015).

3.2.4 Project Impact Analysis

a) The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

South Coast AQMD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SoCAB to achieve the National and California AAQS and has responded to this requirement by preparing an AQMP. The South Coast AQMD Governing Board adopted the 2022 AQMP, which is a regional and multiagency effort (South Coast AQMD, CARB, SCAG, and EPA).

A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The two principal criteria for conformance with an AQMP are:

1. Whether the project would exceed the assumptions in the AQMP.

2. Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timeline attainment of air quality standards.

SCAG is South Coast AQMD's partner in the preparation of the AQMP, providing the latest economic and demographic forecasts and developing transportation measures. Regional population, housing, and employment projects developed by SCAG are based, in part, on general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP.

Criterion 1: Consistency with Regional Growth Assumptions

Section 15206(b)(2) of the CEQA Guidelines states that a project is of statewide, regional, or area-wide significance if the project would constitute a proposed residential development of more than 500 dwelling units; a proposed shopping center or business establishment employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space; a proposed hotel/motel development of more than 500 rooms; or a proposed industrial,

manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 50 acres of land, or encompassing more than 650,000 square feet of floor area.

Proposed Field Lighting Improvements

The proposed project would entail lighting improvements on the school campus to accommodate school sports activities and the existing student population. Implementation of the proposed field lighting improvements would not involve any residential development and would not have a direct impact on local resident growth assumptions for the City of Manhattan Beach or region. In addition, the proposed field lighting improvements would involve improvements to an existing campus without increasing student or employment capacity and would not substantially influence the employment growth forecasts for the City or region. Thus, the proposed field lighting improvements are not anticipated to substantially affect demographic projections beyond what is accounted for in the current 2022 AQMP. Therefore, the proposed field lighting improvements would be consistent with the AQMP under the first criterion.

Proposed Facilities Master Plan

The building, two new e-bike parking areas and various site improvements under the proposed FMP would continue to serve the existing student population. Implementation of the proposed FMP would not involve any residential development and would not have a direct impact on local resident growth assumptions for the City or region. In addition, the proposed FMP would involve improvements to an existing campus without increasing student or employment capacity and would not substantially influence the employment growth forecasts for the City or region. Thus, the proposed FMP is not anticipated to substantially affect demographic projections beyond what is accounted for in the current 2022 AQMP. Therefore, the proposed FMP would be consistent with the AQMP under the first criterion.

Conclusion

Both project components would not have a direct impact on residential or employment growth assumptions for the City or region. Therefore, the proposed project would not substantially affect demographic projections beyond those already accounted for in the 2022 AQMP and would be consistent with the AQMP under the first criterion.

Criterion 2: Consistency with Regional Air Quality Standards

The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS,[15] nonattainment for PM_{10} under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2025a).

Proposed Field Lighting Improvements

Long-term emissions generated by the proposed field lighting improvements would not produce criteria air pollutants that exceed the South Coast AQMD regional significance thresholds (see Air Quality Impact b). South Coast AQMD's significance thresholds identify whether a project has the potential to cumulatively contribute to the SoCAB' s nonattainment designations. Because the proposed field lighting improvements would not exceed the South Coast AQMD's regional significance thresholds (see Impact b), the proposed field lighting improvements would not contribute to an increase in frequency or severity of air quality violations or delay attainment of the AAQS and would be consistent with the AQMP under the second criterion.

Proposed Facilities Master Plan

Similarly, long-term emissions generated by the campus improvements under the proposed FMP would not produce criteria air pollutants that exceed the South Coast AQMD regional significance thresholds (see Air Quality Impact b). Therefore, the campus improvements under the proposed FMP would not contribute to an increase in frequency or severity of air quality violations or delay attainment of the AAQS and would be consistent with the AQMP under the second criterion.

Conclusion

Both project components would not produce long-term emissions exceeding the South Coast AQMD's regional significance thresholds, nor would they contribute to an increase in the frequency or severity of air quality violations or delay attainment of the AAQS. Therefore, the proposed project would be consistent with the AQMP under the second criterion.

Summary

The proposed project is not anticipated to result in population or employment growth that would exceed the demographic growth forecasts in the 2022 AQMP. Moreover, the proposed project would not result in exceedances of South Coast AQMD regional significance thresholds

[15] The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal $PM_{2.5}$ standards. The 2021 $PM_{2.5}$ Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow the EPA to redesignate the SoCAB to attainment for the 65 $\mu g/m^3$ and 35 $\mu g/m^3$ 24-hour $PM_{2.5}$ standards. CARB will submit the 2021 $PM_{2.5}$ Redesignation Request to the EPA as a revision to the California SIP (CARB 2021).

and would not contribute to existing or projected AAQS violations. Therefore, the proposed project would be considered consistent with the AQMP, and impacts would be **less than significant**.

Significance without Mitigation: Less than significant.

b) The proposed project would not 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.

Construction Phase

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Construction of the proposed project would generate criteria air pollutants associated with construction equipment exhaust and fugitive dust from various construction activities. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. Table 3.2-10, *Regional Construction Emissions*, shows maximum daily construction emissions associated with the proposed project.

Table 3.2-10 Regional Construction Emissions

Construction Phase	Pollutants (lbs./day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Field Lighting Improvements						
Site Preparation	<1	6	7	<1	1	<1
Utility Trenching	<1	2	3	<1	<1	<1
Field Lighting Installation	<1	3	4	<1	<1	<1
Paving	1	4	6	<1	<1	<1
Maximum Daily Construction Emissions	**1**	**6**	**7**	**<1**	**1**	**<1**
Proposed FMP						
Demolition	1	13	15	<1	1	1
Site Preparation	1	11	12	<1	7	4
Grading	1	13	15	<1	8	4
Building Construction 2027	1	9	12	<1	1	<1
Building Construction 2028	1	8	12	<1	1	<1
Building Construction, Paving, and Architectural Coating	19	12	18	<1	1	1

Table 3.2-10 Regional Construction Emissions

Construction Phase	Pollutants (lbs./day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions	**19**	**13**	**18**	**<1**	**8**	**4**
Overall Project						
Maximum Daily Construction Emissions	**19**	**13**	**18**	**<1**	**8**	**4**
South Coast AQMD Regional Significance Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod version 2022.1; South Coast AQMD 2023. Highest winter or summer emissions are reported. (See Appendix C)

1 Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 25 miles per hour on unpaved surfaces, and street sweeping with Rule 1186–compliant sweepers.

2 Based on the preliminary information provided by the District. Where specific information regarding proposed project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

Proposed Field Lighting Improvements

Construction associated with the field lighting improvements and new e-bike parking areas would include site preparation, utility trenching, field lighting installation, and paving. As shown in Table 3.2-10, the maximum daily construction emissions associated with the proposed field lighting improvements would not exceed the South Coast AQMD regional significance thresholds.

Proposed Facilities Master Plan

Construction associated with the proposed FMP would include demolition, site preparation, grading, building construction, paving, and architectural coating. Table 3.2-10 shows the maximum daily construction emissions associated with the various building and site improvements under the proposed FMP would not exceed the South Coast AQMD regional significance thresholds.

Conclusion

As shown in Table 3.2-10, the maximum daily construction emissions associated with the proposed project would not exceed South Coast AQMD's regional significance thresholds for any criteria air pollutant. This impact would be **less than significant**.

Operational Phase

Buildout of the proposed project would generate an increase in criteria air pollutant emissions from transportation (i.e., vehicle trips), area sources (e.g., landscaping equipment, architectural coating), and energy (i.e., natural gas used for heating). Table 3.2-11, *Regional Operation Emissions*, shows the maximum daily emissions from operation-related activities.

Table 3.2-11 Regional Operation Emissions

Source	Pollutants (lbs./day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Field Lighting Improvements						
Mobile[1]	<1	<1	3	<1	1	<1
Area	<1	0	0	0	0	0
Energy	0	0	0	0	0	0
Maximum Daily Operation Emissions	**<1**	**<1**	**3**	**<1**	**1**	**<1**
Proposed FMP						
Mobile[2]	0	0	0	0	0	0
Area	2	<1	3	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Maximum Daily Operation Emissions	**2**	**<1**	**3**	**<1**	**<1**	**<1**
Overall Project[3]						
Mobile	<1	<1	3	<1	1	<1
Area	2	<1	3	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Maximum Daily Operation Emissions	**2**	**1**	**6**	**<1**	**1**	**<1**
South Coast AQMD Regional Significance Threshold	55	55	550	150	150	550
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1. South Coast AQMD 2023. Highest winter or summer emissions are reported. (See Appendix C)

1 Mobile emissions conservatively based on daily trip generation provided by DJ&A (Appendix I).

2 Building and site improvements under the proposed FMP would not increase student enrollment or capacity. Therefore, mobile emissions would not change from existing conditions and were not modeled.

2 Operational emissions from both project components were added together to evaluate overall project impacts.

Proposed Field Lighting Improvements

The additional field lighting would accommodate relocated events on the End Cap and West Field, generating approximately 143 average daily vehicle trips (refer to Appendix I). However,

the proposed field lighting improvements would primarily support local-serving sports activities and practices, resulting in the relocation of existing trips within the same general area rather than generating entirely new trips. Table 3.2-11 shows the maximum daily emissions from operation-related activities associated with the proposed field lighting improvements. As shown in the table, the proposed field lighting improvements would not generate operation-related emissions that would exceed the South Coast AQMD regional significance thresholds.

Proposed Facilities Master Plan

Building and site improvements under the proposed FMP would not increase student enrollment or capacity. Therefore, mobile emissions associated with the proposed FMP would not change from existing conditions and were not modeled. Table 3.2-11 shows that the maximum daily emissions from operation-related activities associated with the proposed FMP would not exceed the South Coast AQMD regional significance thresholds.

Conclusion

As shown in Table 3.2-11, the overall maximum daily emissions from operation-related activities of the proposed project would be less than their respective South Coast AQMD regional significance threshold values. This impact would be **less than significant**.

Significance without Mitigation: Less than significant.

c) The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

The proposed project could expose nearby receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass emissions shown in the regional emissions analysis in Table 3.2-10, which are described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects.

CONSTRUCTION

Construction-Phase Localized Significance Thresholds

Screening-level LSTs (pounds per day) are the amount of project-related mass emissions at which localized concentrations (ppm or $\mu g/m^3$) could exceed the AAQS for criteria air pollutants. LSTs are based on the acreage disturbed, distance to the nearest sensitive receptor, and SRA. Thresholds are based on the California AAQS, which are the most stringent, established to provide a margin of safety in the protection of the public's health and welfare. They are designed to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other illness, and

persons engaged in strenuous work or exercise. The nearest off-site sensitive receptors are the residences surrounding the project site, Pennekamp Elementary School to the north, and Journey of Faith School to the west. The nearest on-site sensitive receptors are the Mira Costa High School students and staff on campus.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 3.2-12, *Field Lighting Construction Emissions Compared to Screening-Level LSTs,* and Table 3.2-13, *Proposed FMP Construction Emissions Compared to Screening-Level LSTs*, show the maximum daily construction emissions (pounds per day) generated during on-site construction activities at the project area compared with the South Coast AQMD's screening-level LSTs thresholds for sensitive receptors in SRA 3. The field lighting improvements and the building improvements proposed under the FMP would disturb different areas of the campus; therefore, different screening-level LSTs apply to each component.

Proposed Field Lighting Improvements

For the field lighting improvements, the screening-level LSTs are based on sensitive receptors within 82 feet (25 meters) for NO_X, CO, PM_{10} and $PM_{2.5}$. As shown in Table 3.2-12, the maximum daily NO_X, CO, PM_{10}, and $PM_{2.5}$ construction emissions from on-site construction-related activities related to the field lighting improvements would be less than their respective South Coast AQMD screening-level LSTs.

Table 3.2-12 Field Lighting Construction Emissions Compared to Screening-Level LSTs

	Pollutants(lbs./day)[1]			
	NO_X	**CO**	**PM_{10}[2]**	**$PM_{2.5}$[2]**
Field Lighting Improvements[3]				
Site Preparation	4	6	0.71	0.22
Utility Trenching	2	3	0.22	0.08
Field Lighting Installation	3	3	0.12	0.11
Paving	4	5	0.18	0.16
≤1.00-acre Disturbed Per Day	**91**	**664**	**5.00**	**3.00**
Exceeds Screening-Level LST?	No	No	No	No

Source: CalEEMod Version 2022.1 and South Coast AQMD 2008 and 2011.

Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment occurring on the project area are included in the analysis.

1 Based on information provided or verified by the District. Where specific information regarding project-related construction activities or processes was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by the South Coast AQMD.

2 Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 25 miles per hour on unpaved surfaces, and street sweeping with Rule 1186–compliant sweepers.

3 Screening-level LSTs are based on sensitive receptors within 82 feet (25 meters) for NOX, CO, PM10 and PM2.5 in SRA 3.

Proposed Facilities Master Plan

For the building and site improvements under the proposed FMP, the screening-level LSTs are based on sensitive receptors within 82 feet (25 meters) for NO_X and CO and within 285 feet (87 meters) for PM_{10} and $PM_{2.5}$.[16] As shown in Table 3.2-13, the maximum daily NO_X, CO, PM_{10}, and $PM_{2.5}$ construction emissions from on-site construction-related activities would be less than their respective South Coast AQMD screening-level LSTs.

Table 3.2-13 Proposed FMP Construction Emissions Compared to Screening-Level LSTs

	Pollutants(lbs./day)[1]			
	NO_X	**CO**	**PM_{10}[2]**	**$PM_{2.5}$[2]**
Proposed FMP[3]				
Building Construction 2027	8	10	0.26	0.24
Building Construction 2028	8	10	0.23	0.21
Building Construction, Paving, and Architectural Coating	12	16	0.37	0.33
≤1.00-acre Disturbed Per Day	**91**	**664**	**24.32**	**7.95**
Exceeds Screening-Level LST?	No	No	No	No
Site Preparation	10	12	7.17	3.47
1.44-acre Disturbed Per Day	**109**	**797**	**28.26**	**9.15**
Exceeds Screening-Level LST?	No	No	No	No
Demolition	12	14	0.97	0.49
Grading	12	14	8.20	3.98
1.66-acre Disturbed Per Day	**117**	**864**	**30.26**	**9.76**
Exceeds Screening-Level LST?	No	No	No	No

Source: CalEEMod Version 2022.1 and South Coast AQMD 2008 and 2011.

Notes: In accordance with South Coast AQMD methodology, only on-site stationary sources and mobile equipment on the project area are included in the analysis.

[16] Based on South Coast AQMD guidance, screening-level LSTs are partially determined by the distance to sensitive receptors and exposure duration (South Coast AQMD 2008). These thresholds assume 24-hour exposure for particulate matter (PM_{10} and $PM_{2.5}$) and shorter exposure duration for nitrogen oxides (NO_X) and carbon monoxide (CO). The field lighting improvements and the building improvements proposed under the FMP would disturb different areas of the campus; therefore, different screening-level LSTs apply to each component.

1 Based on information provided or verified by the District. Where specific information regarding project-related construction activities or processes was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by the South Coast AQMD.

2 Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 25 miles per hour on unpaved surfaces, and street sweeping with Rule 1186–compliant sweepers.

3 Screening-level LSTs are based on sensitive receptors within 82 feet (25 meters) for NOX and CO, who are not assumed to have 24-hour exposure, and residences within 285 feet (87 meters) for PM10 and PM2.5, which are assumed to have 24-hour exposure in SRA 3.

Conclusion

As shown in Tables 3.2-12 and 3.2-13, on-site construction-related activities associated with the proposed field lighting improvements and the proposed FMP would not result in an exceedance of their respective South Coast AQMD screening-level LSTs. This impact would be **less than significant**.

Construction Health Risk

The proposed project would elevate concentrations of TACs (i.e., DPM) in the vicinity of sensitive land uses during temporary construction activities that would use off-road equipment operating on-site and at different levels depending on the type of activity. A site-specific construction HRA of TACs was prepared to quantify potential health risk emissions during construction associated with the proposed project (see Appendix C).

As shown in Table 3.2-14, *Construction Health Risk Summary,* unmitigated incremental cancer risk during the construction periods for the proposed project would not exceed the South Coast AQMD threshold of 10 in one million, nor would the chronic hazard index exceed the South Coast AQMD threshold of 1.0 at any of the identified MERs.

Table 3.2-14 Construction Health Risk Summary – Field Lighting Improvements

Receptor[1]	Cancer Risk (per million)	Chronic Hazards
Field Lighting Improvements		
Residential MER	0.5	<0.1
High School MER – Mira Costa High School	0.1	<0.1
Elementary School MER – Pennekamp Elementary School	<0.1	<0.1
Preschool MER – Journey of Faith Preschool	<0.1	<0.1
Proposed FMP		
Residential MER	1.8	<0.1
High School MER – Mira Costa High School	9.2	0.1

Table 3.2-14 Construction Health Risk Summary – Field Lighting Improvements

Receptor[1]	Cancer Risk (per million)	Chronic Hazards
Elementary School MER – Pennekamp Elementary School	<0.1	<0.1
Preschool MER – Journey of Faith Preschool	<0.1	<0.1
Overall Project[2]		
Residential MER	2.3	<0.1
High School MER – Mira Costa High School	9.3	0.1
Elementary School MER – Pennekamp Elementary School	<0.1	<0.1
Preschool MER – Journey of Faith Preschool	<0.1	<0.1
South Coast AQMD Threshold	**10**	**1.0**
Exceeds Threshold?	No	No

Source: See Appendix C.

Notes: MER = Maximally Exposed Receptor.

1 Each MER receptor type was based on overall MER location, representing the point of maximum exposure from all source group areas, and was used for the AERMOD results and HRA.

2 Calculated cancer risk and chronic hazards from both project components were added together to evaluate overall project impacts.

Proposed Field Lighting Improvements

As shown in Table 3.2-14, the unmitigated incremental cancer risk during the construction periods for the field lighting improvements would not exceed the South Coast AQMD threshold of 10 in one million, nor would the chronic hazard index exceed the South Coast AQMD threshold of 1.0 at any of the identified MERs. Therefore, the proposed field lighting improvements would not expose nearby receptors to substantial concentrations of air pollutant emissions during construction.

Proposed Facilities Master Plan

As shown in Table 3.2-14, the unmitigated incremental cancer risk during the construction periods for the proposed FMP would not exceed the South Coast AQMD threshold of 10 in one million, nor would the chronic hazard index exceed the South Coast AQMD threshold of 1.0 at any of the identified MERs. Therefore, the proposed FMP would not expose nearby receptors to substantial concentrations of air pollutant emissions during construction.

Conclusion

As shown in Table 3.2-14, construction-related activities associated with the proposed project would not result in an exceedance of the South Coast AQMD health risk thresholds. Therefore,

the proposed project would not expose nearby receptors to substantial concentrations of air pollutant emissions during construction. This impact would be **less than significant**.

OPERATION

Operation LSTs

Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing and warehousing operations where truck idling would occur on-site and would require a permit from South Coast AQMD.

Proposed Field Lighting Improvements

Operation of the proposed field lighting improvements would not generate substantial emissions from on-site stationary sources. The proposed project would entail field lighting improvements and new e-bike parking areas on an existing campus. Thus, the proposed field lighting improvements do not fall within these categories of uses and would not result in localized air quality impacts associated with operation-related emissions.

Proposed Facilities Master Plan

Operation of the building and site improvements under the proposed FMP would not generate substantial emissions from on-site stationary sources. Thus, the proposed FMP does not fall within these categories of uses and would not result in localized air quality impacts associated with operation-related emissions.

Conclusion

As described above, the proposed project would not generate substantial emissions from on-site stationary sources, and localized air quality impacts related to operation-related emissions would be **less than significant**.

Carbon Monoxide Hotspots

Since South Coast AQMD currently does not have an adopted CO hotspot screening criteria, the Bay Area Air District's recommended threshold was used in this analysis. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—to generate a significant CO impact (Bay Area Air District 2023).

Proposed Field Lighting Improvements

In the opening year 2026, the intersection of S. Prospect Avenue and Artesia Boulevard is projected to have the highest PM peak hour turning movement count, with a total of 2,751 turning movements (refer to Figure 14 of Appendix I). As such, the proposed field lighting improvements would not add vehicle trips to the regional roadway network to cause an exceedance of 44,000 vehicles per hour or 24,000 vehicle per hour where vertical and/or horizontal mixing is substantially limited at an intersection. Additionally, the e-bike parking areas would encourage more students to commute to campus using e-bikes, which would likely reduce vehicle miles traveled (VMT) and decrease vehicle parking demand on campus. Therefore, implementation of the proposed field lighting improvements would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project area.

Proposed Facilities Master Plan

The proposed FMP would not increase student enrollment or capacity and, therefore, would not result in additional vehicle trips. As such, the proposed FMP would not add vehicle trips to the regional roadway network to cause an exceedance of 44,000 vehicles per hour or 24,000 vehicle per hour where vertical and/or horizontal mixing is substantially limited at an intersection. Therefore, implementation of the proposed FMP would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project area.

Conclusion

Overall, the proposed project would not generate additional vehicle trips on the regional roadway network that would exceed the Bay Area Air District's CO hotspot screening criteria and, therefore, would not substantially increase localized CO concentrations in the project vicinity. Accordingly, impacts related to CO hotspots would be **less than significant**.

Significance without Mitigation: Less than significant.

d) The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural

tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Construction

Proposed Field Lighting Improvements

Emissions from construction equipment, such as diesel exhaust, may generate odors. However, any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern and would not affect a substantial number of people.

Proposed Facilities Master Plan

Similarly, any construction-related odor emissions associated with the proposed FMP would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern and would not affect a substantial number of people.

Conclusion

Overall, construction activities associated with the proposed project would generate temporary and intermittent odor emissions. Therefore, impacts related to construction-generated odors would be **less than significant**.

Operation

The type of facilities that are considered to have objectionable odors include wastewater treatment plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

Proposed Field Lighting Improvements

The proposed field lighting improvements would support recreational and educational uses and would not include the types of land uses that create objectionable odors. Additionally, the proposed field lighting improvements would be required to comply with South Coast AQMD Rule 402, which would minimize and provide a control for objectionable or offensive odors that

are reported to the South Coast AQMD. The proposed field lighting improvements would not generate potentially significant odor impacts affecting a substantial number of people.

Proposed Facilities Master Plan

The proposed FMP would continue to support educational uses and would not include the types of land uses that create objectionable odors. Additionally, the building and site improvements under the proposed FMP would also be required to comply with South Coast AQMD Rule 402. The proposed FMP would not generate potentially significant odor impacts affecting a substantial number of people.

Conclusion

Overall, the proposed project would support educational uses, and all improvements would comply with South Coast AQMD Rule 402. As a result, the proposed project would not generate significant odors affecting a substantial number of people, and impacts would be **less than significant**.

Significance without Mitigation: Less than significant.

3.2.5 Cumulative Impact Analysis

The proposed project would not have a cumulative effect related to air quality.

In accordance with the South Coast AQMD methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted by cumulative project emissions (i.e., the SoCAB), the South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions thresholds shown in Table 3.2-5. In addition, per the draft guidelines released by the South Coast AQMD's Cumulative Risk Working Group, projects that result in project risk impacts are also considered to result in cumulative risk impacts.

Construction

The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS, and nonattainment for PM_{10} under the California AAQS (CARB 2025a). Construction of cumulative projects would further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities.

Proposed Field Lighting Improvements

As shown in Tables 3.2-10, 3.2-12, and 3.2-14, construction activities associated with the development of the proposed field lighting improvements would not exceed regional or localized significance thresholds. Therefore, the proposed field lighting improvement's construction-related emissions would not result in cumulative construction-related emissions or health risk impacts. Moreover, odor-related impacts resulting from construction would be temporary and confined to the immediate vicinity of the construction equipment.

Proposed Facilities Master Plan

As shown in Tables 3.2-10, 3.2-13, and 3.2-14, construction activities associated with the development of the proposed FMP would not exceed regional or localized significance thresholds. Therefore, the proposed FMP's construction-related emissions would not result in cumulative construction-related emissions or health risk impacts. Moreover, odor-related impacts resulting from construction would be temporary and confined to the immediate vicinity of the construction equipment.

Conclusion

Overall, the construction activities associated with the proposed project would not exceed South Coast AQMD's regional or localized construction thresholds. Odor impacts generated during construction under both project components would be temporary and confined to the immediate vicinity of the construction equipment. Therefore, construction-related impacts associated with the proposed project would not be cumulatively considerable.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional and/or cancer risk threshold values is not considered a substantial source of air pollution by the South Coast AQMD and does not add significantly to a cumulative impact.

Proposed Field Lighting Improvements

As discussed in Impact c), under Section 3.2.4, implementation of the proposed field lighting improvements would primarily support local-serving sports activities and practices, resulting in the relocation of existing trips within the same general area rather than generating entirely new trips, and would not exceed South Coast AQMD's regional significance thresholds (refer to Table 3.2-11). In addition, the proposed field lighting improvements would not include land uses that generate on-site stationary sources and would not result in localized operational air quality impacts. Finally, odors resulting from operation of the proposed field lighting improvements

would not change from existing conditions as no new odor-generating land uses are proposed as part of the proposed field lighting improvements.

Proposed Facilities Master Plan

As discussed in Impact c under Section 3.2.4, implementation of the proposed FMP would not increase student enrollment or capacity and therefore, would not result in additional vehicle trips and would not exceed South Coast AQMD's regional significance thresholds (refer to Table 3.2-11). Similarly, the proposed FMP would not include land uses that generate onsite stationary sources and would not result in localized operational air quality impacts. Finally, odors resulting from operation of the proposed FMP would not change from existing conditions because no new odor-generating land uses are proposed as part of the proposed FMP.

Conclusion

Overall, the proposed project would not exceed South Coast AQMD's regional significance thresholds and would not involve land uses that generate on-site stationary sources capable of resulting in localized operational air quality impacts. Odors would remain consistent with existing conditions. Therefore, air pollutant emissions associated with the proposed project would not be cumulatively considerable, and impacts would be **less than significant**.

Significance without Mitigation: Less than significant.

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3.3 BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report (Draft EIR) discusses the potential impacts to biological resources from implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) project (proposed project), including candidate or special status species, sensitive natural communities, protected wetlands, wildlife corridors, or unique native woodlands. The analysis in this section is based in part on the following technical report:

- *Biological Resource Evaluation for Manhattan Beach Unified School District Mira Costa High School Project,* HANA Resources Inc., December 2025.

A copy of this study is included in Appendix D to this Draft EIR.

During the scoping period for the DEIR, written and oral comments were received from agencies, organizations, and the public (Appendix A). Table 3-1, *NOP Scoping Comments Summary*, in Chapter 3, *Environmental Analysis*, includes a summary of all comments received during the scoping comment period. The California Department of Fish and Wildlife (CDFW) submitted a comment letter for the Draft EIR to analyze potential impacts of the proposed project on special status species and implement mitigation measures as necessary. Additionally, the CDFW requested a survey for California Endangered Species and a survey of rare plants that have the potential to occur on the project site. Comments raised during the public review period are addressed in this section.

3.3.1 Regulatory Framework

FEDERAL

Endangered Species Act

The federal ESA of 1973 (US Code Title 16, Sections 1531–1543), as amended, designates and provides for protection of listed threatened and endangered plant and animal species, and their critical habitat. The US Fish and Wildlife Service (USFWS), in the Department of the Interior (DOI), and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), in the Department of Commerce (DOC), share responsibility for administration of the ESA. These responsibilities include listing and delisting species, designating critical habitat, and formulating recovery plans. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Section 9 (Prohibited Acts)

Once a species is listed, section 9 of the ESA makes it unlawful for any person, including private and public entities, to "take" species listed as endangered or without a permit issued pursuant to section 10 or an incidental take statement issued pursuant to section 7. Section 9 defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include substantial habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." ESA section 9's take prohibitions apply to listed wildlife and fish species, but not to plants. Endangered plants are not protected from take, although it is unlawful to remove, possess, or maliciously damage or destroy them on federal lands. Removing or damaging listed plants on state and private lands in knowing violation of state law, or in the course of violating a state criminal trespass law, also is illegal under the ESA.

Section 10 (Incidental Take Permits and Habitat Conservation Plans)

An incidental take permit pursuant to section 10(a)(1)(B) is required when non-federal, otherwise lawful activities, including lawful project development, will result in take of threatened or endangered wildlife. Under this provision, the USFWS and/or NMFS may, where appropriate, authorize the taking of federally listed wildlife or fish if such taking occurs incidentally during otherwise legal activities. Section 10(a)(2)(B) requires an application for an incidental take permit to include a Habitat Conservation Plan (HCP). The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate avoidance, minimization, and mitigation measures to address the effects of the authorized incidental take. Section 10 provides a clear regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests and non-federal governmental agencies.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain

specified conditions, the taking, possession and commerce of such birds. If compatible with the preservation of bald and golden eagles, the Secretary of the Interior may permit the taking, possession and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of wildlife, agricultural or other interests. The Secretary of the Interior may authorize the take of golden eagle nests that interfere with resource development or recovery operations. Bald eagles may not be taken for any purpose unless the Secretary issues a permit prior to the taking.

Clean Water Act, Section 404

The federal CWA (33 US Code Sections 1251–1376) is the principal federal law governing pollution control and water quality of the nation's waterways. It establishes the basic structure for regulating discharges of pollutants into "waters of the United States" (waters of the U.S.) and for regulating water quality and establishing water quality standards for surface waters. Sections 401, 402, and 404 of the CWA are pertinent to surface and coastal waters of the U.S. For purposes of Section 404 permitting under the CWA, "Waters of the U.S." are wetland and non-wetland bodies of water that meet the criteria in the Code of Federal Regulations (CFR) Title 33, Section 328.3, as interpreted by a number of court opinions and guidance, including *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers (USACE)*, 531 U.S. 159 (2001) (*SWANCC*); consolidated cases *Rapanos v. United States* (*Rapanos*), and *Carabell v. United States* (*Carabell*), 547 U.S. 715 (2006); and joint guidance issued by USACE and the US Environmental Protection Agency (EPA) in light of judicial decisions, including the joint guidance memorandum "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabell v. United States* (December 12, 2008)" (2008 Regulatory Guidance).

Section 404: Discharge of Dredge and Fill Requirements

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the U.S. The USACE's implementing regulations define "dredged material" as material that is excavated or dredged from waters of the US. The CWA implementing regulations define "fill material" as material placed in waters of the US where the material has the impact of either replacing any portion of waters of the US with dry land or changing the bottom elevation of any portion of a waters of the US. Examples include discharges of rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure for development projects in waters of the US.

Section 401: Water Quality Certification

Although the CWA is a federal law, Section 401 of that law recognizes that states have the primary authority and responsibility for setting surface water quality standards and requires the USACE to obtain a state certification that their permits for discharge or dredge and fill material

do not violate state water quality standards. Section 401 of the CWA requires every applicant for a Section 404 permit resulting in any discharge of dredge or fill material into waters of the US to provide a certification that any discharges will comply with the applicable state water quality standards set pursuant to the CWA and applicable state law.

STATE

Native Plant Protection Act

The Native Plant Protection Act (NPPA) and implementing regulations in the California Fish and Game Code Section 1900 et seq. designate rare and endangered plants and provide specific California Coastal Act protection measures for identified populations. The NPPA was enacted to "preserve, protect, and enhance endangered or rare native plants of this state." The NPPA defines a plant as endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes. A rare plant is defined as a plant species that, though not presently threatened with extinction, occurs in such small numbers throughout its range that it may become endangered if its present environment worsens. The NPPA prohibits the take or sale of rare and endangered plants in California. However, the law includes broad exemptions to the prohibition of take, including removal of endangered or rare plants from a building site, road, or right-of-way.

California Fish and Game Code, Section 1600

Section 1600 of the California Fish and Game Code requires a project proponent to notify the California Department of Fish and Wildlife (CDFW) of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review and place conditions on the project as part of a Streambed Alteration Agreement that addresses potentially significant adverse impacts within CDFW's jurisdictional limits.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the CDFW. Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or memorandum of understanding (MOU). In addition, some sensitive mammals and birds are protected by the state as "fully protected species." California "species of special concern" are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDB),

which maintains a record of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biological resources assessments.

LOCAL

Manhattan Beach Municipal Code

MBMC Chapter 7.32.100 (Protection of Trees) establishes provisions for the protection of tress during construction of any building in the City.

MBMC Chapter 10.52.120 (Tree Preservation and Restoration in Residential Zones, Area Districts I and II) establishes the criteria for protected trees.

3.3.2 Existing Conditions

This information is based on the Biological Resources Evaluation (BRE) Report (Appendix D), which provides a comprehensive overview of candidate or special status species, sensitive natural communities, protected wetlands, wildlife corridors, or unique native woodlands. Based on the provided site plan, the total area assessed for HANA's site visit and BRE was designated as the Biological Survey Area (BSA) and encompassed the proposed project footprint and a 500-foot buffer.

SOILS

After review of the USDA NRCS Web Soil Survey (USDA 2025) it was determined that the BSA is entirely composed of the following soil type: Urban land-Abaft-Marina complex, 0 to 15 percent slopes. The Urban land-Abaft-Marina complex is split into three groups: Urban land soil, Abaft soil, and Marina soil. The Abaft soil is comprised of sand, and the parent material is discontinuous human-transported material over aeolian sands. The Abaft soil has a somewhat excessively drained drainage class and is not classified as a hydric soil. The Marina soil is composed of sandy loam, sand, and loamy sand, with the parent material being discontinuous human-transported material over aeolian sands. This soil has a very low runoff class and is not classified as a hydric soil. Two additional minor components (5 percent each) of this complex include Garey soil and Abaft, loamy surface soil. None of the mapped soils are listed as hydric soils.

WETLANDS

After review of the USFWS National Wetland Inventory’s Wetland Mapper, two types of wetlands were identified within 500 feet of the proposed project boundaries, though none were identified within the project’s proposed construction and plan improvement areas. A map that illustrates all documented wetlands as per the National Wetland Inventory is included in

Exhibit IV, Wetlands (see Appendix D) (see Figure 3.3-1, *Wetlands*). Relative to the project site, the two wetland types, PFOCx (0.25 acres) and PEM1Cx (0.42 acres), are to the south of Mira Costa High School, across Artesia Boulevard. According to the Redondo Beach General Plan, the wetlands are contained within a retention basin named "Wylie Sump" (Redondo Beach 2024). Receiving stormwater from surrounding neighborhoods, Wylie Sump receives runoff from 38 acres of the City of Manhattan Beach, 20 acres of Hermosa Beach, and 73 acres of Redondo Beach (Beach Cities Watershed Management Group 2018). Wylie Sump does not have an outlet and is closed to the public but can be viewed from along the public right-of-way outside the fencing that surrounds the sump.

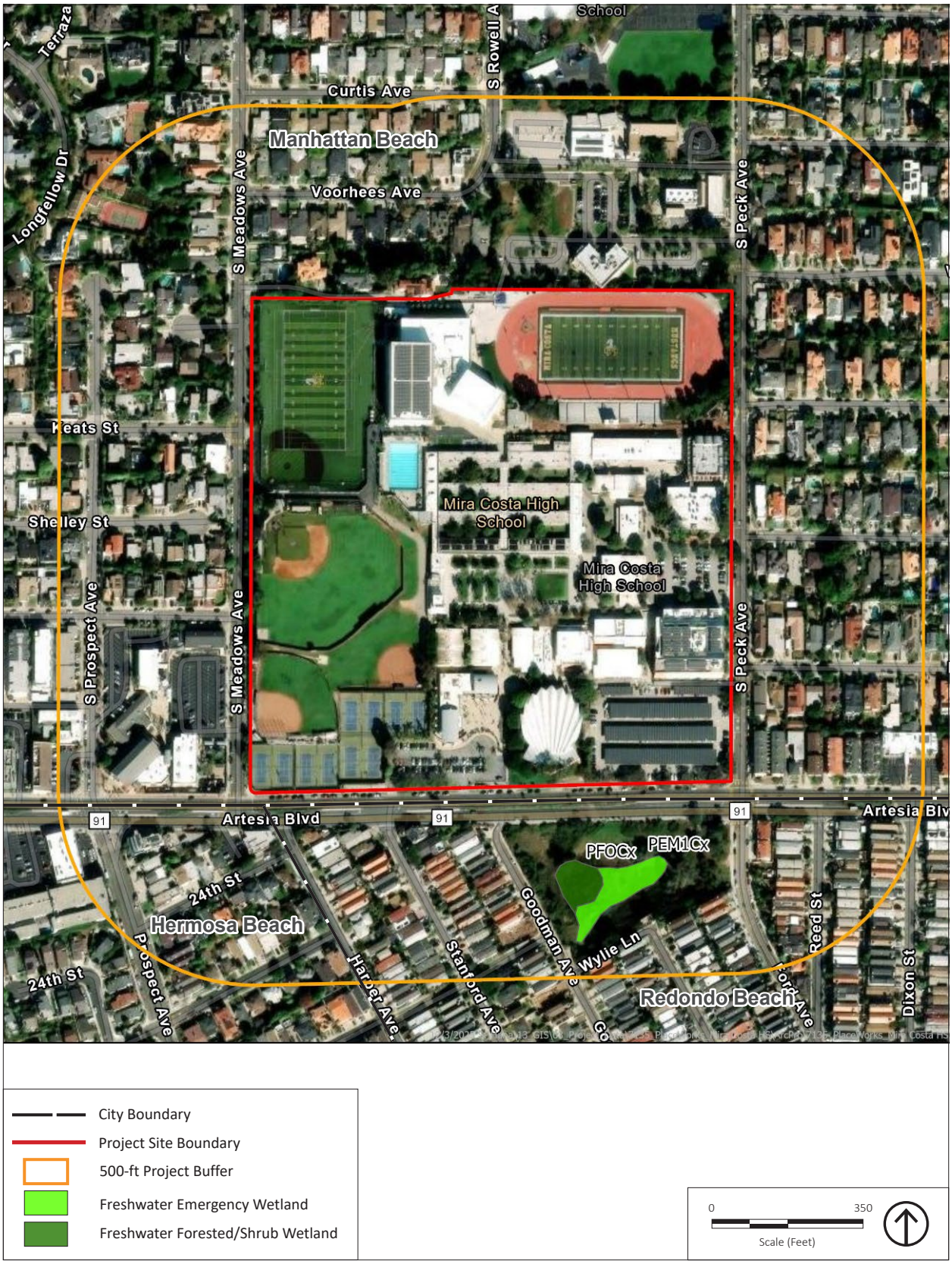
SPECIAL STATUS PLANTS AND WILDLIFE

The literature review resulted in a list of 47 special-status plant species that have been known to occur within the BSA and database search area (two miles for IPAC and CNDDB, nine quads for CNPS RPI) presented in Table 4, Special-Status Plant Species, of Appendix D. Of these 47 species, 2 have a low potential for occurrence, and 45 have no potential to occur in the BSA. The literature review resulted in a list of 10 special-status wildlife species that have been known to occur in the BSA and surrounding two miles (see Table 5, Special-Status Wildlife Species, in Appendix D). Of these 10 species, 2 were considered to have moderate potential, 2 were considered to have low potential, and 6 had no potential to occur in the BSA.

VEGETATION COMMUNITIES

Developed

Developed areas are those that primarily consist of structures, pavement, and roads. The majority of the Mira Costa High School campus falls into this community; there are various ornamental trees dispersed across campus, but limited areas where wildlife can disperse in a continuous manner (see Figure 3.3-2, *Vegetation Communities*). Species present include Chinese elm (*Ulmus parvifolia*), olive (*Olea europea*), western sycamore (*Platanus racemosa*), pampass grass (*Cortaderia selloana*), bermuda grass (*Cynodon dactylon*), and annual blue grass (Poa annua).



Source: Hana Resources 2025.

Figure 3.3-1
Wetlands

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Source: Hana Resources 2025.

Figure 3.3-2
Vegetation Communities

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Landscape

This area refers to landscaped lawns characterized by low grasses or patches of areas that are maintained but likely host small numbers of invasive or ruderal species and ornamental trees. There are several areas along the edges of the project site and neighboring properties throughout the BSA that include this community. Common species in this community include Chinese banyan (*Ficus microcarpa*), bird of paradise (*Strelitzia reginae*), coastal rosemary (*Westringia fruticosa*), common ice plant (*Mesembryanthemum crystallinum*), western australian peppermint (*Agonis flexuosa*), canary island pine (*Pinus canariensis*), Outeniqua yellowwood (*Afrocarpus falcatus*), society garlic (*Tulbaghia violacea*), and Chinese flame tree (Koelreuteria bipinnata).

Drainage

The drainage basin south of Mira Costa High School is primarily characterized by non-native species across all plant strata. Species that are normally cultivated for landscaping purposes and appear to have spread species in this community include common ice plant (*Mesembryanthemum crystallinum*), beautiful bougainvillea (*Bougainvillea spectabilis*), western coastal wattle (*Acacia cyclops*), Mexican fan palm (*Washingtonia robusta*), Brazilian peppertree (*Schinus terebinthifolia*), common sow thistle (*Sonchus oleraceus*), and Chinese elm.

SPECIAL STATUS PLANT SPECIES

Of the 47 special-status plant species found during the literature review, 2 had low potential for occurrence and 45 had no potential for occurrence. None of these sensitive species were detected in the BSA during the field survey. These findings align with expectations based on the urbanized setting of the BSA and the lack of native habitat features necessary to support the sensitive species identified in the literature review. Focused surveys are required for any federal- and/or state-listed endangered species with potential to occur on-site when the species is in bloom to ensure that it is both evident and identifiable during the survey. No sensitive species were observed/detected on-site; therefore, no focused surveys are required.

WILDLIFE

Wildlife species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the wildlife species detected within the Survey Area is included in Appendix D. Nineteen species were observed/detected within the BSA during the reconnaissance field survey. One common mammal species was detected during the field survey: the Eastern fox squirrel (*Sciurus niger*). One common reptile species was detected during the field survey: the Western fence lizard (*Sceloporus occidentalis*).

SENSITIVE WILDLIFE SPECIES

Of the ten special-status wildlife species identified in the literature review, two were considered to have moderate occurrence potential in the BSA: the Monarch Butterfly (*Danaus plexippus*) and American bumble bee (*Bombus pensylvanicus*). Two were considered to have low occurrence potential in the BSA: Crotch's bumble bee (*Bombu crotchii*) and Southern California legless lizard (*Anniella stebbinsi*). No sensitive species identified in the literature review were detected during the survey within the BSA.

The monarch butterfly was determined to have a moderate potential of occurrence due to a stand of Eucalyptus species (spp.) that could serve as overwintering habitat. Overwintering season typically takes place during the month of October through March. The canopy density of this stand could provide adequate shelter from rain and is at a relatively low elevation in the area that contains buildings and other features that serve as windbreaks. While the ground cover of the Eucalyptus spp. stand in the school is similar in size, the canopy density is not as extensive. Additionally, the higher elevation of the stand means it is only afforded windbreak protection from the west by the nearby school gymnasium. Buildings and other BSA features of comparable height that could provide windbreak protection to this stand are well above 500 feet away. However, certain features characteristic of ideal habitat, such as nearby host plants or puddling sources of water (that are not so deep as to serve as a drowning risk for monarchs), are not present, which limits the potential of the northernmost stand to serve as overwintering habitat. This species is federally proposed for listing as threatened under the ESA, which requires a consideration of habitat present and potential surveys for elements of a project that may impact overwintering habitat.

The American bumble bee was determined to have a moderate potential for occurrence due to this species being commonly documented within the area, with multiple occurrences within two miles of the BSA. While flowering species throughout the BSA can support general foraging activities, the lack of tall grassland habitat and burrowing mammal species means active site occupation in the form of nesting is limited. Occurrences are therefore likely to be limited to transient encounters. This species is not federally listed as endangered or threatened by the USFWS or CDFW.

Crotch's bumble bee was determined to have a low potential of occurrence due to some suitable site features and modern documented occurrences within two miles of the BSA found during the literature review. Modern occurrences for this species were rarer in comparison to that of the American bumble bee. Flowering species capable of supporting general foraging activities are present.

Flower types that were observed to be in bloom at the time of HANA's site visit were primarily invasive species such as cape honeysuckle, coastal rosemary, and bird of paradise. Most flowering species were in landscaping areas, facing roadways, parking lots, and along general

student walkways and sidewalks. Due to the extent of developed areas, it is estimated that the total plant cover of flowering species suitable for Crotch's bumble bee is less than 5 percent of the entire BSA. This cover is intermittently dispersed throughout the project site, rather than present as an established field or continuous clearing. In addition, a lack of adequate grassland habitat and burrowing mammal species, such as small rodents, that could provide adequate nesting opportunities means occurrences within the BSA would likely be limited to transient encounters. Crotch's bumble bee species is a state candidate for listing as endangered under CESA.

Southern California legless lizard was determined to have a low potential of occurrence due to multiple modern occurrences within two miles of the BSA and low quality habitat being present in the form of suburban gardens and surrounding landscaping. However, most modern occurrences that were found via the literature review highlighted that Southern California legless lizard live primarily within coastal bluff habitat. Lack of direct habitat connectivity within the BSA to areas with bluff or dune habitat because of development limits the potential for this species to occur in the BSA. This species is a CDFW species of special concern.

3.3.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact on biological resources if it would:

a) Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan.

METHODOLOGY

This following impact analysis is based on the Biological Resources Evaluation (BRE) Report (Appendix D), which provides a comprehensive overview of candidate or special status species, sensitive natural communities, protected wetlands, wildlife corridors, or unique native woodlands. Biological resources evaluated included sensitive habitats, special-status plant and animal species, and potential for wildlife movement corridors and were based on a literature review from database research results. Information regarding biological resources within the BSA was obtained from a search of sensitive species databases, a review of pertinent literature, prior environmental documents, and aerial photographs. Biological information obtained from these sources was utilized to perform a programmatic evaluation of existing biological conditions and identify sensitive biological resources that have the potential to occur.

3.3.4 Project Impact Analysis

a) Would the project have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society. The project site is on the developed campus of Mira Costa High School in an urbanized area of Manhattan Beach. The surrounding land uses are entirely built up and include residential neighborhoods, streets, and other school facilities. The site is paved, landscaped, and actively maintained, with no natural open space, native vegetation, or sensitive habitat types present. Below is a discussion of the special status plants and wildlife observed within the project site area.

Special Status Plants

None of the 47 sensitive plant species identified in the literature review were present within the BSA. Two sensitive, but not listed, species have a low potential for occurrence: southern tarplant (*Centromadia parryi ssp. australis*) and paniculate tarplant (*Deinandra paniculata*), and

the remaining 45 have no potential for occurrence. Focused surveys are required for any federal- and/or state-listed endangered species with potential to occur on-site when the species is in bloom to ensure it is both evident and identifiable during the survey. Due to the survey area's developed and maintained nature and its location in a suburban setting, there is no potential for occurrence for all but two of the sensitive species identified in the literature review. The general reconnaissance survey was conducted and found no suitable habitat present for 45 out of 47 of these sensitive species and found no sensitive plant species present within the BSA. No additional rare plant surveys are required. Southern tarplant (California Rare Plant Rank of 1B.1) was not observed within the BSA in its current blooming period of May to November. Paniculate tarplant has a California Plant Rare Rank of 4,which refers to its limited distribution regionally in Southern California; it is not a rare or endangered species. Southern tarplant and paniculate tarplant are not listed species under either the federal or state endangered species act and do not require additional focused surveys or a specific mitigation plan.

Special Status Wildlife

Of the ten sensitive wildlife species identified in the literature review, two have a moderate potential to occur, two have a low potential to occur, and six were determined to have no potential to occur within the BSA. These two species of moderate potential are the federally endangered monarch butterfly and the American bumble bee. The two species of low potential are the federally endangered Crotch's bumble bee and Southern California legless lizard. Because the American bumble bee is not listed as endangered or threatened under the ESA or CESA, no additional focused surveys are recommended. Also, no additional surveys are recommended for the Crotch's bumble bee or southern California legless lizard because of a lack of habitat and site features that would fully support those species.

The monarch butterfly is a migratory species whose potential for occurrence is limited to time of year. The BSA is in the butterfly's overwintering range in coastal California. Overwintering season typically takes place during the month of October through March. A Eucalyptus spp. stand that can provide suitable refuge to overwintering monarch butterflies is an estimated 150 feet from the northernmost border of the proposed project area and in the general vicinity of one of the proposed light poles for the football stadium (see Figure 3.3-2, *Vegetation Communities*). Although the only suitable potential overwintering habitat is outside of project bounds and will not be displaced or directly impacted by ground work, there is a potential for indirect disturbance from light and noise during the overwintering season (October to early February). Implementation of Mitigation Measure BIO-1 would ensure that construction of the proposed project is conducted outside of the monarch overwintering season.

Therefore, this impact is **potentially significant**.

Impact BIO-1: The proposed project would have potential impacts on special status species.

> **Mitigation Measure BIO-1:** Light installation activities at the football stadium will be conducted outside of the monarch overwintering season. If work must occur during this period, avoidance of the Eucalyptus spp. stand and an associated 150-foot buffer must be observed.

Adherence to Mitigation Measure BIO-1 would reduce potential disturbance and noise impacts to a less than significant level for the overwintering monarch population.

Significance with Mitigation: Less than significant.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies; that are known to provide habitat for sensitive animal or plant species; or are known to be important wildlife corridors. The project site is entirely developed and distributed within a developed area. Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. The California Fish and Game Code, Section 2785(e), defines riparian habitat as lands which contain habitat which grows close to, and which depends upon soil moisture from a nearby freshwater source. Landscaping typical of urban areas occurs throughout the school campus—about 90 of 99 plant species are non-native. The majority of proposed project activities are replacing or improving otherwise already-established structures, such as school buildings, and therefore will have no significant impact on existing habitat in the project area.

Therefore, this impact is **less than significant**.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The project site is on the developed campus of Mira Costa HS. The field visit conducted on November 19, 2025, found no signs of previously unidentified wetlands that would overlap with proposed project work areas. Additionally, the proposed project does not overlap with previously known wetlands within Wylie Sump, as discussed in Section 3.4.2, *Existing Conditions*.

However, two wetlands were identified within 500 feet of project site boundaries (see Figure 3.3-1, *Wetlands*). Where feasible, any aquatic features, including the wetland polygons identified in the vicinity of the BSA, must be avoided and minimally disturbed through best management practices. As part of a Stormwater Pollution Prevention Plan (SWPPP), erosion control measures and stormwater best management practices must be incorporated into construction plans, particularly along slopes that drain toward mapped aquatic features or drainages. Implementation of Mitigation Measures BIO-2 and BIO-3 would ensure that construction activities do not disturb adjacent aquatic resources and that monitoring be required during construction activities to ensure BMPs identified in the SWPPP are being implemented.

Therefore, this impact is **potentially significant**.

Impact BIO-2: The proposed project would potentially have an impact on wetlands.

> **Mitigation Measure BIO-2:** When feasible, construction activities within 500 feet of potential aquatic resources shall be scheduled during the dry season (typically May through October) to reduce the risk of hydrologic disruption and erosion. If work must occur outside of the dry season (November through April), enhanced sediment and erosion controls should be utilized as necessary (e.g., two rows of silt fencing or wattles, sediment traps, etc.) as determined by the contractor. Disturbed soils shall be stabilized as soon as practicable following construction through native seed mixes, erosion control blankets, or equivalent methods as approved by agencies.
>
> **Mitigation Measure BIO-3:** To ensure compliance with BIO-2, a qualified monitor must conduct a detailed site inspection at least once per week, or as frequently required by the project-specific SWPPP, during active construction occurring outside the dry season and within 500 feet of aquatic features, and within 24 hours following any rainfall event. Monitoring shall include inspection of all erosion and sediment control measures, photo documentation of work areas, and verification of adherence to avoidance and minimization measures. A weekly monitoring report summarizing site conditions, compliance status, and any corrective actions taken shall be submitted to the lead agency and maintained in the project file. The qualified monitor shall have the authority to halt work if noncompliance is observed until corrective measures are implemented.

Therefore, implementation of Mitigation Measures BIO-2 and BIO-3 would ensure that construction activities associated with the proposed project would not impact nearby wetlands and require compliance with BMPs identified in the SWPPP.

Significance with Mitigation: Less than significant.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?

The project site is in the fully developed campus of Mira Costa HS, situated in the urbanized community of Manhattan Beach. The surrounding land is composed entirely of urban development, including residential neighborhoods, roads, and commercial infrastructure.

Impact on any species that may be using the borders of the school to move throughout the area or potentially nesting within trees would be mitigated by implementation of light operation schedules that minimize usage outside of the intended use for school or sporting events; see Section 3.1, *Aesthetics*.

Despite its developed setting, the BSA should be treated with the potential for general nesting by avian species. Nesting conducted by general bird species is possible throughout the BSA, including in individual trees or high up on school buildings with features such as overhangs and exposed pipes. Implementation of Mitigation Measure BIO-4 would ensure impacts to migratory birds are reduced to a less than significant impact.

Therefore, this impact is **potentially significant**.

Impact BIO-3: The proposed project would have a potential impact in migratory birds.

> **Mitigation Measure BIO-4:** Vegetation clearing or ground-disturbing activities shall be conducted during the non-breeding season (September 1 to February 14) to limit impacts to nesting birds. If vegetation clearing or ground disturbing activities need to take place during breeding season (February 15 through August 31), a pre-construction nesting bird survey(s) will be required to remain in compliance with the Migratory Bird Treaty Act. The survey should be conducted no more than three days prior to the start of work.

Mitigation Measure BIO-4 would require construction, ground-disturbing activities, and vegetation removal to occur outside the general avian nesting season, as well as require pre-construction nesting bird surveys if construction takes place during breeding season. Therefore, implementation of Mitigation Measure BIO-4 would reduce potential impacts to migratory bords to **less than significant.**

Significance with Mitigation: Less than significant.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project site is within the fully developed campus of Mira Costa HS, situated in the urbanized community of Manhattan Beach. The City of Manhattan Beach does not currently have a formal Tree Preservation Ordinance or other adopted local policy specifically protecting native or heritage trees on public school property. Furthermore, there are no local or regional conservation plans applicable to the site that would impose restrictions on landscaping or vegetation removal. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources. **No impact would occur**.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan?

The project area does not fall within any USFWS-designated Critical Habitat, current Habitat Conservation Plan (HCP), or Natural Community Conservation Plan (NCCP) areas. While western snowy plover critical habitat is within two miles of the project area, project activities would have a less than significant impact on this Critical Habitat because of distance or western snowy plover individuals due to the inherent lack of suitable habitat (i.e. beaches, sandy nesting substrates) in the project site or BSA. Due to existing urban development, the BSA additionally lacks movement corridors that could facilitate movement within the designated Critical Habitat, facilitate the movement to or connect one Critical Habitat parcel to another, or potentially colonize new habitat.

Therefore, this impact is **less than significant**.

3.3.5 Cumulative Impact Analysis

Would the project have a cumulative effect related to biological resources?

The proposed project, when considered together with other past, present, and reasonably foreseeable development in the surrounding area, would not result in a cumulatively significant impact on biological resources. The project site is a developed high-school campus characterized by maintained turf, pavement, and existing structures, with minimal habitat value for sensitive species. Although installation of new lighting fixtures and construction activities would result in temporary noise, human activity, and nighttime illumination, these effects would be limited in duration and location and would not combine with nearby projects to substantially reduce the regional habitat base, disrupt wildlife movement corridors, or affect special-status species. Compliance with standard construction best management practices, lighting design measures to minimize spill-over and glare, and applicable regulatory requirements would

ensure that the proposed project's contribution to cumulative biological impacts would not be considerable. Therefore, this impact is **less than significant**.

3.3.6 References

Beach Cities Watershed Management Group. 2018. Enhanced Watershed Management Program (EWMP) for the Beach Cities Watershed Management Area (Santa Monica Bay and Dominguez Channel Watersheds). https://www.waterboards.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/water shed_management/beach_cities/BeachCities_EWMP_March%202018.pdf.

Hana Resources. 2025, December. *Biological Resource Evaluation for Manhattan Beach Unified School District Mira Costa High School Project.* (Appendix D) Redondo Beach, City of. 2024. City of Redondo Beach General Plan, Public Review Draft January 2024. https://www.redondo.org/departments/community_development/planning/general_plan_and _long-range_planning_.php.

3.4 CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (Draft EIR) discusses the potential impacts to cultural, archaeological, and historical resources in Manhattan Beach from implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) project (proposed project). The analysis in this section is based in part on the following technical report:

- *Historic Period Building Evaluation,* HANA Resources Inc., September 2025.

A copy of this study is included in Appendix E to this Draft EIR.

3.4.1 Regulatory Framework

Federal, state, and local laws related to cultural resources that are applicable to the proposed project are summarized below.

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act of 1966 coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the act requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the National Historic Preservation Act, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic

and archeological resources. The NRHP is administered by the National Park Service, which is part of the US Department of the Interior.

To be eligible for listing in the NRHP, a resource must meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of our history.
- Is associated with the lives of persons significant in our past.
- Embodies the distinctive characteristics of a type, period or method of construction, represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- Has yielded, or may be likely to yield, information important in history or prehistory.

To retain historic integrity, a property will always possess several and often most of the aspects of integrity—location, design, setting, materials, workmanship, feeling, and association.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

STATE

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and State-mandated historic preservation programs in California and the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission; require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

California Register of Historical Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register of Historic Resources (CRHR) is the authoritative guide to the state's significant historical and archaeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for State and local planning purposes; determines eligibility for State historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- Is associated with the lives of persons important to local, California, or national history.
- Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may change its historical, cultural, or architectural significance. Resources must retain enough of their historic character or appearance to be recognizable as

historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

California Historical Landmarks

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical significance. The resource must be approved for designation by the county board of supervisors or the city/town council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. A resource must meet at least one of the following criteria:

- Be the first, last, only, or most significant of its type in the state or within a large geographic region (northern, central, or southern California).
- Be associated with an individual or group having a profound influence on the history of California.
- Be a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a landmark and a point. If a point is subsequently granted status as a landmark, the point designation is retired.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- Be the first, last, only, or most significant of its type within the local geographic region (city or county).
- Be associated with an individual or group having a profound influence on the history of the local area.

- Be a prototype of, or an outstanding example of, a period, style, architectural movement or construction or be one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Historic Building Code

The California Historic Building Code—California Code of Regulations, Title 24, Part 8—provides regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or properties designated as qualified historical buildings or properties. The California Historic Building Code is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users.

California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that if human remains are discovered on the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Mills Act

Under the Mills Act, California Government Code Sections 50280 et seq., a city or county may contract with the owner of any qualified historical property to restrict the use of the property. The owner continues to preserve the property, and the State reduces property taxes. The City of Manhattan Beach participates in the Mills Act program and currently has 110 active contracts and several contracts pending.

LOCAL

Manhattan Beach Historic Preservation Program

The purpose of the City's Historic Preservation Program is to provide opportunities to identify and preserve the City's unique history through voluntary preservation of properties that exemplify its historical context.

Manhattan Beach Municipal Code

MBMC Chapter 10.86 (Historic Preservation) establishes provisions for the preservation of historic resources. This ordinance superseded previous urgency ordinances that were adopted by the city council while permanent provisions were developed. Of note, the ordinance specifies that owners' consent is required to designate any property as a historic landmark.

MBMC Section 10.86.040 names the planning commission serves as the City's Historic Preservation Commission and reviews and recommends Historic Landmark designations and other historic preservation applications to the city council for final action.

Manhattan Beach General Plan

The current General Plan's Land Use (LU) Element includes design and development goals and policies that aim to preserve neighborhood character, historic homes/buildings, and landscaping features with historic/cultural importance. The LU Element includes the following land use goal and policies that are relevant to cultural and historic resources.

Goal LU-4: Preserve the features of each community neighborhood, and develop solutions tailored to each neighborhood's unique characteristics.

- **Policy LU-4.4.** Encourage the preservation and enhancement of unique residential homes and buildings throughout Manhattan Beach to preserve the culture and history of the City
- **Policy LU-4.5.** Encourage measures that recognize and work to protect buildings, landscaping, and other features important to the City's history.
- **Policy LU-4.6.** When public improvements are made, they should preserve and maintain distinctive neighborhood characteristics

3.4.2 Existing Conditions

This information is based on the Historic Period Building Evaluation report (Appendix E), which provides a comprehensive overview of the city's historical and cultural context, including known archaeological and paleontological resources and historic-era structures.

HISTORIC SETTING

The Los Angeles Basin, including the South Bay area, was originally part of the Tongva (Gabrielino) people's traditional territory. In 1784, what is now the city of Manhattan Beach was included in a Spanish land concession known as Rancho Sausal Redondo, or "Round Clump of Willows," which extended from present-day Playa del Rey to Hermosa Beach. In 1863, Scottish immigrant Sir Robert Burnett acquired the land, leasing it in 1873 to Canadian Daniel Freeman,

who later purchased it. In 1888, the Atchison Topeka and Santa Fe Railway was first to connect the Redondo Beach wharf to downtown Los Angeles. Soon Manhattan Beach forerunner Potencia was a rail stop, later becoming Shore Acres.

Manhattan Beach was founded in 1901 on the vision of brothers John and Stewart Merrill, who bought the southern, sand-dune-dominated portion of Rancho Sausal Redondo and renamed it Manhattan Beach after a Coney Island resort in their home state of New York. The remaining northern portion was Shore Acres, which was owned by George Peck. The City of Manhattan Beach incorporated in 1912 with 600 residents and early infrastructure that included a pier and wood-planking roads along "The Strand"; a school; and a water system.

The 1901 pier was washed out by a storm in 1913. Another pier was built in 1920 with a roundhouse at the end. Despite similar periodic storm battering, this pier has been repaired and reconstructed over the years to become California State Historic Monument No. 1018. Beside the Santa Fe Railway, in 1903 the Pacific Electric Railway laid tracks along the Strand and started service from Manhattan Beach to Hill Street in downtown Los Angeles. Both rail services were often delayed due to blowing sand. In an effort to tame the dunes, sand was carted to help build the Memorial Coliseum in Los Angeles and moved by barge to help bolster Waikiki Beach in Hawaii.

In 1913, the Manhattan Beach City School District was formed, and construction began on Center School (now Pacific Elementary School) at the corner of Center Street (Manhattan Beach Boulevard) and Pacific Avenue. The school opened in 1914 with 43 students, four classrooms, and two teachers. Until Mira Costa High School opened in 1950, the District had only elementary schools in its jurisdiction. Efforts to bring public schools of all grades under one district umbrella began in the 1960s but were not successful until 1992, when a voter proposition approved formation of Manhattan Beach Unified School District and Redondo Beach Unified School District.

Many of Manhattan Beach's early buildings were beach cottages, and a number of those were seasonal residences. One early resort in the early 1900s was Bruce's Beach, opened for African American beachgoers in 1912 and owned by Willa and Charles Bruce. In 1924, the City claimed the property through eminent domain and paid the Bruces $14,500 instead of their $120,000 claim. In recent years, Los Angeles County initiated efforts to return the land to the Bruce family's descendants.

During World War II, military personnel assigned to Pacific coastal wartime installations became enamored of the beach community lifestyle and often returned as residents after the war. As in the rest of the nation, the post-war era brought prosperity, rapid population increase, and a boom in urban/suburban development. Manhattan Beach's role as an established residential community with upscale homes and modern commercial and retail centers was fortified in that process. In 1980, the City annexed 34 acres of county land, consisting of the area known as El

Porto, a popular surf spot, and in 1981, the Manhattan Village Mall opened. Since then, Manhattan Beach, like other South Bay cities, has expanded residential development and taken on the characteristics of a "bedroom community" in support of the Greater Los Angeles area. As of 2020, the city's total population stood at approximately 35,000 distributed over almost four square miles.

PROJECT SITE HISTORY

Plans for Mira Costa High School were revealed in late 1948 with a group of "finger buildings"—long rectangular classroom buildings—as the core of the campus (Daily Breeze 1948). The architect chosen was Samuel E. Lunden (1897–1995), a versatile professional who was responsible for such landmark buildings as the Los Angeles Stock Exchange (1931) and the Doheny Memorial Library at the University of Southern California. The name "Mira Costa" was selected by the Redondo Union High School board of trustees in January 1949, along with names for buildings in honor of longtime teachers and administrators. Ultimate enrollment was expected to reach 2,000 to 2,500 students. The $646,084 contract for construction of the school was awarded to the Curlett Construction Company.

Groundbreaking took place on May 24, 1949, and by July enough classrooms were completed to hold summer school art classes. When the first classes of the regular school year began on September 7, 1950, the campus consisted of "an assembly-library-study hall building, 20 classrooms, an administrative building, health unit, shop building, office and dressing rooms for physical education class … two grass playfields, one for boys and one for girls … eight paved tennis courts, 10 volleyball courts, and nine basketball courts," with future plans for "14 more classrooms, two shop buildings, an auditorium-gymnasium, and a cafeteria building." Lloyd W. Waller, the former dean of Redondo High School Junior College and championship football coach for Redondo High School, was the first principal at Mira Costa High School with a staff of 30 teachers. Construction and improvements on the campus continued through 1970, then began again in 2000.

- **1953 to 1956:** More classrooms, a music room, a workshop, a library; two wings added to the finger buildings; and an addition to the cafeteria. Construction of a baseball field near the western property boundary and a football field in the northeast corner. Later improvements included a press box and seating for 5,000.

- **1960 to 1962:** The "clamshell" auditorium designed by architects Flewelling and Moody began construction in 1960 at a cost of over $750,000 and was completed in 1962.

- **1967 to 1970:** 12 classrooms, additions to the counseling offices, industrial arts building, library and auto shop; remodels to the coaches' offices, locker rooms, and gyms; a home economics building, a large group instruction building, and a two-story building along the eastern edge of the campus.

- **2000 to 2020:** This most recent phase has largely been an effort to replace outdated buildings with modern ones with sleek designs and prominent exteriors, including a new two-story building in the northeastern part of the campus (2000–2003); Student Services (2003–2004); the "Small Theater" (2014–2016); Building L (math/science; 2012–2014) and Food Services ("Beach Café"); Building G and the quad (2014–2016); and the Mira Costa Sports Complex (2018–2020). A plaque dedicated to Francis Miyosaku Uyematsu was placed in a courtyard on campus in 2021.

HISTORIC RESOURCES NEAR THE PROJECT SITE

Within a quarter-mile radius of the project site, five additional studies were reported to the South Central Coast Information Center (SCCIC). One of them was an overview study completed in 1993 for a water reclamation project that included the entire area of the records search scope; two studies covered all or portions of Hermosa View Elementary School to the southeast; and two covered small areas to the southwest in the neighboring city of Redondo Beach. Despite these past survey efforts, SCCIC records indicate no additional historical/archaeological cultural resources within the quarter-mile scope. However, at least one of the two studies on Hermosa View Elementary School prior to its revamping in 2022 likely resulted in it being recorded in the inventory, and the record has not yet been processed by the SCCIC.

ARCHAEOLOGICAL RESOURCES

The Mira Costa High School campus is a fully developed and extensively disturbed property that has undergone continuous construction, grading, and utility installation since its establishment in the mid-20th century, resulting in substantial modification of the native soil profile. Though the broader Manhattan Beach area was historically occupied by the Tongva/Gabrielino people and contains known prehistoric sites, a records search and review of previous studies indicate that no archaeological resources have been recorded within the project site. Due to the high level of previous ground disturbance, the presence of imported fill, and existing infrastructure, the potential for intact archaeological deposits in the project area is considered low. However, as with any project involving ground disturbance in Southern California, the inadvertent discovery of subsurface cultural materials is still possible, particularly in deeper soils that may not have been previously disturbed.

3.4.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact on cultural resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

c) Disturb any human remains, including those interred outside of dedicated cemeteries.

METHODOLOGY

To determine the presence or absence of historical or archaeological resources on the project site, a review was conducted of the City of Manhattan Beach General Plan and General Plan Environmental Impact Report and relevant federal, state, and local databases, including the National Register of Historic Places and the California Register of Historical Resources. These sources were evaluated to assess whether the project site has been previously identified as containing or being eligible for historical or archaeological resources.

3.4.4 Project Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) 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;

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project would include the installation of two new e-bike parking areas and improvements identified in the District's Mira Costa High School FMP, which includes demolition, new construction, modernization, and renovation of buildings and facilities on campus, as identified

in Table 2-1, *Proposed Changes to Campus Buildings*, of Section 2.6.4, *Facilities Master Plan*. Future project development facilities under the FMP would occur entirely within the existing developed campus.

The proposed project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus.

The proposed project would be implemented within the existing Mira Costa HS campus. The campus is not historically significant and does not contain historic structures. Mira Costa HS is not listed as a historical resource in the National Register of Historic Places, California Historical Landmarks, or California Register of Historical Resources (NPS 2025a, 2024b; OHP 2024a, 2024b). The SCCIC records indicate no additional historical/archaeological cultural resources within a quarter-mile of the project site. The nearest historical resource is Manhattan Beach Pier, which is approximately 1.9 miles northwest of the project site. Additionally, the Cultural Resources Report concluded that development of the proposed project would not constitute a substantial adverse change in the significance of a historical resource, and no further cultural resources investigation was recommended. The campus as a whole was found not to be eligible for listing. Given the nature of the proposed project, the distance, and intervening development, the proposed project would not impact a historical resource. Therefore, there are no resources on the project site that would be considered "historically significant," and impacts would be **less than significant.**

Significance without Mitigation: Less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Manhattan Beach is virtually built out and does not contain any known archaeological resources (Manhattan Beach 2003). The potential for uncovering significant resources during any construction activity is considered remote, given that no such resources have been discovered during past development, and all new future development facilitated by the proposed project would occur on a developed site.

The project site is surrounded by development and is not near any creeks, which decreases the chance that any previously undiscovered prehistoric archaeological deposits are located on the project site. However, there is still potential to discover unknown buried archeological resources, and this impact would be **potentially significant**.

Mitigation Measure CUL-1 would be implemented for the proposed project to address the potential to encounter any additional artifacts or subsurface archaeological resources during

project-related ground-disturbing activities. Additionally, Mitigation Measures TCR-1 through TCR-3, as discussed in Section 3.8, *Tribal Cultural Resources*, would address the potential to encounter any tribal cultural resources during ground-disturbing activities. With the implementation of Mitigation Measures CUL-1 and TCR-1 through TCR-3, potential impacts to archaeological resources would be reduced to **less than significant**.

Impact CUL-1: Project development could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

> **Mitigation Measure CUL-1:** In the event that a prehistoric archeological site indicator or a historic-period archaeological site indicator is uncovered during grading or other construction activities, all ground-disturbing activity within 50 feet of the discovery shall be halted. The District shall be notified of the potential find and a qualified archeologist shall be retained to investigate its significance (CEQA Guidelines15064.5[f]).
>
> Prehistoric archeological site indicators could be obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and hand stones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; locally darkened midden soils, etc. Historic-period site indicators could be fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).

Significance with Mitigation: Less than significant.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

There are no known cemeteries or human burials at the project site. However, the proposed project has the potential to uncover previously unknown human remains during the construction phase, which would excavate holes for installation of the proposed light poles and utility trenching on the project site.

If human remains are encountered during ground-disturbing activities, California Health and Safety Code Section 7050.5 requires that disturbance of the site shall halt and remain halted. The Los Angeles County Coroner shall investigate the circumstances, manner, and cause of any death and recommend the treatment and disposition of the human remains to the person responsible for the excavation or to his or her authorized representative, in the manner provided in Section 5097.98 of the California Public Resources Code. The coroner is required to determine this within two working days of being notified of the discovery of the human remains. If the coroner determines that the remains are not subject to his or her authority or has reason to believe they are Native American, he or she shall contact, by telephone within 24

hours, the NAHC, who will contact the "most likely descendant." The most likely descendant shall receive access to the discovery and provide recommendations or preferences for treatment of the remains within 48 hours of accessing the discovery site. Disposition of human remains and any associated grave goods, if encountered, shall be treated in accordance with procedures and requirements in Sections 5097.94 and 5097.98 of the Public Resources Code, Section 7050.5 of the California Health and Safety Code, and CEQA Guidelines Section 15064.5,

Although soil-disturbing activities associated with the proposed project could result in the discovery of human remains, compliance with existing law would ensure that impacts would be **less than significant**.

Significance without Mitigation: Less than significant.

3.4.5 Cumulative Impact Analysis

Would the project have a cumulative effect related to cultural resources?

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. The study area for the assessment of cumulative impacts related to cultural resources is the Mira Costa HS campus. There are currently no other projects proposed within the campus.

The proposed project would not result in an adverse change in the significance of a historical resource. The project site does not contain known archeological resources or human remains. However, because the proposed project would conduct ground-disturbing activities, the proposed project would require a mitigation measure to minimize its impact to potential archeological materials to a less than significant level and reduce the potential for the project to contribute to cumulative impacts to cultural resources. No other projects are currently planned for the project site. Therefore, the proposed project would not have a cumulative effect related to cultural resources and would be **less than significant**.

Significance without Mitigation: Less than significant.

3.4.6 References

Hana Resources. September 2025. *Historic Period Building Evaluation.* Appendix E.

Manhattan Beach, City of. 2003. *Manhattan Beach General Plan Final Environmental Impact Report*. https://www.manhattanbeach.gov/home/showpublisheddocument/48342/637714691472700000 .

NPS (National Park Service). 2025a, April 28 (accessed). National Register of Historic Places. https://www.nps.gov/subjects/nationalregister/database-research.htm#table.

NPS. 2025b, April 28 (accessed). National Register of Historic Places: Map. https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466.

OHP (California Office of Historic Preservation). 2025a, April 28 (accessed). California Historical Landmarks by County. https://ohp.parks.ca.gov/?page_id=21445.

OHP. 2025b, April 28 (accessed) California Historical Resources. https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=30.

3.5 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (Draft EIR) discusses the potential impacts related to paleontological resources in Manhattan Beach from implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) project (proposed project). The analysis in this section is based in part on the following technical reports.

- *Paleontological Resources Records Search for the Mira Costa High School Field Renovation, Lighting Improvement, and Campus Master Plan Project,* Natural History Museum, Los Angeles County, August 2025.
- *Mira Costa High School Summary of Soils,* HANA Resources, October, 2025.

Copies of these studies are included in Appendix F and Appendix G, respectively, of this Draft EIR.

Impacts related to seismicity, fault rupture, seismically induced ground failure, soil erosion, and unstable soils were evaluated in the Initial Study and found to have no significant impact (see Appendix A).

3.5.1 Regulatory Framework

FEDERAL

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 (PRPA) limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate State or federal agency. Additionally, it specifies these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers. This Act incorporates key findings of a report, “Fossils on Federal Land and Indian Lands,” issued by the Secretary of Interior in 2000, which establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources (USDI 2000). In passing the PRPA, Congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The PRPA codifies existing policies of the Bureau of Land Management, National Park Service, US Forest Service, Bureau of Reclamation, and US Fish and Wildlife Service, and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands.
- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants).
- Uniform definitions for "paleontological resources" and "casual collecting."
- Uniform requirements for curation of federal fossils in approved repositories.

Antiquities Act of 1906

The Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972, with its primary purpose being to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault.

The act requires the State Geologist of the California Geologic Survey to delineate regulatory zones known as "earthquake fault zones" along faults that are "sufficiently active" and "well defined" and to issue and distribute appropriate maps to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction.

Pursuant to this act and as stipulated in the California Code of Regulations (CCR), Title 14, Section 3603(a), structures for human occupancy are not permitted to be placed across the trace of an active fault. The act also prohibits structures for human occupancy within 50 feet of the trace of an active fault, unless proven by an appropriate geotechnical investigation and report that the development site is not underlain by active branches of the active fault, as stipulated in 14 CCR Section 3603(a). Furthermore, the act requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting, as stipulated in 14 CCR Section 3603(d).

STATE

Public Resources Code Section 5097.5 and Section 30244

Paleontological sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA. PRC Division 5, Chapter 1.7, Section 5097.5, and Division 20, Chapter 3, Section 30244 state:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made

> by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

This statute prohibits the removal, without permission, of any paleontological site or feature from lands under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. As a result, local 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. PRC Section 5097.5 establishes the removal of paleontological resources as a misdemeanor and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public lands (state, county, city, and district).

Paleontological Assessment Standards

The California Environmental Quality Act (CEQA) also directs agencies to assess whether a project would have an adverse effect on unique paleontological resources. The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources. Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., as represented in institutional collections). Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant. Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. The sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

LOCAL

Manhattan Beach General Plan

The Manhattan Beach General Plan does not have any goals or policies concerning paleontological resources.

City Manhattan Beach Municipal Code

The MBMC does not have any standards concerning paleontological resources.

3.5.2 Existing Conditions

Soils

A soil summary was conducted by HANA to evaluate the types of soils on the project site (Appendix G). The soil type, 1152–Urban land–Abaft–Marina complex, is presently mapped on the project site. The map unit composition consists of 50 percent urban land, 25 percent abaft and similar soils, 15 percent marina and similar soils, and 10 percent minor components. Information regarding the soil type is provided in Table 3.5-1, *Soil Summary*. Because no mapped soils on the site are hydric, the area does not indicate past wetland conditions that typically enhance fossil preservation, and therefore soil characteristics provide no evidence of elevated paleontological sensitivity.

Table 3.5-1 Soil Summary

Map Unit Composition	Upper Boundary	Lower Boundary	Description
Urban Land	---	---	0–15% slopes, 0 inches to manufactured layer, and very high runoff class
Abaft	0 inches	79 inches	Sand, parent material: discontinuous human-transported material over eolian sands, 0–15% slopes, more than 80 inches to restrictive feature somewhat excessively drained, and negligible runoff class.
Marina	0 inches	79 inches	Sandy loam/sand/loamy sand, parent material: discontinuous human-transported material over eolian sands, 0–15% slopes, more than 80 inches to restrictive feature, somewhat excessively drained, and very low runoff
Minor Components	---	---	Abaft loamy surface: 5% of map unit, no hydric soil rating, side slope/base slope Garey: 5% of map unit, no hydric soil rating, side slope/crest

Source: USDA NRCS Web Soil Survey.

Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils), and can include

mineralized body parts, body impressions, or footprints and burrows. They are valuable, nonrenewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit.

Paleontological Records Search

A records search was conducted by the Natural History Museum of Los Angeles County (see Appendix F. According to the records search, no known fossil localities lie directly within the proposed project site, but there are fossil localities nearby from the sedimentary deposits that may occur in the proposed project area, either at the surface or at depth.

Paleontological Sensitivity

A multilevel ranking system was developed by professional resource managers in the Bureau of Land Management as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system has a multilevel scale based on demonstrated yield of fossils. The PFYC system also provides guidance on assessment and management for different fossil yield rankings. The probability of finding significant fossils in a project area can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the project area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria.

Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average diameter of the sediment particles is reduced to 5 millimeters or less. Moreover, fossil preservation greatly increases after natural burial in rivers, lakes, or oceans. Remains left on the surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. Therefore, the sands, silts, and clays of rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified by the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the *abundance* of localities is the major determinant for the value assignment (BLM 2016).

3.5.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact related to geology if it would:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)

   ii) Strong seismic ground shaking.

   iii) Seismic-related ground failure, including liquefaction.

   iv) Landslides.

b) Result in substantial soil erosion or the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

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

The Initial Study, included as Appendix A, substantiates that no impacts would occur associated with the following thresholds:

- Threshold (a)
- Threshold (b)

- Threshold (c)
- Threshold (d)
- Threshold (e)

METHODOLOGY

Analysis of paleontological resources in this section is based on review of available literature as well as a records search by the Natural History Museum of Los Angeles County (see Appendix F).

3.5.4 Project Impact Analysis

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources are recognized as nonrenewable resources and therefore receive protection under the California Public Resources Code and CEQA. According to the records search, no known fossil localities lie in the project site itself, but there are fossil localities nearby from the sedimentary deposits that may occur in the project site, either at the surface or at depth (see Appendix F).

The project site is in a highly urbanized area of Manhattan Beach. The city does not contain unique geologic features or documented paleontological resources (Manhattan Beach 2003). Given the geology of the city and underlying soils, it is unlikely that the proposed project would encounter unique paleontological resources. In addition, the proposed project would be developed on an already developed site that has been subject to extensive ground disturbance and/or development. Therefore, any paleontological resources that potentially existed on the site have likely been disturbed.

However, grading and construction activities in undeveloped areas or redevelopment that requires more intensive soil excavation than in the past could potentially disturb paleontological resources. Long-term implementation of the proposed project could allow development, including grading, of known and unknown sensitive areas. Therefore, future development accommodated by the proposed project could potentially unearth previously unrecorded resources. All development would be subject to compliance with the established federal, State, and local regulatory framework concerning protection of paleontological resources. Implementation of Mitigation Measures GEO-1 would ensure that the required process is conducted in the event a paleontological resource is uncovered during ground disturbing activities.

Level of Significance Before Mitigation: Potentially significant.

Impact GEO-1: Implementation of the proposed project could impact paleontological resources.

> **Mitigation Measure GEO-1:** In the event of any fossil discovery, ground disturbing activities shall halt within a 50-foot radius of the find until its significance can be determined by a qualified paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology. The most likely repository is the Natural History Museum of Los Angeles County. The repository shall be identified, and a curatorial arrangement shall be signed as part of a Paleontological Impact Mitigation Plan.

Mitigation Measure GEO-1 would apply to any project that encounters any paleontological resource, regardless of depth, to coordinate with a qualified paleontologist and any applicable experts in order to collect the resources. Adherence to the mitigation measures would reduce impacts to less than significant.

Level of Significance with Mitigation: Less Than Significant.

3.5.5 Cumulative Impact Analysis

Would the project have a cumulative effect related to geological resources?

For purposes of the paleontological resources impact analysis, cumulative impacts are considered for cumulative development within the City of Manhattan Beach and the Manhattan Beach Unified School District. Should fossil resources be present in the project site's subsurface, ground-disturbing activities associated with excavations could directly or indirectly destroy a unique paleontological resource. Following compliance with GEO-1, the proposed project would not destroy a unique paleontological resource or site or unique geologic feature, and impacts would be less than significant. Cumulative projects could involve excavations that could destroy known or as-yet-undiscovered paleontological resources specific to those development sites. Other related projects under development would also be subject to project-level review and project-specific measures would be required, as needed, to reduce significant impacts. All development would be subject to compliance with the established federal, State, and local regulatory framework concerning protection of paleontological resources on a project-by-project basis. Where significant or potentially significant impacts are identified, implementation of all feasible site-specific mitigation would be required to avoid or reduce impacts. Therefore, the proposed project combined with other cumulative development would not result in significant cumulative environmental impacts concerning paleontological resources.

Level of Significance with Mitigation: Less Than Significant.

3.5.6 References

BLM (Bureau of Land Management). 2016. *Potential Fossil Yield Classification System*. https://www.blm.gov/sites/blm.gov/files/uploads/IM2016-124_att1.pdf.

Hana Resources. 2025, October. *Mira Costa High School Summary of Soils*. (Appendix G)

Manhattan Beach, City of. 2003. *Manhattan Beach General Plan Final Environmental Impact Report*. https://www.manhattanbeach.gov/home/showpublisheddocument/48342/637714691472700000.

Natural History Museum of Los Angeles County. August 2025. *Paleontological Resources Records Search for the Mira Costa High School Field Renovation, Lighting Improvement, and Campus Master Plan Project*. (Appendix F)

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3.6 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mira Costa High School Field Renovation, Lighting Improvements, and Facilities Master Plan Project (proposed project) to result in noise impacts in the noise environment in the local vicinity. Specifically, this section summarizes relevant federal, State, and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; and evaluates potential noise impacts. This evaluation uses procedures and methodologies specified by the Federal Transit Administration (FTA). The analysis in this section is based in part on the noise modeling data in Appendix H of this Draft EIR.

Comments related to noise were received during the Notice of Preparation public comment period and/or public scoping meeting held for the proposed project and have been addressed in this section. The NOP is included as Appendix A of this document.

Terminology

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq})**; also called the Energy-Equivalent Noise Level. The value of an equivalent, steady sound level that, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L10 level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 pm to 7:00 am.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and Ldn values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the Ldn value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Peak Particle Velocity (PPV).** The peak signal value of an oscillating vibration velocity waveform usually expressed in inches per second (in/sec).

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Noise Fundamentals

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

SOUND FUNDAMENTALS

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions, and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment, and a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

SOUND MEASUREMENT

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation

period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8, and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These "L" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the Lmin and Lmax. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, an artificial dB increment is added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 a.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24 hour level with the CNEL being only slightly more restrictive (i.e., higher)

PSYCHOLOGICAL AND PHYSIOLOGICAL EFFECTS OF NOISE

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium, such as the ground or a building. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers.

AMPLITUDE

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration

signal, and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage. The units for PPV are normally inches per second (in/sec). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3.6-1, *Human Reaction to Typical Vibration Levels*, shows the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3.6-1 Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity	Human Reaction	Effect on Buildings
0.006–0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwellings – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans 2013.

3.6.1 Regulatory Framework

FEDERAL

Construction Noise and Vibration

The Federal Transit Administration (FTA) oversees safety measures related to noise and vibration. The FTA's Transit Noise and Vibration Impact Assessment manual indicates that 80 A-weighted decibels (dBA) equivalent sound level (L_{eq}) is reasonable criteria for assessing construction noise levels at residential uses (FTA 2018). In the absence of local construction noise limits, the FTA recommended 80 dBA L_{eq} criteria is used to assess the significance of construction noise levels at residential receivers as recommended by the FTA are shown in Table 3.6-2, *FTA Detailed Analysis Construction Noise Criteria*.

Table 3.6-2 FTA Detailed Analysis Construction Noise Criteria

Building/Structural Category	L_{eq}.equip (8hr) dBA		Ldn.equip (30day) dBA
	Day	Night	
Residential	80	70	75
Commercial	85	85	80
Industrial	90	90	85

Source: FTA 2018.

The FTA also provides criteria for acceptable levels of groundborne vibration for various types of buildings. Structures amplify groundborne vibration; wood-frame buildings, such as typical residential structures, are more affected by ground vibration than heavier buildings. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively, but the standards recommended by the FTA are shown in Table 3.6-3, *FTA Construction Vibration Damage Criteria*.

Table 3.6-3 FTA Construction Vibration Damage Criteria

Building/Structural Category	Peak Particle Velocity (PPV) (in/sec)	Approximate Vibration dB
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018.

in/sec = inches per second

According to FTA's *Transit Noise and Vibration Impact Assessment Manual*, a vibration velocity (VdB) of 75 to 80 VdB will annoy individuals. Table 3.6-4, *Human Response to Different Levels of Groundborne Vibration and Noise*, presents the human response to different levels of ground-borne vibration and noise. For purposes of analysis in this Draft EIR, the threshold of 75 VdB will be applied.

Table 3.6-4 Human Response to Different Levels of Groundborne Vibration and Noise

Vibration Velocity Level	Nosie Level		Human Response
	Low Frequency	Mid Frequency	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many humans. Low-frequency sound: usually inaudible. Mid-frequency sound: excessive for quiet sleeping areas.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise: tolerable for sleeping areas. Mid-frequency noise: excessive in most quiet occupied areas.
85 VdB	45 dBA	60 dBA	Vibration tolerable only if there are an infrequent number of events per day. Low-frequency noise: excessive for sleeping areas. Midfrequency noise: excessive even for infrequent events for some activities.

Source: FTA 2018, Table 5-5.

Low Frequency= Approximate noise level when vibration spectrum peak is near 30 hertz (Hz).

Mid Frequency= Approximate noise level when vibration spectrum peak is near 60 Hz.

STATE

California Code of Regulations

Title 24, Part 11. The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65

dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA L_{eq} (1hr).

Title 5, Section 14040(q). Under Title 5, the California Department of Education (CDE) regulations require a school district to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

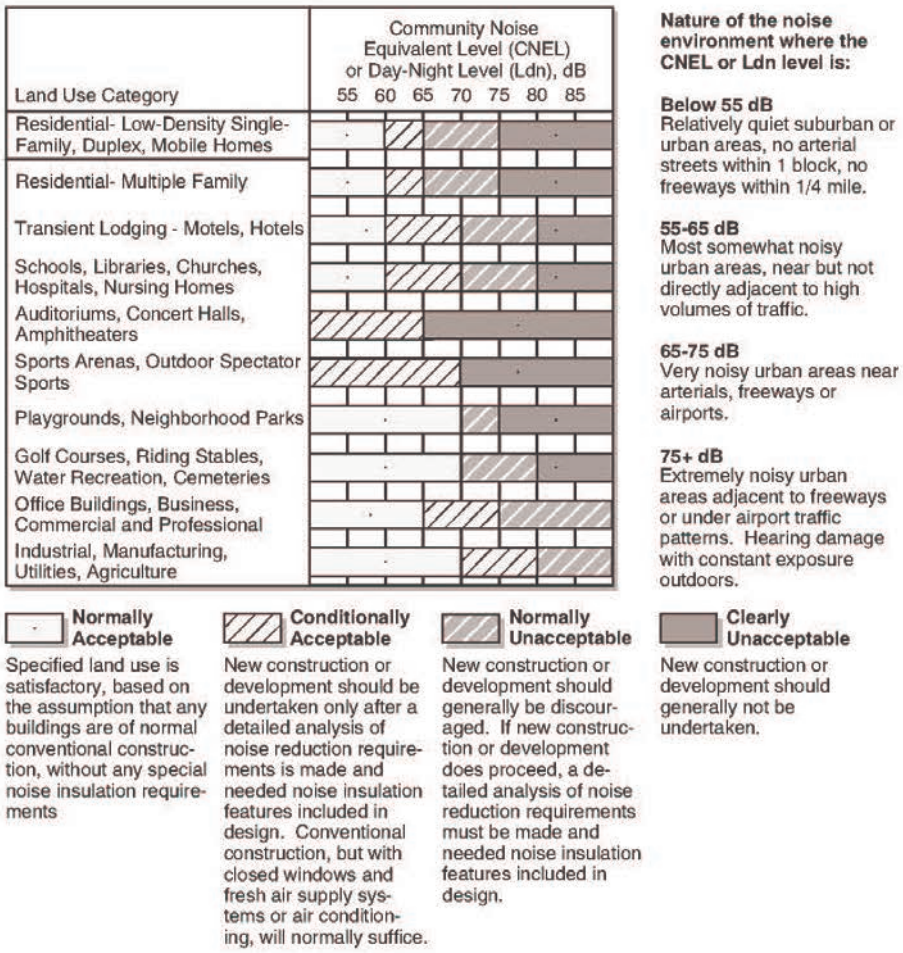
LOCAL

City of Manhattan Beach General Plan

The City of Manhattan Beach General Plan Noise Element identifies the City's noise compatibility standards and identifies goals and policies aimed at maintaining a healthy noise environment. Figure 3.6-1, *City of Manhattan Beach Figure N-2 Noise/Land Use Compatibility Matrix*, identifies the maximum exterior noise levels for each land use category. The standards assume the incorporation of California State Law requirements into all projects. Noise impacts can be reduced and addressed through the employment of goals and policies identified in the Noise Element. The following goals and policies applicable to the proposed project.

Goal N-1: Provide for measures to reduce noise impacts from transportation noise sources.

- **Policy N-1.1.** Use proven methods of reducing the transmission of traffic noise onto adjacent noise-sensitive land uses (e.g., residences, schools, medical facilities).
- **Policy N-1.3.** Reduce transportation noise through proper design and coordination of vehicle routing.



Source: Manhattan Beach General Plan; 2003 Noise Element, page 9.

Figure 3.6-1

City of Manhattan Beach Figure N-2 Noise/Land Use Compatibility Matrix

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- **Policy N-1.6.** Work with surrounding jurisdictions and other agencies to mitigate noise impacts.

Goal N-2: Incorporate noise considerations into land use planning decisions.

- **Policy N-2.1.** Establish acceptable limits of noise for various land uses throughout the community.
- **Policy N-2.2.** Ensure acceptable noise levels near residences, schools, medical facilities, and other noise-sensitive areas.
- **Policy N-2.3.** Establish standards for all types of noise not already governed by local ordinances or preempted by State or Federal law.
- **Policy N-2.4.** Encourage acoustical design in new construction.
- **Policy N-2.5.** Require that the potential for noise be considered when approving new development to reduce the possibility of adverse effects related to noise generated by new development, as well as impacts from surrounding noise generators on the new development.

Goal N-3: Minimize the impact of non-transportation noise sources.

- **Policy N-3.1.** Monitor and update the Noise Ordinance to mitigate noise conflicts.
- **Policy N-3.2.** Enforce the Noise Ordinance.
- **Policy N-3.3.** Minimize impacts associated with single-event noise activities.
- **Policy N-3.4.** Recognize in the Noise Ordinance that nighttime noise levels create a greater sensitivity than do daytime noise levels.
- **Policy N-3.6.** Monitor and minimize noise impacts associated with construction activities on residential neighborhoods.

City of Manhattan Beach Municipal Code

The City of Manhattan Beach Municipal Code includes a noise ordinance in Chapter 5.48, Noise Regulations, that limits daytime and nighttime exterior noise levels. Exterior noise limits are summarized in Table 3.6-5, *Exterior Noise Limits*. Exempt from the noise limits in Table 3.6-5 are activities conducted on public or private school grounds such as athletic and entertainment events (Section 5.48.150, Amplified Sound Permits and Section 5.48.200, Outdoor Activities). Construction activities are also exempt under Section 5.48.250, Construction Activity, during the

hours of 7:30 am to 6:00 pm on weekdays and 9:00 am to 6:00 pm Saturdays. No construction activities shall take place on Sundays or on City-recognized holidays.

Table 3.6-5 City of Manhattan Beach Exterior Noise Limits

Designated Land Use or Zoning Classification	Time of Day	Exterior Noise Level, dBA
Residential	7:00 AM to 10:00 PM	50
	10:00 PM to 7:00 AM	45
Commercial	7:00 AM to 10:00 PM	65
	10:00 PM to 7:00 AM	60
Industrial	7:00 AM to 10:00 PM	70
	10:00 PM to 7:00 AM	70

Source: City of Manhattan Beach Municipal Code 5.48.160.

Notes: Exterior noise standards may not be exceeded:

- For a cumulative period of more than 30 minutes in any hour (L50)
- By 5 dBA for a cumulative period of more than 15 minutes in any hour (L25)
- By 10 dBA for a cumulative period of more than 5 minutes in any hour (L8)
- By 15 dBA for a cumulative period of more than 1 minutes in any hour (L2)
- By 20 dBA for any period of time (L_{max})

City of Redondo Beach Municipal Code

The project site is also adjacent to receptors in Redondo Beach and Hermosa Beach to the south across Artesia Blvd. The City of Redondo Beach's municipal code includes various directives pertaining to noise. Title 4, Chapter 24, Noise Regulation, establishes regulations to protect the inhabitants of the City against all forms of nuisances. Article 3, Exterior Noise Limits, and Article 4, Interior Noise Standards, establish permissible sound levels by land use category. For residential uses, the maximum permissible sound level is 45 dBA during the nighttime hours of 10:00 pm to 7:00 am and 50 dBA during the daytime hours of 7:00 am to 10:00 pm.

Guidelines related to construction noise and vibration impacts are included in Article 5 of the Redondo Beach Municipal Code. Section 4-24-503 establishes the following requirements to protect the inhabitants of the City against construction noise as follows:

a) All construction activity shall be prohibited, except between the hours of 7:00 a.m. and 6:00 p.m. on Monday, Tuesday, Wednesday, Thursday, and Friday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday. No construction activity shall be permitted on Sunday, or the days on which the holidays designated as Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, and New Year's Day are observed.

City of Hermosa Beach Municipal Code

The City of Hermosa Beach's Municipal Code includes various directives pertaining to noise. Title 8, Chapter 24, Noise control, establishes regulations to protect the inhabitants of the City against all forms of nuisances. Section 8.24.050, Construction, establishes permissible hours of construction. All construction shall be conducted between the hours of 8:00 am and 6:00 pm, Monday through Friday (except national holidays), and 9:00 am and 5:00 pm Saturdays. Construction activity is prohibited at all other hours and on Sundays and national holidays. Section 8.24.090, Exemptions, (C), Outdoor Activities, exempts activities conducted on public playgrounds, fully licensed and approved child day care facilities within residential areas as permitted by law, and public or private school grounds, including but not limited to school athletic and school entertainment events.

3.6.2 Existing Conditions

The project site encompasses the entire 37-acre Mira Costa HS campus. The existing stadium is in the northeastern portion of the campus along South Peck Avenue; the West field is in the northwestern portion of the campus along Meadows Avenue; and the softball/baseball fields are in the southwestern portion of the campus along Meadows Avenue and Artesia Boulevard. The project site is bordered by District facilities and residential uses to the north, and residential neighborhoods surround the project on all sides.

The noise environment surrounding the campus is characterized by roadway traffic from Peck Avenue, Voorhees Avenue, and Meadows Avenue and residential activities. Intermittent noise from the campus (students talking and bells/buzzers) also contributes to the existing ambient noise environment. The nearest sensitive receptors to the project site are the single-family residences to the west, across Meadows Avenue, to the north in Manhattan Estates, and to the east, across Peck Avenue.

SHORT-TERM NOISE MEASUREMENTS

Short-term (15-minute) measurements were conducted at two locations around the project site. Measurements were conducted in the evening during the campus graduation on Thursday, June 12, 2025. The short-term sound level meter (SLM), a Larson Davis LxT, satisfies the American National Standards Institute standard for Type 1 instrumentation. The meter was set to "slow" response and "A" weighting (dBA) and calibrated prior to and after each monitoring period. Measurements were at least five feet above the ground and away from reflective surfaces. Temperatures were moderate, approximately 74 degrees Fahrenheit, with wind speeds of 5 to 10 miles per hour and moderate humidity. Measurement locations are described below and shown on Figure 3.6-2, *Noise Monitoring Locations*, and results are summarized in Table 3.6-6, *Short-Term Noise Measurements Summary in A-Weighted Sound Levels*.

Short-Term Location 1 (ST-1) was at the corner of Peck Avenue and Voorhees Avenue, at 1501 Voorhees Avenue, approximately 165 feet northeast of the track and field. A 15-minute noise measurement began at 5:30 pm on Thursday, June 12, 2025. The noise environment is characterized by campus graduation crowd noise, PA system, and music. Noise levels measured 63.8 dBA L_{eq} and 80.8 dBA L_{max} during the measurement period at ST-1.

Short-Term Location 2 (ST-2) was at the western portion of Meadows Avenue, adjacent to 1280 Shelley Street, approximately 60 feet from the western wall bounding the campus. A 15-minute noise measurement began at 6:11 pm on Thursday, June 12, 2024. The noise environment is characterized by residential traffic on Meadows Avenue and sports practices on the Mira Costa HS fields. Noise levels measured 60.2 dBA L_{eq} and 76.0 dBA L_{max} during the measurement period at ST-2.

Table 3.6-6 Short-Term Noise Measurements Summary in A-Weighted Sound Levels

Monitoring Location	Description	15-minute Noise Level, dBA						
		L_{eq}	L_{max}	L_{min}	L_{50}	L_{25}	L_{8}	L_{2}
ST-1	Corner of 1501 Voorhees Avenue 6/12/25, 5:30 PM	63.8	80.8	48.7	60.3	62.9	66.3	70.4
ST-2	Adjacent to existing baseball fields along Meadows Ave, near 1280 Shelly Street 6/12/25, 6:11 PM	60.2	76.0	43.9	50.8	59.2	65.9	59.1

Source: Appendix H.



Source: Nearmap 2025.

Figure 3.6-2
Noise Monitoring Locations

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LONG-TERM NOISE MEASUREMENTS

Ambient noise monitoring was conducted over a 24-hour period from June 12 to June 13, 2025, and captured noise at graduation on June 12th. Three long-term noise monitoring locations were adjacent to existing noise sensitive receptors to the north, east, and west of project site playfields and stadium. The noise environment was characterized primarily by graduation activities and traffic noise within residential roadways, specifically on Peck Avenue, Voorhees Avenue, and Meadows Avenue. The Picollo II SLMs deployed for noise monitoring satisfy the American National Standards Institute standard for Type II instrumentation. Long-term SLMs were set to "slow" response and "A" weighting (dBA), five feet above the ground, and away from reflective surfaces. Long-term measurement results at each of the three locations are described in the following paragraphs and summarized in Tables 3.6-7 to 3.6-9, *Long-Term Noise Measurements*. Figure 3.6-2, *Noise Monitoring Locations*, shows the long-term (24-hour) noise measurement locations. Additional noise monitoring data is shown in Appendix H to this Draft EIR.

Long-Term Location 1 (LT-1) was on the western side of Peck Avenue, at the southern portion of the track and field. LT-1 was 170 feet from the closest light pole (to the east) on the track and field and approximately 60 feet from the residential wall at 438 S Peck Avenue. The noise environment was characterized by traffic noise on Peck Avenue; graduation event noise (i.e., PA system, crowd and student cheering/talking); and various residential noise, including dogs barking, plane flying overhead, birds, and wind. Noise levels measured 61.5 dBA CNEL at LT-1.

Long-Term Location 2 (LT-2) was in the District facility parking lot, adjacent to the backyard of 1360 S Rowell Avenue. The meter was 50 feet from the track and field fence and 215 feet from the District building. The residence at 1360 S Rowell Avenue has a 6-foot block wall on top of a dirt berm. The noise environment was characterized by traffic noise on Voorhees Avenue; graduation event noise (i.e., PA system, crowd and student cheering/talking); and various residential noise, including dogs barking, plane flying overhead, birds, and wind. Noise levels measured 52.0 dBA CNEL at LT-2.

Long-Term Location 3 (LT-3) was on the western side of Meadows Avenue, adjacent to the backyard of 1280 Shelley Street and 60 feet from the western wall of the Mira Costa HS campus. The noise environment was dominated by traffic on Meadows Avenue. Noise levels measured 65.6 dBA CNEL.

Table 3.6-7 Long-Term Noise Measurements, LT-1

June 12–13, 2025: 61.5 dBA CNEL					
Time	L_{eq} (dBA)	L_{max} (dBA)	Time	L_{eq} (dBA)	L_{max} (dBA)
4:00 PM	64.5	78.0	4:00 AM	55.3	75.6
5:00 PM	65.4	76.2	5:00 AM	61.2	75.6
6:00 PM	65.2	77.6	6:00 AM	65.9	80.5
7:00 PM	64.7	86.0	7:00 AM	65.9	77.8
8:00 PM	62.6	76.4	8:00 AM	65.6	87.6
9:00 PM	61.2	74.7	9:00 AM	63.9	77.0
10:00 PM	59.5	74.1	10:00 AM	63.3	76.5
11:00 PM	56.6	75.3	11:00 AM	65.3	89.1
12:00 AM	55.0	73.3	12:00 PM	63.6	80.9
1:00 AM	50.9	72.7	1:00 PM	63.4	81.1
2:00 AM	48.0	73.0	2:00 PM	64.3	81.5
3:00 AM	52.2	78.0	3:00 PM	64.6	79.4

Source: Appendix H.

Table 3.6-8 Long-Term Noise Measurement, LT-2

June 12–13, 2025, 2025: 52.0 dBA CNEL					
Time	L_{eq} (dBA)	L_{max} (dBA)	Time	L_{eq} (dBA)	L_{max} (dBA)
4:00 PM	64.5	78.0	4:00 AM	55.3	75.6
5:00 PM	65.4	76.2	5:00 AM	61.2	75.6
6:00 PM	65.2	77.6	6:00 AM	65.9	80.5
7:00 PM	64.7	86.0	7:00 AM	65.9	77.8
8:00 PM	62.6	76.4	8:00 AM	65.6	87.6
9:00 PM	61.2	74.7	9:00 AM	63.9	77.0
10:00 PM	59.5	74.1	10:00 AM	63.3	76.5
11:00 PM	56.6	75.3	11:00 AM	65.3	89.1
12:00 AM	55.0	73.3	12:00 PM	63.6	80.9
1:00 AM	50.9	72.7	1:00 PM	63.4	81.1
2:00 AM	48.0	73.0	2:00 PM	64.3	81.5
3:00 AM	52.2	78.0	3:00 PM	64.6	79.4

Source: Appendix H.

Table 3.6-9 Long-Term Noise Measurement, LT-3

June 12–13, 2025, 2025: 65.6 dBA CNEL					
Time	L_{eq} (dBA)	L_{max} (dBA)	Time	L_{eq} (dBA)	L_{max} (dBA)
4:00 PM	64.5	78.0	4:00 AM	55.3	75.6
5:00 PM	65.4	76.2	5:00 AM	61.2	75.6
6:00 PM	65.2	77.6	6:00 AM	65.9	80.5
7:00 PM	64.7	86.0	7:00 AM	65.9	77.8
8:00 PM	62.6	76.4	8:00 AM	65.6	87.6
9:00 PM	61.2	74.7	9:00 AM	63.9	77.0
10:00 PM	59.5	74.1	10:00 AM	63.3	76.5
11:00 PM	56.6	75.3	11:00 AM	65.3	89.1
12:00 AM	55.0	73.3	12:00 PM	63.6	80.9
1:00 AM	50.9	72.7	1:00 PM	63.4	81.1
2:00 AM	48.0	73.0	2:00 PM	64.3	81.5
3:00 AM	52.2	78.0	3:00 PM	64.6	79.4

Source: Appendix H.

3.6.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, *Environmental Checklist Form*, of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact related to noise if it would:

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

b) Generate excessive groundborne vibration or groundborne noise levels.

c) For a project within the vicinity of a private airstrip or 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, if the project would expose people residing or working in the project area to excessive noise levels.

THRESHOLD GUIDANCE

Stationary Source Noise

The City of Manhattan Beach's noise ordinance establishes daytime and nighttime exterior noise levels to determine project-related noise impact significance. A significant impact would occur if the proposed project exceeds the City's exterior noise limits, summarized in Table 3.6-5. Exempt from the noise limits in Table 3.6-5 are activities conducted on public or private school grounds such as athletic and entertainment events (Section 5.48.150, Amplified Sound Permits, and Section 5.48.200, Outdoor Activities).

Construction Noise

The City of Manhattan Beach's municipal code regulates the timing of construction activities, which are limited to 7:30 am to 6:00 pm on weekdays and 9:00 am to 6:00 pm Saturdays. This analysis focuses on noise impacts for nearby residential areas. According to Federal Transit Administration (FTA) criteria, construction noise exceeding 80 dBA at homes would be considered a significant impact.

Vibration

The FTA vibration criteria are used to evaluate vibration structural damage. The potential for construction-related vibration impacts depends on the magnitude of vibration generated by the construction equipment, the frequency of occurrence of the vibration during the construction day, and total duration of construction activities. According to FTA vibration criteria, construction vibration exceeding 0.20 PPV (in/sec) at structures would be considered a significant impact.

Transportation Noise

A project will normally have a significant effect on the environment related to noise if transportation noise would substantially increase the ambient noise levels for adjoining noise sensitive areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 dBA to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance, similar to those recommended by the Federal Aviation Administration (FAA), are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if project traffic noise increases would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL
- 5 dBA in ambient noise environments of less than 60 dBA CNEL

A significant cumulative traffic noise impact occurs when the thresholds above are exceeded under cumulative conditions (with project) and the contribution of the project to future traffic is calculated to be greater than 1.5 dBA to 5 dBA CNEL, based on ambient noise levels.

METHODOLOGY

This noise evaluation was prepared in accordance with the California Environmental Quality Act (CEQA) to determine whether the proposed Mira Costa High School Field Renovation, Lighting Improvements, and Facilities Master Plan project would result in significant construction or operational noise impacts at nearby off-site sensitive receptors. Consistent with the California Supreme Court ruling in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, CEQA does not generally require analysis of the effects of the existing environment on a project's future users. Therefore, noise compatibility for on-site sensitive receptors, such as students and staff is not subject to CEQA significance determinations. However, the project must comply with applicable City regulations and building standards to ensure a suitable acoustic environment for educational use.

The construction noise analysis uses the Roadway Construction Noise Model (RCNM) based on an anticipated equipment mix for individual construction activities verified by the District. The simultaneous use of the three loudest pieces of equipment for each construction activity is modeled from the appropriate acoustical center of the construction site to the nearest sensitive receptor property line. Groundborne vibration and vibration noise are determined using FTA methodology and reference vibration levels for typical construction equipment (FTA 2018). Construction activities are subject to Manhattan Beach Municipal Code Section 5.48.250, which limits work to the hours between 7:30 am to 6:00 pm on weekdays and 9:00 am to 6:00 pm Saturdays, and must comply with General Plan Policy N-3.6, which require feasible mitigation and proper equipment maintenance to reduce short-term noise impacts.

Though CEQA does not require a significance determination for on-site noise compatibility, the project would be conditioned to meet all applicable City and State standards to ensure construction and long-term operations do not result in adverse noise impacts to surrounding sensitive receptors.

3.6.4 Project Impact Analysis

a) Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise

The transport of workers and materials to and from the construction site has the potential to increase noise levels along local access roadways to the project site. Individual construction vehicle passes-by and haul trucks may create momentary and short-lived noise levels. However, daily construction trips would be minimal compared to existing conditions and temporary.

The project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also include the installation of two new e-bike parking areas on campus and various improvements identified in the District's Mira Costa High School Facilities Master Plan. Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, and the timing and duration of the noise-generating activities. Noise levels from construction activities are dominated by the loudest piece of construction equipment. The dominant noise source is typically the engine, although work piece noise (such as dropping of materials) can also be noticeable. For the proposed project, construction noise is dominated by the loudest piece of equipment needed for each construction phase. No nighttime work or the use of pile-driving equipment is proposed.

The noise produced at each construction phase is determined by combining the L_{eq} contributions from the three loudest pieces of equipment used at a given time while accounting for the ongoing time-variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment.

Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance—conservatively disregarding other attenuation effects from air absorption, ground effects, and shielding effects provided by intervening structures or existing solid walls—the average noise

levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site (site of each development phase) with different equipment mixes, loads, and power requirements.

The expected construction equipment mix was estimated and categorized by construction activity using the Federal Highway Administration Roadway Construction Model (RCNM). Assuming the nearest sensitive receptor to the closest boundary for project construction activities, construction-related noise levels would be up to 78 dBA L_{eq} at residences to the north. Construction noise levels at receptors further away are estimated to be even less. The results are summarized in Table 3.6-10, *Project-Related Construction Noise Levels, dBA at the Nearest Receptors*.

Table 3.6-10 Project-Related Construction Noise Level, dBA at the Nearest Receptors

Construction Activity Phase	Noise Levels in dBA L_{eq}				
	RCNM Reference Noise Level	**Residential Receptor North**	**Residential Receptor East**	**Residential Receptor South**	**Residential West**
Distance (feet)	**50**	**400**	**550**	**445**	**385**
Demolition	84	66	63	65	66
Distance (feet)	**50**	**450**	**580**	**450**	**425**
Site Preparation	84	65	63	65	65
Grading	85	66	64	66	66
Building Construction	80	61	59	61	61
Architectural Coating	74	55	53	55	55
Distance (feet)	**50**	**405**	**500**	**290**	**460**
Paving	80	62	60	65	61
Distance (feet)	**50**	**40**	**150**	**450**	**70**
Utility Trenching	76	78	66	57	73
Light Installation	74	76	64	55	71
Exceeds FTA 80 L_{eq} Standard?		**No**	**No**	**No**	**No**

Source: FHWA's RCNM software. See Appendix H.

Notes: Distance measurements were taken using Google Earth (2025) from the area of anticipated construction to the property line of the nearest receptors.

dBA L_{eq} = Energy Average Sound Levels

Proposed Field Lighting Improvements

Off-Site Receptors

The anticipated construction equipment (e.g., crane, manlift, front end loader) was modeled using the FHWA RCNM. The types of pieces of equipment to be deployed during each construction phase were determined as part of the air quality and GHG emissions analyses for this proposed project. The nearest sensitive receptor property line to proposed Field Lighting Improvements construction activities are single-family homes approximately 40 feet to the north. These residences would be exposed to short term, periodic noise levels of up to 78 dBA L_{eq} during utility trenching and 76 dBA L_{eq} during light installation.

On-Campus Receptors

Students would occupy classrooms on site during construction phases of proposed Field Lighting Improvements. Construction activities could occur within 40 feet of existing classroom buildings. Based on Table 3.6-10, field lighting construction noise levels would range between 76 dBA and 78 dBA Leq at 50 feet per RCNM Reference Noise Levels. Typical exterior-to-interior noise attenuation with windows and doors closed is 25 dBA. This would result in short term, periodic interior noise levels of approximately 51 dBA to 53 dBA Leq. Speech interference is considered intolerable when background noise levels exceed 60 dBA. Therefore, average construction noise levels are not expected to exceed 60 dBA Leq within adjacent classrooms based on typical exterior-to-interior noise attenuation.

Proposed Facilities Master Plan

Offsite Receptors

The anticipated construction equipment (e.g., auger drill rig, backhoe, grader, tractor, and roller) was modeled using the FHWA RCNM. The types of pieces of equipment to be deployed during each construction phase were determined as part of the air quality and GHG emissions analyses for this proposed project. Demolition, grading and site preparation noise levels would range between 63 dBA and 66 dBA Leq at the nearest sensitive receptor property line adjacent to the school campus. The nearest sensitive receptor property line to proposed Facilities Master Plan construction activities (paving) are single-family homes approximately 290 feet to the south. These residences would be exposed to short term, periodic noise levels of up to 65 dBA L_{eq}.

On-Campus Receptors

Students would occupy classrooms on site during construction phases of the Facilities Master Plan. Construction activities (site preparation, paving, building construction, and architectural coating) could occur within 50 feet of existing classroom buildings. As shown in Table 3.6-10, construction noise levels would range between 74 dBA and 84 dBA Leq at 50 feet per the RCNM Reference Noise Level. Typical exterior-to-interior noise attenuation with windows and doors

closed is 25 dBA. This would result in interior noise levels of approximately 49 dBA to 59 dBA Leq. Speech interference is considered intolerable when background noise levels exceed 60 dBA. Therefore, average construction noise levels are not expected to exceed 60 dBA Leq within adjacent classrooms based on typical exterior-to-interior noise attenuation.

Conclusion

The proposed project's construction activities would occur within the permitted time frame identified in the City of Manhattan Beach's Municipal Code Section 5.48.250 (7:30 am to 6:30 pm on weekdays and 9:00 am to 6:00 pm Saturdays). The permitted time frame for construction activities acknowledges that construction activities during daytime hours are a typical part of urban living and generally do not cause significant disruption.

Construction would occur throughout the project site and thereby would be further than 50 feet at times, which would reduce interior noise levels. In addition, to avoid classroom disruption, some work would be done during instructional breaks when students are off campus. Because the proposed project's construction activities would not exceed the FTA noise standards (80 L_{eq}), would not cause classroom speech interference, and would comply with the City's municipal code, the proposed Field Lighting Improvements and Facilities Master Plan construction-related noise impacts would be **less than significant.**

Operational Noise

Proposed Field Lighting Improvements

The primary on-site operational noise sources associated with proposed Field Lighting Improvements include sporting events and non-sporting events. The proposed project would not increase capacity at the athletic fields and would not include improvements to the fields or athletic amenities beyond the proposed new field lighting. The proposed project would add practice times at the athletic fields into the evening to a maximum of 9:00 pm. Proposed project practice field activities would comply with the City of Manhattan Beach Noise Standards set by the Manhattan Beach Municipal Code. The proposed Field Lighting Improvements would result in an increase of similar existing events (sporting practices and games), with start and end times ranging from 9:00 am to 9:00 pm; however, the proposed Field Lighting Improvements would not result in an increase of operational noise.

Proposed Facilities Master Plan

The primary on-site operational noise sources associated with the proposed Facilities Master Plan include existing mechanical equipment, active students on campus and athletic fields, and student drop-off and pick-up. The proposed Facilities Master Plan would not increase student enrollment or significantly change existing operational noise sources associated with the

campus. The proposed Facilities Master Plan would not result in an increase of operational noise.

Conclusion

The proposed project would introduce more events or uses of the fields under the proposed Field Lighting Improvements; however, existing sporting and non-sporting event noise levels would not result in a significant increase over existing operational noise levels. Additionally, exempt from the noise limits in Table 3.6-5 are activities conducted on public or private school grounds such as athletic and entertainment events (Section 5.48.150, Amplified Sound Permits, and Section 5.48.200, Outdoor Activities). The proposed Facilities Master Plan would not increase student enrollment or significantly increase operational noise sources as a result of the project. Because the proposed project's operational noise levels would remain similar to existing noise levels and comply with the City of Manhattan Beach's municipal code, the proposed Field Lighting Improvements and Facilities Master Plan operation-related noise impacts would be **less than significant.**

Traffic Noise

A project will normally have a significant effect on the environment related to traffic noise if it substantially increases the ambient noise levels for adjoining areas. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an outdoor environment. Noise levels above 65 dBA CNEL are normally unacceptable at sensitive receptor locations such as residences, schools, and noise environments in these areas would be considered degraded. Based on this, a significant impact would occur if traffic noise increases by 3 dBA over existing conditions, which would represent a doubling of traffic volumes along a project area roadway segment.

Project area roadway segment average daily traffic (ADT) volumes were provided by DJ&A (see Appendix I). To determine the project-related traffic noise increases from the Existing and Opening Year 2026 with-project ADT volumes were compared to the Existing and Opening Year 2026 no-project ADT volumes. Under the Existing traffic scenarios, the project area roadway network would experience ADT increases of 30 to 259 vehicles a day, representing a maximum increase of 1 percent in daily traffic volumes. Under the 2026 traffic scenarios, the project area roadway network would experience ADT increases of 30 to 79 vehicles a day, representing a maximum increase of 2.3 percent in daily traffic volumes. Increases in daily traffic volumes of 1 to 2.3 percent result in a negligible increase in traffic noise of less than 1 dBA, as shown in Table 3.6-11, *Summary of Traffic Noise Increases*.

Table 3.6-11 Summary of Traffic Noise Increases

Roadway	Segment		Average Daily Traffic Noise Levels, dBA CNEL				Noise Increase, dBA CNEL	
	From	To	Existing no Project	Existing with Project	Year 2026 no Project	Year 2026 with Project	Project Noise Increase	Cumulative Noise Increase
Artesia Boulevard	the West	South Peck Avenue	72	72	72	72	<1	<1
Artesia Boulevard	South Peck Avenue	the East	72	72	72	72	<1	<1
South Peck Avenue	the North	Artesia Boulevard	58	58	58	58	<1	<1
Meadows Avenue	Artesia Boulevard	the North	58	58	58	59	<1	<1
Vorhees Avenue	South Peck Avenue	the East	48	48	48	48	<1	<1
Ruhland Avenue	South Peck Avenue	the East	48	48	48	48	<1	<1
Nelson Avenue	South Peck Avenue	the East	49	49	49	49	<1	<1
South Prospect Avenue	Artesia Boulevard	the North	57	57	57	57	<1	<1
Keats Street	South Meadows Avenue	the West	62	62	62	62	<1	<1

Source: See Appendix H. Based on traffic volumes provided by DJ&A. (see Appendix I).

Proposed Field Lighting Improvements

The increase in vehicle trips associated with proposed Field Lighting Improvements would result in a minimal increase in daily traffic volumes on study roadway segments, thus resulting in a minimal increase in traffic noise levels. As shown in Table 3.7-12, project traffic increases would not exceed the 1.5 dBA or 3 dBA in ambient noise environments of greater than 70 dBA CNEL and less than 60 dBA CNEL thresholds, respectively, under the Opening Year with project scenario.

Proposed Facilities Master Plan

As previously discussed, the proposed Facilities Master Plan would not result in an increase in students, but the extended hours have the potential to result in additional trips from community groups after school hours. As shown in Table 3.7-12, project traffic increases would not exceed thresholds of 1.5 dBA in ambient noise environments of greater than 70 dBA CNEL, or 3 dBA in ambient noise environments less than 60 dBA CNEL thresholds under the Opening Year with-project scenario.

Conclusion

The proposed project would not result in significant daily traffic volume increases under the proposed Field Lighting Improvements or Facilities Master Plan projects. The proposed Field Lighting Improvements would only generate a minimal increase over existing daily traffic noise levels. The Facilities Master Plan would not result in an increase in student enrollment and would not result in significant daily traffic volume increases. Because the proposed project's traffic noise levels would remain similar to existing noise levels and would not exceed the 1.5 dBA or 3 dBA thresholds in ambient noise environments of greater than 70 dBA CNEL or less than 60 dBA CNEL thresholds, respectively, proposed Field Lighting Improvements and Facilities Master Plan traffic-related noise impacts would be **less than significant.**

Significance without Mitigation: Less than significant.

b) Would the project generate excessive groundborne vibration or groundborne noise levels?

Construction

Construction activities have the potential to generate varying degrees of ground vibration, depending on the construction procedures and equipment. The use of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels when construction activities are conducted in close proximity to receptors.

For reference, a vibration level of 0.2 in/sec PPV is used as the limit for nonengineered timber and masonry buildings, which would conservatively apply to the surrounding structures (FTA 2018). Typical construction equipment can generate vibration levels ranging from 0.21 inches per second (in/sec) peak particle velocity (PPV) at 25 feet. Table 3.6-12, *Project-Related Construction Vibration Damage Levels*, summarizes vibration levels for typical construction equipment at a reference distance of 25 feet and the nearest sensitive receptor.

Table 3.6-12 Project-Related Construction Vibration Damage Levels

Equipment	Levels, PPV (in/sec)				
	FTA Reference at 25 Feet	Residential North at 30 Feet	Residential East at 150 Feet	Residential South at 290 Feet	Residential West at 70 Feet
Vibratory Roller	0.21	0.160	0.014	0.005	0.045
Clam shovel	0.202	0.154	0.014	0.005	0.043
Hoe Ram	0.089	0.068	0.006	0.002	0.019
Large Bulldozer	0.089	0.068	0.006	0.002	0.019
Caisson Drilling	0.089	0.068	0.006	0.002	0.019
Loaded Trucks	0.076	0.058	0.005	0.002	0.016
Jackhammer	0.035	0.027	0.002	0.001	0.007
Small Bulldozer	0.003	0.002	0.000	0.000	0.001
Exceed 0.2 in/sec PPV Standard?		**No**	**No**	**No**	**No**

Source: FTA 2018. See Appendix H.

Proposed Field Lighting Improvements

The nearest off- and on-site sensitive receptors are residences to the north and campus classrooms, both of which are approximately 30 feet from the nearest Field Lighting Improvements construction impact area. As shown in Table 3.6-13, the proposed construction activities would result in a vibration level of 0.160 in/sec PPV at the nearest sensitive structure to the Field Lighting Improvements construction impact areas. Proposed Field Lighting Improvements construction vibration would not exceed the 0.2 in/sec PPV FTA standard at adjacent sensitive receptors.

Proposed Facilities Master Plan

The nearest off-site sensitive receptors are residences to the west approximately 70 feet from the nearest Facilities Master Plan construction impact area. The nearest on-site campus classroom receptors are approximately 30 feet from the nearest construction impact area. As shown in Table 3.6-13, the proposed construction activities would result in a vibration level of 0.045 in/sec PPV at the nearest off-site receptor and 0.160 in/sec PPV at the nearest on-site receptor to Facilities Master Plan construction impact areas. Proposed Facilities Master Plan construction vibration would not exceed the 0.2 in/sec PPV FTA standard at adjacent sensitive receptors.

Conclusion

The proposed project would not result in significant vibration levels that would exceed the 0.2 in/sec PPV FTA standard at adjacent sensitive receptors to construction impact areas under the proposed Field Lighting Improvements or Facilities Master Plan projects. Therefore, vibration damage impacts would be **less than significant.**

Operation

Proposed project operation would not include any substantial long-term vibration sources under the proposed Field Lighting Improvements or Facilities Master Plan projects. Therefore, no significant vibration effects would occur; thus, impacts would be **less than significant.**

Significance without Mitigation: Less than significant.

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

The nearest airports to the Mira Costa HS campus, including the project site, are the Los Angeles International Airport and Hawthorne Municipal Airport, approximately four miles north and four miles northeast, respectively (Google Earth 2025). Therefore, due to distance, the proposed project would not expose people residing or working in the project area to excessive noise levels related to air travel. **No impacts would occur.**

Significance without Mitigation: No impact.

3.6.5 Cumulative Impact Analysis

Noise and vibration are localized phenomena; they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only the related projects that are adjacent to the project site would have the potential to be considered in a cumulative context with the proposed project's contribution.

No major stationary sources of noise were identified in the vicinity of the project site. Because the project area is mostly built out, no future residential construction noise or groundborne vibration sources were identified adjacent to the project site.

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for noise. The Mira

Costa HS campus is in an area that is developed with a suburban setting that includes residential, office, and commercial uses.

Would the project have a cumulative effect related to noise?

Construction

Cumulative impacts would only occur if other projects are being constructed in the vicinity of the project site at the same time as the proposed Field Lighting Improvements and Facilities Master Plan. The project site is adjacent to developed residential to the north, south, east, and west. There is no future construction planned in the immediate project area to combine with the proposed Field Lighting Improvements and Facilities Master Plan project's construction to create cumulative construction noise impacts. As with the proposed project, future development activities would be required to comply with the city's noise ordinance and applicable general plan policies related to noise. Therefore, Field Lighting Improvements and Facilities Master Plan cumulative construction noise and vibration would be **less than significant**.

Operation

Operation of the proposed project would not exceed the city's municipal code noise standards. There are no other nearby sources of stationary noise in the project area that would significantly contribute to the ambient noise environment near the project site.

A significant cumulative traffic noise increase would be identified if proposed project traffic contributed 1.5 dBA in ambient noise environments of greater than 70 dBA CNEL or 3 dBA in ambient noise environments of less than 60 dBA CNEL. That is, if a cumulative traffic noise increase is calculated that is greater than 1.5 dBA along Artesia Boulevard and Keates Street and greater than 3 dBA along all other roadway segments, and if project traffic is calculated to contribute 1.5 dBA to 3 dBA or more to this cumulative impact, the project's contribution would be considered cumulatively considerable. As shown in Table 3.6-12, the cumulative increase would be less than the most stringent significance threshold of 1.5 dBA for ambient noise environments of 65 dBA CNEL or more. Therefore, proposed Field Lighting Improvements and Facilities Master Plan cumulative traffic noise impacts would be **less than significant**.

Airport

Noise and vibration are localized phenomena; they decrease rapidly in magnitude as the distance from the source to the receptor increases. The project site is approximately four miles from both Los Angeles International Airport and Hawthorne Municipal Airport, a distance that places it well outside the 65 dBA CNEL contours of both airports. The threshold of 65 dBA CNEL is recognized by the Federal Aviation Administration, Caltrans Division of Aeronautics, and local jurisdictions for potentially incompatible noise exposure for school and other sensitive land

uses. The proposed project would not include uses that would generate new or increased aircraft activity, nor would it involve alterations to existing flight paths, aviation-related land uses, or noise-sensitive facilities that would draw significant people into areas subject to high aircraft noise exposure. Therefore, the proposed project would not contribute to a cumulatively considerable impact related to exposing people working or residing in the area to excessive noise levels; **no impacts would occur**.

Significance without Mitigation: Less than significant.

3.6.6 References

Caltrans (California Department of Transportation). 2013, September. Technical Noise Supplement ("TeNS"). https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf.

FHWA (Federal Highway Administration). 2006, January. FHWA Roadway Construction Noise Model (RCNM) User's Guide. https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf.

FTA (Federal Transit Administration). 2018, September. Transit Noise and Vibration Impact Assessment. 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.

3.7 TRANSPORTATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) Project (proposed project) to result in transportation and traffic impacts. The analysis in this section is based in part on the following technical report:

- *Mira Costa High School Transportation Analysis*, DJ&A, November, 2025.

A complete copy of this technical report is provided in Appendix I of this DEIR.

During the Notice of Preparation (NOP) public review period, multiple comments were received regarding traffic and transportation. A CEQA scoping meeting was conducted on October 6, 2025, where multiple residents raised concerns regarding transportation issues. The NOP and all scoping comment letters are included as Appendix A of this DEIR.

3.7.1 Regulatory Framework

Federal, state, and local laws, regulations, plans, or guidelines related to hazardous materials that are applicable to the proposed project are summarized below.

STATE

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The legislature found that with the adoption of SB 375, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by Assembly Bill (AB) 32. Additionally, AB 1358 requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

SB 743 started a process that fundamentally changed transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, level of service (LOS), and similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts in many parts of California (if not statewide). As part of the new CEQA Guidelines, the new criteria “shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses” (California Public Resources Code Section 21099[b][1]). On January 20, 2016, the Governor’s Office of Planning and Research released proposed revisions to its CEQA Guidelines for the implementation of SB 743 and developed alternative metrics and thresholds based on VMT. The guidelines were certified by the Secretary of the Natural Resources Agency in December 2018,

and automobile delay, as described solely by LOS or similar measures of roadway capacity or traffic congestion, shall not be considered a significant impact on the environment. As of July 1, 2020, lead agencies were required to consider VMT as the metric for determining transportation impacts. The guidance provided relative to VMT significance criteria is focused primarily on land use projects, such as residential, office, and retail uses. However, as noted in the updated CEQA Guidelines, agencies are directed to choose metrics that are appropriate for their jurisdiction to evaluate the potential impacts of a project in terms of VMT. The Manhattan Beach Unified School District (MBUSD or District) has not yet adopted a VMT threshold for use in determining significant transportation impacts under CEQA and relies on the City of Manhattan Beach adopted VMT screening criteria and significance thresholds.

REGIONAL

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs.

2024 Regional Transportation Plan/Sustainable Community Strategy (Connect SoCal)

SB 375 requires each metropolitan planning organization to prepare a sustainable communities strategy (SCS) in its regional transportation plan (RTP). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a “Core Vision” that centers on

maintaining and better managing the transportation network for moving people and goods; expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

SCAG Active Transportation Technical Report

The SCAG Active Transportation Technical Report is a part of Connect SoCal; it outlines some of the most prominent reasons for investing in active transportation and provides a discussion of current conditions and future developments related to active transportation. The Active Transportation Technical Report also serves as a guide for local and county agencies to outline the existing conditions and needs of the region related to active transportation. The report discusses several projects and programs that are needed to achieve the goals of Connect SoCal. These include the following related to schools (Safe Routes to Schools discussed further under *Local*, below).

- **Strategy 1.** Complete school-area improvements to pedestrian and bicycle networks, drop-off areas and schools sites to improve safety and reduce conflicts with vehicles.
- **Strategy 2.** Install school site improvements for storage of bicycles, skateboards and other micro-mobility devices.
- **Strategy 3.** Implement vehicle speed reductions in school zones (e.g., 15 miles per hour) per the California Vehicle Code.

LOCAL

City of Manhattan Beach Mobility Plan

The City of Manhattan Beach adopted the Mobility Plan on May 15, 2018, replacing the Circulation Element previously adopted in 2003. In recent years there has been a shift in the prioritization of various modes of transportation throughout the region and nation. The Manhattan Beach Mobility Plan focuses on providing a well-balanced, connected, safe, and convenient multimodal transportation network instead of a mostly vehicle-centric plan that focused on building and widening roads. The updated Mobility Plan was prepared in response to AB 1358, the California Complete Streets Act. AB 1358 requires cities and counties to integrate multimodal transportation network policies into their General Plans and to plan for, design, and build transportation networks that allow all users to effectively travel by motor vehicle, foot, bicycle, or transit. Thus, the Mobility Plan is focused on “complete streets” and “living streets” to enhance all travel modes. The goals and policies listed here is not exhaustive, but a selection relevant to the impact discussion in this chapter.

Goal I-2: Move commuter traffic through the City primarily on arterial streets and collector streets, as appropriate, to protect other streets from the intrusion of cut-through traffic.

- **Policy I-2.1.** Utilize the Neighborhood Traffic Management Program (NTMP) tools to mitigate neighborhood intrusion by cut through traffic, and improve conditions for pedestrians and bicyclists.

- **Policy I-2.3.** Minimize vehicular access for new developments on local residential streets, and in locations with high pedestrian and bicycle activity, and design access and egress to avoid traffic intrusion on local streets to the maximum extent possible.

- **Policy I-2.6.** Review on-street parking in neighborhoods adjacent to commercial areas where neighbors request such review, and develop parking and traffic solutions for those neighborhoods adversely impacted by spillover parking and traffic.

Goal I-3: Ensure adequate parking and loading facilities are available to support both residential and commercial needs while reducing adverse parking and traffic impacts.

- **Policy I-3.8.** Encourage the school district and private schools to promote active modes of transportation for students and employees as a means of reducing peak-hour traffic.

- **Policy I-3.9.** Work with the school district and private schools to improve pedestrian and bicycle routing and safety around schools. Focus pedestrian access to the elementary schools and bicycle and pedestrian access to the middle and high schools.

- **Policy I-3.10.** Discourage parking associated with schools, particularly at Mira Costa High School, within surrounding neighborhoods.

- **Policy I-3.11.** Work with the school district and private schools to address high traffic volumes during the morning and afternoon peak school hours, and improve drop-off and pick-up circulation.

- **Policy I-3.12.** Continue to support and enhance Safe Routes to School programs such as Walking School Bus, walk audits, classroom safety instruction and promotional events.

3.7.2 Existing Conditions

EXISTING ROADWAY NETWORK

Selected roadways surrounding the project area are described in this section. Items of note include existing geometry, pedestrian and bicycle facilities, speed limit, parking facilities, and adjacent land uses.

Artesia Boulevard

Artesia Boulevard is a four-lane, divided roadway that runs east-west along the southern boundary of the project site. The posted speed limit is 40 miles per hour. Sidewalks are provided on both the north and south sides of Artesia Boulevard, and the shoulders on each side accommodate parallel on-street parking. The surrounding area land use is predominantly low-density residential.

Peck Avenue

Peck Avenue is a two-lane, undivided roadway that runs north-south along the eastern boundary of the project site. The posted speed limit is 25 miles per hour. Sidewalks are present on both the west and east sides of Peck Avenue. Though dedicated bike lanes are not provided, shared-lane markings (sharrows) indicate that the roadway is intended to be shared with bicycles. The road shoulders accommodate parallel parking. The surrounding land use is primarily low-density residential

Meadows Avenue

Meadows Avenue is a two-lane, undivided roadway that runs north-south along the western boundary of the project site. The posted speed limit is 25 miles per hour. Sidewalks are provided on both the east and west sides of Meadows Avenue. Although dedicated bike lanes are not present, shared-lane markings (sharrows) indicate that the roadway is intended for shared use with bicycles. The shoulders accommodate parallel parking for both northbound and southbound traffic. The surrounding land use is primarily low-density residential, with a church at the southwest corner of Meadows Avenue and Artesia Boulevard.

TRANSIT SERVICES

Mira Costa High School is served by Torrance Transit Line 13, which operates east-west along Artesia Boulevard. Bus stops in both the eastbound and westbound directions exist at the intersections of Artesia Boulevard and Peck Avenue and Artesia Boulevard and Meadows Avenue. Line 13 runs with a frequency between 21 and 23 minutes from 5:30 a.m. to 9:00 p.m. in each direction.

BICYCLE AND PEDESTRIAN FACILITIES

Sharrow markings are provided along Peck Avenue and Meadows Avenue in both the northbound and southbound directions adjacent to the campus. No bicycle facilities are provided along Artesia Boulevard adjacent to the campus. Sidewalks are present along all three roadways adjacent to campus on both sides of the streets. Marked crosswalks are provided at signalized intersections and at stop-sign-controlled intersections along Peck Avenue and Meadows Avenue.

EXISTING PARKING SUPPLY

Although the topic of parking is not an issue pursuant to CEQA Guidelines, the following discussion is provided for informational purposes. Mira Costa High School has three existing parking lots to serve staff and students. Additional parking is accommodated on the north side of Artesia Boulevard adjacent to the school and on Peck Avenue and Meadows Avenue on the east and west sides of the campus. The staff parking lot is accessed via a single entrance-only driveway, with a separate exit-only driveway, both along Peck Avenue. This lot includes a one-way pick-up/drop-off loop that operates in a counterclockwise direction. The student parking lot, situated in the southeast corner of the campus, is served by one access driveway on Peck Avenue and an exit-only driveway to Artesia Boulevard. This lot also includes staff parking spaces. A third parking lot, located west of the auditorium, provides two access driveways to Artesia Boulevard. This lot also contains a small one-way pick-up/drop-off loop. Table 3.7-1 summarizes the existing parking supply in each of the off-street parking lots on campus.

Table 3.7-1 On-Site Parking Supply

Parking Location	Parking Spaces	ADA Parking Spaces
East Staff Lot	63	7
Student Lot	290	7
West Staff Lot	65	5
TOTAL	**418**	**19**

EXISTING TRAFFIC VOLUMES

Average Daily Traffic

Although the topic of traffic is not an issue pursuant to CEQA Guidelines, the following discussion is provided for informational purposes. The average daily traffic (ADT) volumes for the study area roadway segments for the Existing Conditions and No Project and Project scenarios are summarized in Table 3.7-2.

Table 3.7-2 Roadway Average Daily Traffic

Roadway	2025 No Project	2025 With Project	2026 No Project	2026 With Project
Artesia Blvd west of S Peck Ave	28,242	28,299	28,524	28,581
Artesia Blvd east of S Peck Ave	25,904	25,961	26,163	26,220
S Peck Ave north of Artesia Blvd	4,005	4,041	4,045	4,081
S Meadows Ave north of Artesia Blvd	3,317	3,396	3,350	3,429

Intersection and Driveway Level of Service

Intersection and driveway level of service (LOS) were analyzed. Table 3.7-3, summarizes the existing level of service at the study intersections. All study intersections and site access driveways currently operate at an acceptable level of service during the AM and PM peak hours.

Table 3.7-3 Existing Intersection and Driveway Level of Service

Intersection/Driveway	AM Peak Hour		PM Peak Hour	
	HCM Delay (seconds)	LOS	HCM Delay (seconds)	LOS
S Peck Ave and Voorhees Ave	8.8	A	8.0	A
S Peck Ave and Ruhland Ave	8.6	A	8.0	A
S Peck Ave and Artesia Blvd	22.2	C	13.8	B
S Meadows Ave and Artesia Ave	7.5	A	9.2	A
S Meadows Ave and Keats St	8.6	A	9.0	A
S Prospect Ave and Artesia Ave	13.5	B	14.8	B
S Peck Ave and Nelson-Driveway A	9.3	A	8.2	A
S Peck Ave and Driveway B	10.1	B	9.7	A
S Peck Ave and Driveway C	13.3	B	10.1	B
Artesia Blvd and Driveway D	16.8	C	12.2	B
Artesia Blvd and Driveway E	17.1	C	12.2	B
Artesia Blvd and Driveway F	27.2	D	22.22	C

Trip Generation and Distribution

Forecast trip generation for the project is estimated using rates published in the ITE *Trip Generation Manual* (12th ed.) and information provided by MBUSD regarding the projected increase in activities and events that would occur on the high school fields with the proposed improvements. No changes to the overall student capacity are planned for the school with the proposed modernization projects. The only forecast change that would influence trip generation would be activities and sports events with the field lighting. MBUSD provided information on the anticipated activities and events on the West Field and the End Cap. These two field are expected to see an increase in the number of events throughout the school year. In Chapter 2, *Project Description*, Table 2-2 lists the activities planned by MBUSD on the athletic fields, including the number of days per week, start and end times, and anticipated attendance.

Based on the start times and days of the week when events are scheduled, only a portion of the planned events on the West Field and the End Cap would generate trips during the weekday PM peak hour. These events would be those scheduled to begin at 6:00 pm on weekdays.

- End Cap
  - Soccer Practices: 30 attendees
- West Field
  - Youth Football: BCS: 40 attendees
  - Lacrosse: LA Select: 40 attendees
  - Soccer: Sand and Surf: 40 attendee

Weekday events scheduled between 7:00 pm and 9:00 pm would generate trips outside of the PM peak hour, which was observed to begin at 4:15 pm on Artesia Boulevard and Meadows Avenue and at 5:00 pm on Peck Avenue. Due to the later start times, these events are not considered in the trip generation forecasts. For the events between 6:00 pm and 9:00 pm, all events are not simultaneous. The three West Field activities (lacrosse, football, and soccer) use the same field, and their events would be scheduled on different days. Use of the West Field and the End Cap at the same time is possible. To estimate trip generation, this analysis assumes simultaneous use of the West Field and End Cap by an event with 40 attendees on the West Field and 30 attendees on the End Cap. The West Field and the End Cap are assumed to be separate single fields for the purposes of trip generation based on the physical space available in each location and the number of attendees.

The Soccer Field land use in the ITE *Trip Generation Manual* was used to develop trip generation forecasts for the AM and PM peak hours and daily period. Table 3.7-4 shows the trip generation forecasts.

Table 3.7-4 Project Trip Generation

Land Use and Time Period	Trip Generation Rate	Distribution		Trips		Total
		Inbound	Outbound	Inbound	Outbound	
Soccer Field: AM Peak Hour	0.99 trips/field	61%	39%	1	1	2
Soccer Field: PM Peak Hour	0.16 trips/field	66%	34%	22	11	33
Soccer Field: DAILY	71.33 trips/field	50%	50%	71	72	143

3.7.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact related to transportation if it would:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

d) Result in inadequate emergency access.

METHODOLOGY

Vehicle Miles Traveled Analysis

The project is evaluated for potential impacts related to VMT, consistent with the requirements in the City of Manhattan Beach Transportation Impact Analysis Guidelines. These guidelines establish that a project could have a potentially significant VMT impact if it meets one or more of the criteria listed below. These impact criteria are based on the latest guidance published by

Office of Land Use and Climate Innovation (LCI) and the California Air Resources Board (CARB) to reach greenhouse gas reduction goals.

- **Residential Projects.** The project's residential VMT per capita would not be less than 16.8 percent below the existing residential VMT per capita .
- **Non-retail/Office Projects.** The project's employment VMT per employee exceeding would not be less than 16.8 percent below the existing employment VMT per employee.
- **Regional Serving Retail Projects.** The project would result in a net increase in existing total VMT.
- **Land Use Plans.** The plan's total VMT per service population (residents and employees) would not be less than 16.8 percent below the existing VMT per service population.

The proposed project does not fit into the standard land use types described in the city's Transportation Analysis Guidelines (office, residential, retail) and would be considered a unique land use by the guidelines. In this case, the guidelines permit the application of a reasonable methodology and approach to VMT screening or analysis as part of the transportation analysis report.

Intersection Analysis

The intersection and driveway analysis was also conducted consistent with the guidelines established by the City of Manhattan Beach. The City's guidelines require analysis of intersection level of service (LOS) and queueing methodologies to utilize the latest edition of the Transportation Research Board's Highway Capacity Manual (HCM) to evaluate the operation of the project driveways and nearby intersections.

Level of Service Analysis

Although the topic of traffic congestion (and thus, level of service or LOS) is not an issue pursuant to CEQA, the following discussion is provided for informational purposes. Traffic LOS for unsignalized and signalized intersections and driveways are designated A through F, with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Table 3.7-5 summarizes the criteria for intersection LOS calculations and the relationship between control delay and LOS, as defined in the HCM (6th ed.). Each intersection's LOS is determined by the calculated control delay. All project intersections with an LOS rating of D or above have an acceptable LOS, consistent with the City of Manhattan Beach guidelines. Intersections with ratings E or F would be considered to have unacceptable LOS.

Table 3.7-5 Level of Service Rating

LOS	Unsignalized Intersections and Driveways Control Delay per Vehicle (sec/veh)	Signalized Intersections and Driveways Control Delay per Vehicle (sec/veh)
A	≤ 10	≤ 10
B	> 10 to ≤ 15	> 10 to ≤ 20
C	> 15 to ≤ 25	> 20 to ≤ 35
D	> 25 to ≤ 35	> 35 to ≤ 55
E	> 35 to ≤ 50	> 55 to ≤ 80
F	> 50	> 80

Intersection and Driveway Counts

Weekday peak-period traffic counts were completed at selected study intersections adjacent to the project site and at existing driveways that provide access to and from the project site. This is consistent with the approach in the City of Manhattan Beach transportation impact analysis guidelines. Intersection counts were completed for the AM (7:00 to 9:00 am) and PM (4:00 to 6:00 pm) peak periods on Tuesday, June 3, 2025. School was in session during these counts, and the day of the week and time periods selected are consistent with the City of Manhattan Beach transportation impact analysis guidelines.

The time periods selected for the traffic counts are consistent with the City of Manhattan Beach transportation impact analysis guidelines. It is recognized that many of the envisioned activities for the sports fields would be scheduled after 6pm in the evening and on the weekends. However, the city's and industry's standard approach for traffic impact studies is to analyze traffic conditions during the peak hours for background traffic on adjacent streets. This approach ensures that the potential impacts of the project are assessed during the peak time for background traffic volumes in the project study area. For events occurring on the project site between 7pm-9pm, this time period occurs outside of the PM peak hour for traffic and background traffic volumes on adjacent streets are typically lower than what occurs in the PM peak hours between 4pm-6pm.

Average Daily Traffic Counts

ADT data were collected along selected roadways as a part of this study to support the separate noise and air quality analyses conducted as part of the CEQA environmental review. ADT data collection was completed on a typical weekday during the school year.

Project Opening Year and Traffic Growth Rate

The project opening year for the field lighting improvements is anticipated to be 2026. This is the year selected for analysis in this report. An annual growth rate of 1 percent was applied to existing intersection and roadway volumes to develop traffic forecasts for 2026 conditions. This growth rate is consistent with City of Manhattan Beach guidelines.

Traffic Study Periods and Scenarios

Traffic operations for the study area intersections were evaluated for each of the following scenarios:

- Existing Conditions (2025) without Project
- Opening Year (2026) without Project
- Existing Conditions (2025) with Project
- Opening Year (2026) with Project Roadway

Segment volumes are also reported for each of these scenarios.

Parking Analysis

Parking occupancy counts were collected on Tuesday, June 3, 2025, in all existing parking lots on the Mira Costa High School campus and along the following roadways:

- Artesia Boulevard (north side only) between Meadows Avenue and Peck Avenue
- Peck Avenue between Artesia Boulevard and Ruhland Avenue
- Meadows Avenue between Artesia Boulevard and Keats Street

Parking occupancy counts were collected between 8:00 am and 5:00 pm to capture the peak parking demand period during the school day and early afternoon period for sports and activities. Although parking is not considered a physical environmental issue under CEQA, it is still evaluated to inform project planning and ensure adequate site functionality.

3.7.4 Project Impact Analysis

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and pedestrian facilities?

General Plan Consistency

The Mobility Plan of the General Plan includes specific goals, objectives, and policies that serve as a comprehensive framework for managing transportation infrastructure and promoting efficient mobility within the City of Manhattan Beach. The goals, objectives, and policies of the Manhattan Beach General Plan that are applicable to the proposed project are summarized above in Section 3.7.1, *Regulatory Framework*.

Local Neighborhood Traffic Management

The proposed project would not generate a significant number of new vehicle trips during the AM and PM weekday peak hours. Further, the project would not result in significant changes to the number of vehicle trips on nearby local or arterial roadways. No significant traffic impacts to local neighborhood streets are expected.

On-Site Circulation

On-site vehicle circulation is provided in the three existing on campus parking lots. No changes to on-site circulation areas are proposed as part of the project. With no increase in student capacity as part of the project, no impacts to on-site circulation are anticipated. The field lighting improvements and resulting increases in sports activities between 6:00 pm and 9:00 pm may increase on-site vehicle travel. With these events taking place outside of the normal school day, no impacts to o-onsite circulation are anticipated.

Pedestrian and Bicycle Facilities

The proposed project would enhance bicycle access to campus through the construction of dedicated e-bike parking facilities. The primary area for e-bike parking would be east of the existing baseball/softball field and west of the existing fire lane and would accommodate parking for 384 e-bikes. In addition, a smaller space in the entry courtyard near the administration building and to the west of the auditorium would accommodate an additional 38 e-bikes. By providing enhanced e-bike parking locations, the proposed project may encourage more students to commute to campus by bicycle, providing a benefit in terms of potential reductions to VMT and vehicle parking demand. The proposed project does not include any changes or improvements to pedestrian facilities on campus or along roadways adjacent to campus. No impacts to pedestrian circulation are anticipated.

Pick-up/Drop-off Activities

Student pick-up and drop-off lanes are provided in the west staff parking lot and the east staff parking lot in designated areas. No changes to these pick-up/drop-off areas are proposed as part of the project. With no increase in student capacity due to the project, no impacts to pick-up/drop-off areas are anticipated. The field lighting improvements and resulting increases in sports activities between 6:00 pm and 9:00 pm may increase pick-up/drop-off activities. Because these events are outside of the normal school day, no impacts to pick-up/drop-off areas are anticipated.

Parking and Level of Service

Although the topics of parking and traffic congestion are not issues pursuant to CEQA Guidelines, the following discussion is provided for informational purposes. As part of the project, the District would implement a variety of parking management strategies that would encourage use of existing on campus parking lots in the evening hours and on weekends. The proposed project design features for parking management include:

- **Parking Lot Wayfinding Signage.** The District proposes adding wayfinding signage directing visitors to existing off-street parking lots located on campus and is proposed along Artesia Boulevard, Peck Avenue, and Meadows Avenue. The proposed signage would be placed in advance of the school campus along each roadway and would direct visitors to the existing on-campus parking lots.
- **Additional On-Campus Wayfinding Signage.** The District proposes adding additional pedestrian wayfinding signage on campus to direct visitors to the athletic fields from the Administration lot. This signage already exists for other on-campus parking lots.
- **Pre-event Digital Maps.** The District will develop and provide a downloadable map on the Mira Costa High School website highlighting the location of on-campus parking lots and vehicle access points to each lot.
- **Off-Site Parking Agreements.** The District will explore the potential for establishing agreements with nearby property owners to use off-street parking resources when nearby business and institutional uses are not operating. This strategy would help increase the amount of off-street parking available.

The District will coordinate with the City of Manhattan Beach regarding the installation of parking wayfinding signage within City right-of-way. The District will also endeavor to engage with the City to discuss modifications to City-administered, on-street parking regulations in the vicinity of the campus, to coordinate with the on-campus parking strategies identified above.

Based on the traffic analysis and a review of the Mobility Plan of the City of Manhattan Beach General Plan, the proposed project would not conflict with a program, plan, ordinance, or policy

addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be **less than significant.**

SCAG: Connect SoCal Consistency

The proposed project would remain consistent with the 2024 SCAG RTP/SCS, Connect SoCal, because no changes to land use, or circulation are proposed. The goals of Connect SoCal are related to housing, transportation technologies, equity, and resilience. The proposed project would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also include the installation of new e-bike parking areas and improvements identified in the District's Mira Costa High School Campus Master Plan, which includes demolition, new construction, modernization, and renovation of buildings on campus. The proposed project would not interfere with the City's ability to continue to provide "complete streets" circulation improvements or with Strategies 1, 2, and 3 of the SCAG Active Transportation Technical Report. Therefore, the proposed project would not conflict with Connect SoCal..

Conclusion

The proposed project would allow existing activities on campus to extend into the evening hours and would not result in an increase in student capacity or events that would substantially decrease the performance or safety of a nearby roadways. The proposed project would not construct any new vehicle or pedestrian access points on the project site (i.e., sidewalks, driveways) or pedestrian facilities (i.e., bike racks) that would alter or improve the existing circulation on campus. The campus would continue to utilize the existing non-motorized and pedestrian facilities. Attendees would continue to utilize existing alternative methods of transportation such as sidewalks, crosswalks, bike lanes, and public transit. The proposed improvements at the project site are consistent with the goals, objectives, and policies in the Mobility Plan, and the project would not adversely affect the performance of any roadway, transit, or non-motorized (pedestrian and bicycle) transportation facilities. Additionally, the proposed project would not conflict with Connect SoCal. Based on the traffic analysis and a review of the Mobility Plan of the City of Manhattan Beach General Plan, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be **less than significant.**

Significance without Mitigation: Less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Section 3.11 of the City of Manhattan Beach Transportation Analysis Guidelines describes the screening criteria adopted by the City to determine if the assessment of VMT is required for a proposed project. The first criterion is daily project trip generation for non-retail projects. The City established 110 daily vehicle trips as a threshold for determining the need for VMT analysis. Projects generating less than 110 daily vehicle trips can be screened out of VMT assessment. As shown in Table 3.7-4, the proposed field projects at Mira Costa High School are forecast to generate 143 daily vehicle trips. Therefore, the project is not eligible to be screened out under this criterion. The second criterion is proximity to a major transit stop. Projects within a half mile of a major transit stop can be screened out from further VMT analysis. Transit service is provided to the school via Torrance Transit bus service, but the stops located to campus or within a half mile are not considered major transit stops. Therefore, the project is not eligible to be screened out under this criterion. The proposed project does not fit into the standard land use types described in the City's Transportation Analysis Guidelines (office, residential, retail) and would be considered a unique land use by the guidelines. In this case, the guidelines permit the application of a reasonable methodology and approach to VMT screening or analysis as part of the transportation analysis report.

The State of California CEQA guidelines allow projects that are considered "locally serving" and consistent with the local agency's General Plan and the RTP/SCS to be screened out from analysis for potential VMT impacts. Schools and parks are commonly considered locally serving uses because trips to and from these land uses are generated in nearby neighborhoods by local residents. In many cases, the VMT generated by schools and parks is captured in VMT estimates generated for surrounding residential land uses. The proposed use for the project would be an increase in locally serving sports activities and practices. These activities would draw trips from local residents in Manhattan Beach and surrounding South Bay communities. The proposed activities that would be scheduled at Mira Costa High School under the proposed project currently occur at other locations in Manhattan Beach and South Bay communities. Given the anticipated condition, the proposed project can be screened out from further VMT analysis due to its locally serving nature and because the project will relocate existing trips within the same general area rather than generate entirely new trips. Under these assumptions, the project is not anticipated to generate a significant impact for VMT.

Significance without Mitigation: Less than significant.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Access to the project site is provided by the existing driveways at Mira Costa HS, as described in Section 3.7.2, *Existing Conditions*. The proposed project would not include any on- or off-site design features or incompatible uses that would create or increase hazards. Access to the school site would continue to be provided by three existing driveways along Meadows Avenue on the west, Artesia Boulevard to the south, and Peck Avenue to the east. There would be no modifications to these driveways or to the study area street network, and all improvements within the school site would be consistent with the criteria of the DSA.

The increases in levels of traffic, the numbers of pedestrians, and numbers of vehicular turning movements at the driveways and nearby intersections due to the project would increase traffic conflicts and the probability of an accident occurring. These impacts would not be significant, however, because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity. These streets and intersections have historically accommodated school-related traffic on a daily basis for the existing campus. The proposed project's athletics field improvements would be compatible with the design and operation of a high school, and the proposed project would not result in any modifications to the existing access or circulation features at the campus.

Additionally, sidewalks are present along all three roadways adjacent to campus on both sides of the streets. Marked crosswalks are provided at signalized intersections and at stop sign controlled intersections along Peck Avenue and Meadows Avenue. These features enhance pedestrian safety and facilitate pedestrian access to the school.

Therefore, the proposed project would not alter or modify the existing roadways or pedestrian circulation in any way that would substantially increase hazards due to a geometric design feature or incompatible uses. A **less than significant** impact would occur.

Significance without Mitigation: Less than significant.

d) Would the project result in inadequate emergency access?

The existing on-campus access and circulation system, including roadways, parking lots, and fire lanes, would continue to accommodate emergency services. The proposed project would be required to maintain emergency access to the project site and would not modify any existing vehicle access points, including those used for emergency access to the campus or project site.

Emergency access to the school site is provided by three existing driveways along Meadows Avenue on the west, Artesia Boulevard to the south, and Peck Avenue to the east. The proposed

project would maintain existing fire lanes on campus because no improvements are proposed at the fire lane. Emergency vehicles would continue to easily access the project site and all other areas of the campus via on-site travel corridors. The existing access/circulation features at the school were subject to the District's design requirements and were approved by the Fire Department and the DSA. The proposed project's design must satisfy the District design requirements and would be reviewed and subject to approval from the DSA. Emergency vehicles would be able to readily access the athletics field and all other areas of the school via the existing on-site travel corridors. The proposed project would not, therefore, result in inadequate emergency access. **No impact** would occur.

Significance without Mitigation: No impact.

3.7.5 Cumulative Impact Analysis

Would the project have a cumulative effect related to transportation?

This section analyzes potential impacts related to transportation from a combination of the proposed project and other past, present, and reasonably foreseeable projects in the vicinity.

As described above, the proposed project would comply with applicable plans, ordinances, and policies that guide circulation. Similar to the proposed project, each cumulative project would be expected to be consistent with existing programs, plans, ordinances, and policies that address its jurisdiction's circulation system (such as the City's Mobility Plan). No significant cumulative impacts are anticipated to which both the proposed project and the cumulative projects would contribute in regard to City mobility policies or standards adopted to protect the environment and support multimodal transportation options.

Geometric design features are physical design characteristics of projects rather than environmental effects, they do not contribute to cumulative impacts under CEQA and are evaluated only as site-specific project components. None of the cumulative development projects in the project vicinity would be close enough to the project site to provide any cumulatively considerable design features. The proposed project along with the cumulative projects would not add driveways that could combine to create hazardous geometric features. Additionally, the proposed project's educational uses are typical of an urban area and would not introduce incompatible uses.

Construction-related activities could adversely impact emergency access in adjacent roadways when combined with other cumulative projects. However, not all cumulative projects would be constructed at the same time, and no cumulative projects immediately adjacent to the project site are proposed at this time. Each construction project would be required to prepare and

implement site-specific construction worksite staging and construction plans to reduce potential impacts to emergency access, and potentially incorporate mitigation measures.

Thus, the project would not in combination with other projects result in significant cumulative transportation impacts and the impact would be **less than significant**.

Significance without Mitigation: Less than significant.

3.7.6 References

DJ&A. 2025, September. Mira Costa High School Transportation Analysis. Appendix I.

Manhattan Beach, City of. 2018. *City of Manhattan Beach Mobility Plan*. https://www.manhattanbeach.gov/home/showdocument?id=36671&_ga=2.122548297.335461187.1763400793-1503935652.1751408455.

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3.8 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mira Costa High School Field Renovation, Lighting, and Facilities Master Plan (FMP) Project (proposed project) to impact tribal cultural resources (TCR). This section discusses state laws and regulations protecting resources, along with the existing cultural resource conditions on and near the project site. TCRs include landscapes, sacred places, or objects with a cultural value to a California Native American tribe. Potential impacts to other cultural resources (i.e., historic, archaeological, and disturbance of human remains) are evaluated in Section 3.4, *Cultural Resources*.

The Manhattan Beach Unified School District (District) invited California Native American tribes that are traditionally and culturally affiliated with the project site to consult on the proposed project via email. Eight tribes were contacted on September 18, 2025, and responses were received from the Gabrielino Tongva Indians of California on September 22, 2025 and the Gabrieleño Band of Mission Indians–Kizh Nation on October 14, 2025

3.8.1 Regulatory Framework

Federal, State, and local laws, regulations, plans, or guidelines related to tribal cultural resources and potentially applicable to the proposed project are summarized below.

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act of 1966 coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the act requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (US Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Native American lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (US Code, Title 25, Sections 3001 et seq.) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Indian tribes.

STATE

Assembly Bill 52

The Native American Historic Resource Protection Act, or Assembly Bill (AB) 52, took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to TCRs into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a notice of preparation of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact and requires feasible mitigation measures.

Tribal cultural resources must have certain characteristics:

1. Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (Public Resources Code [PRC] Section 21074(a)(1))

2. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (PRC Section 21074[a][2])

The first category requires that the tribal cultural resource qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource under the conditions that it supports its determination with substantial evidence and that it considers the resource's significance to a California tribe. Following is a brief outline of the process, paraphrased from PRC Sections 21080.3.1 and 21080.3.2.

1. A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2. Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3. A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4. The lead agency must initiate consultation within 30 days of receiving the request from the tribe.

5. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a tribal cultural resource, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. However, confidentiality does not apply to data or information that are, or become, publicly available; are already in lawful possession of the project applicant before the provision of the information by the California Native American tribe; are independently developed by the project applicant or the project applicant's agents; or are lawfully obtained by the project applicant from a third party that is not the lead agency, a California Native American tribe, or another public agency.

California Public Resources Code Sections 21073 and 20174

PRC Sections 21073 and 21074 define California Native American tribe and tribal cultural resources, respectively. PRC Section 21073 defines a "California Native American tribe" as a Native American tribe in California that is on the contact list maintained by the NAHC.

TCRs are defined in Section 21074 as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for

inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are 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 Section 5024.1.

California Health and Safety Code

California Health and Safety Code Section 7050.5 requires that if human remains are discovered on a project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of Native American, he or she shall contact the NAHC by telephone within 24 hours,.

LOCAL

Manhattan Beach Historic Preservation Program

The purpose of the City's Historic Preservation Program is to provide opportunities to identify and preserve the City's unique history through voluntary preservation of properties that exemplify its historical context.

Manhattan Beach Municipal Code

MBMC Chapter 10.86 (Historic Preservation) establishes provisions for the preservation of Historic Resources. This ordinance superseded previous urgency ordinances adopted by the City Council while permanent provisions were developed. Of note, the ordinance specifies that owners' consent is required in order to designate any property as a historic landmark.

MBMC Section 10.86.040 names the Planning Commission as the City's Historic Preservation Commission that reviews and recommends Historic Landmark designations and other historic preservation applications to the City Council for final action.

Manhattan Beach General Plan

The current General Plan's Land Use (LU) Element includes design and development goals and policies that aim to preserve neighborhood character, historic homes/buildings, and landscaping features with historic/cultural importance. The LU Element includes the following land use goal and policies that are relevant to tribal cultural resources.

Goal LU-4: Preserve the features of each community neighborhood, and develop solutions tailored to each neighborhood's unique characteristics.

- **Policy LU-4.4.** Encourage the preservation and enhancement of unique residential homes and buildings throughout Manhattan Beach to preserve the culture and history of the City
- **Policy LU-4.5.** Encourage measures that recognize and work to protect buildings, landscaping, and other features important to the City's history.
- **Policy LU-4.6.** When public improvements are made, they should preserve and maintain distinctive neighborhood characteristics

3.8.2 Existing Conditions

This information is derived from the *Historic Period Building Evaluation* report (Appendix E) which provides a comprehensive overview of the city's historical and cultural context, including known archaeological and paleontological resources, and historic-era structures.

HISTORIC SETTING

The Los Angeles Basin, including the South Bay area, was originally part of the Tongva (Gabrielino) people's traditional territory. In 1784, what is now the City of Manhattan Beach was included in a Spanish land concession known as Rancho Sausal Redondo, or "Round Clump of Willows," spanning from present-day Playa del Rey to Hermosa Beach. In 1863, Scottish immigrant Sir Robert Burnett acquired the land, leasing it in 1873 to Canadian Daniel Freeman, who later purchased it. In 1888, the Atchison Topeka and Santa Fe Railway was first to connect the Redondo Beach wharf to downtown Los Angeles. Soon Manhattan Beach forerunner Potencia was a rail stop, later becoming Shore Acres.

Manhattan Beach was founded in 1901 on the vision of brothers John and Stewart Merrill, who bought the southern, sand dune dominated portion of Rancho Sausal Redondo and renamed it Manhattan Beach after a Coney Island resort in their home state of New York

In 1913, the Manhattan Beach City School District was formed, and construction began on Center School (now Pacific Elementary School) at the corner of Center Street (Manhattan Beach Boulevard) and Pacific Avenue, opening in 1914 with 43 students, four classrooms, and two teachers. Until Mira Costa High School opened in 1950, the District had only elementary schools in its jurisdiction. Efforts to bring public schools of all grades under one district umbrella began in the 1960s but were not successful until 1992, when a voter proposition approved formation of Manhattan Beach Unified School District and Redondo Beach Unified School District.

HISTORIC RESOURCES NEAR THE PROJECT SITE

Within a quarter-mile radius, five additional studies were reported to the SCCIC (Fig. 4). One of them was for an overview study completed in 1993 for a water reclamation project that

included the entire area within the records search scope (not shown in Fig. 4), two of them covered all or portions of Hermosa View Elementary School to the southeast of the high school, and the other two covered small areas to the southwest, in the neighboring City of Redondo Beach. Despite these past survey efforts, SCCIC records indicate no additional historical/archaeological cultural resources within the quarter-mile scope. However, at least one of the two studies on Hermosa View Elementary School prior to its revamping in 2022 (Google Earth 2022) likely resulted in it being recorded into the inventory, and the record is likely yet to be processed by the SCCIC.

ARCHAEOLOGICAL RESOURCES

The Mira Costa High School campus is a fully developed and extensively disturbed property that has undergone continuous construction, grading, and utility installation since its establishment in the mid-20th century, resulting in substantial modification of the native soil profile. Though the broader Manhattan Beach area was historically occupied by the Tongva/Gabrielino people and contains known prehistoric sites, a records search and review of previous studies indicate that no archaeological resources have been recorded within the project site. Due to the high level of previous ground disturbance and the presence of imported fill and infrastructure, the potential for intact archaeological deposits within the project area is considered low. However, as with any project involving ground disturbance in Southern California, the inadvertent discovery of subsurface cultural materials remains possible, particularly in deeper soils that may not have been previously disturbed.

TRIBAL CONSULTATION

In compliance with the requirements of AB 52, the District sent formal notification of the proposed project and served as an invitation for consultation to eight tribes that are on the District's "request for notification" list on September 18, 2025. These letters were emailed and sent via certified mail to the following:

- Cahuilla Band of Indians
- Gabrieleño Band of Mission Indians–Kizh Nation
- Gabrielino Tongva Indians of California
- Gabrielino Tongva San Gabriel Band of Missions Indians
- Gabrielino Tongva Nation
- Gabrieleño–Tongva Indian Tribe
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

On September 22, 2025, a response email was received from the Gabrielino Tongva Indians of California requesting cultural reports conducted for the proposed project. On October 14, 2025,

the Gabrieleño Band of Mission Indian–Kizh Nation provided recommended mitigation measures for the proposed project. None of the other contacted tribes responded to the invitation for consultation. The District began consultation via email with representatives of the Gabrieleño Band of Mission Indian–Kizh Nation on September 24, 2025, and closed consultation on December 1, 2025.

3.8.3 Standards for Analysis

SIGNIFICANCE CRITERIA

Appendix G, "Environmental Checklist Form," of the California Environmental Quality Act (CEQA) Guidelines states that the proposed project would result in a significant impact related to tribal cultural resources if it would:

a) 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:

i) 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).

ii) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

METHODOLOGY

To determine the presence or absence of TCRs on the project site, a review was conducted of the City of Manhattan Beach General Plan and General Plan Environmental Impact Report, as well as relevant federal, state, and local databases, including the National Register of Historic Places and the California Register of Historical Resources. The analysis was also based on information in the *Historic Period Building Evaluation* report (Appendix E), which provides a comprehensive overview of the city's historical and cultural context, including known archaeological resources. Sensitivity for TCRs was assessed through tribal consultation with the Gabrieleño Band of Mission Indian–Kizh Nation.

3.8.4 Project Impact Analysis

a) Would the project 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:

i) 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)?

ii) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

(i) As discussed in Section 3.3, *Cultural Resources*, the project site is not listed or eligible for listing in the California Register of Historical Resources (CRHR), National Register of Historic Places (NRHP), California Historical Landmarks (CHL), or California Points of Historical Interest (CPHI) or in a local register of historical resources (NPS 2025a, 2025b; OHP 2025a, 2025b). The project site does not meet any of the historic resource criteria and does not meet the definition of a historic resource pursuant to CEQA.

The project would not impact tribal cultural resources listed on any of the registers of historic resources. However, development of the proposed project could result in the discovery of previously unknown tribal cultural resources or human remains that could be eligible for listing.

Ground-disturbing activities as part of the proposed project have the potential to disturb subsurface deposits possessing resources of traditional or cultural significance to Native Americans. Though the project would be confined within the existing campus boundaries and would involve minimal construction, any grading beneath existing artificial fill could reach previously undisturbed soils where buried TCRs may exist. Therefore, this impact is **potentially significant**.

Impact TCR-1: Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to criteria in PRC Section 5020.1(k).

Mitigation Measures TCR-1 through TCR-3 would address the potential to encounter any tribal cultural resources during project-related ground-disturbing activities. With the implementation of MMs TCR-1 through TCR-3, potential impacts to tribal cultural resources would be reduced to less than significant.

Mitigation Measure TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.

a) The Manhattan Beach Unified School District (MBUSD) shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians–Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

b) A copy of the executed monitoring agreement shall be submitted to the Manhattan Beach Unified School District (MBUSD) prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

c) The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc. (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the Manhattan Beach Unified School District (MBUSD) upon written request to the Tribe.

d) On-site tribal monitoring shall conclude upon either (1) written confirmation to the Kizh from a designated point of contact for the Manhattan Beach Unified School District (MBUSD) that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the

Manhattan Beach Unified School District (MBUSD) that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

Mitigation Measure TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-funerary/Non-ceremonial)

a) Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural, and/or historic purposes.

Mitigation Measure TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

a) 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 Public Resources Code Section 5097.98, are also to be treated according to this statute.

b) If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.

c) Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).

d) Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.

e) Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

Significance with Mitigation: Less than significant.

ii) Tribal cultural resources consider the value of a resource to tribal cultural tradition, heritage, and identity to establish potential mitigation and to recognize that California Native American tribes have expertise concerning their tribal history and practices. As discussed in Section 3.4, there are no sensitive resources on the project site eligible for listing in the

California or National Registers. The project site is not listed as a historical resource in the City of Manhattan Beach.

In accordance with PRC Section 21080.1(d), a lead agency is required to provide formal notification of intended development projects to Native American tribes that have requested to be on the lead agency's list for receiving such notification. The formal notification is required to include a brief description of the proposed project and its location, lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. Pursuant to AB 52, the District mailed and emailed tribal consultation letters on September 18, 2025, inviting eight tribes on their AB 52 list to consult on the project. One tribe, the Kizh Nation, requested to consult during the 30-day AB 52 consultation request window, and the District did not receive any additional responses. Further, a Sacred Lands File request was submitted to the NAHC and received a negative result; there are no known sacred sites or tribal cultural resources within or in the vicinity of the project site.

Although unlikely, the potential exists to unearth tribal cultural resources during ground-disturbing activities. Therefore, this impact is **potentially significant**.

In the event tribal cultural resources are discovered, Mitigation Measures TCR-1 through TCR-3, and CUL-1 provide guidelines for how to protect tribal cultural resources. Under Mitigation Measure TCR-1, as described above, the District must retain a Native American monitor during all ground-disturbing construction activities. If tribal cultural resources are encountered, work must stop in the immediate area while the monitor and a qualified archaeologist assess the find. Mitigation Measure CUL-1 requires the District to retain a qualified archaeologist to be on call during grading activities, conduct preconstruction cultural resources training, and prepare a monitoring plan. If archaeological materials are discovered, work must stop within 50 feet of the find, and the archaeologist must evaluate its significance. If the discovery includes tribal cultural resources, appropriate tribal consultation is required to determine the proper course of action. Implementation of Mitigation Measures TCR-1 through TCR-3, and CUL-1 would reduce impacts to **less than significant** levels.

Significance with Mitigation: Less than significant.

3.8.5 Cumulative Impact Analysis

Would the project have a cumulative effect related to tribal cultural resources?

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for tribal cultural

resources. The study area for the assessment of cumulative impacts related to tribal cultural resources is the Mira Costa HS campus.

Development of the proposed project and related projects have the potential to encounter and potentially degrade tribal cultural resources and archeological resources. However, similar to the proposed project, each related project would be expected to comply with PRC Section 15064.5, which addresses accidental discoveries of archaeological sites and resources, including tribal cultural resources, perform site-specific archeological analyses, implement mitigation measures if needed, and comply with other applicable regulatory compliance measures. The proposed project would not result in an adverse change in the significance of a tribal cultural resource. The project site does not contain known archeological resources or human remains. No other projects are currently planned for the project site.

Therefore, the proposed project would not have a cumulative effect related to tribal cultural resources, and this impact is **less than significant.**

Significance with Mitigation: Less than significant.

3.8.6 References

Manhattan Beach, City of. 2003. *Manhattan Beach General Plan Final Environmental Impact Report*. https://www.manhattanbeach.gov/home/showpublisheddocument/48342/637714691472700000 .

NPS (National Park Service). 2025a, April 28 (accessed). *National Register of Historic Places.* https://www.nps.gov/subjects/nationalregister/database-research.htm#table.

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OHP (California Office of Historic Preservation). 2025a, April 28 (accessed). California Historical Landmarks by County. https://ohp.parks.ca.gov/?page_id=21445.

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4. ALTERNATIVES TO THE PROPOSED PROJECT

4.1 INTRODUCTION

This chapter presents the alternatives analysis for the proposed project, as required by the California Environmental Quality Act (CEQA). CEQA requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives" (CEQA Guidelines sec. 15126.6[a]).

The discussion includes an explanation of the methodology used to select alternatives to the proposed project, with the intent of identifying potentially feasible alternatives that could avoid or substantially lessen the significant impacts identified for the proposed project while still meeting most of the basic project objectives, pursuant to CEQA Guidelines Section 15126.6(a). This chapter identifies a reasonable range of alternatives that meet these criteria, and these alternatives are evaluated with respect to minimizing adverse environmental effects as compared to the proposed project. It also describes other alternatives and alternative concepts that were considered but eliminated from detailed consideration and the reasons for their elimination. For the alternatives selected for analysis, this chapter evaluates the impacts of the alternatives against baseline environmental conditions and compares the potential impacts of the alternatives with those of the proposed project. Finally, as required under CEQA Guidelines Section 15126.6(e), based on this analysis, this chapter then discusses the Environmentally Superior Alternative.

The discussion in this chapter is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. Section 15126.6, "Consideration and Discussion of Alternatives to the Proposed Project," of the CEQA Guidelines states that:

> An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for

> selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. (sec. 15126.6[a])

4.2 FACTORS CONSIDERED WHEN DEVELOPING ALTERNATIVES

This section describes the basis for determining the range of CEQA alternatives and identifies the specific alternatives that are analyzed in this Draft Environmental Impact Report (DEIR). The primary factors considered when determining feasible alternatives to the proposed project are the identified project objectives and those significant impacts that have been identified for the proposed project. Therefore, these two considerations are summarized below.

4.2.1 Project Objectives

Chapter 2, *Project Description*, provides objectives that have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts. The following specific objectives have been identified for the proposed project:

1. Provide adequate athletic facilities at Mira Costa HS to accommodate school sport games, other school events, and community events on the campus.
2. Provide updated lighting to allow night use athletic fields to accommodate school-related events and activities as well as community events.
3. Upgrade buildings and facilities on campus consistent with the FMP to support current needs and to guide future growth, renovations, and improvements.

4.2.2 Significant Impacts

Apart from the No Project Alternative, alternatives to a project should be evaluated because of their ability to feasibly attain most of the basic objectives of the project and avoid or lessen the project's identified significant impacts. The proposed project would result in three significant impacts.

LESS-THAN-SIGNIFICANT IMPACTS WITH MITIGATION

The following impacts were found to be less than significant with implementation of mitigation measures.

- **Impact AES-1:** The proposed project would have a substantial impact related to light and glare.
- **Impact BIO-1:** The proposed project would have potential impacts on special status species.
- **Impact BIO-2:** The proposed project would have a potential impact on wetlands.
- **Impact BIO-3:** The proposed project would have a potential impact in migratory birds.
- **Impact CUL-1:** Project development would cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- **Impact GEO-1:** Construction of the proposed project could encounter unique paleontological resources during ground-disturbing activities.
- **Impact TCR-1:** Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, pursuant to criteria set forth in Public Resources Code Section 5020.1(k).

SIGNIFICANT AND UNAVOIDABLE IMPACTS

This DEIR did not identify any significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project.

4.3 ALTERNATIVES CONSIDERED BUT REJECTED

CEQA Guidelines section 15126.6(c) requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. CEQA Guidelines section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. Following is a discussion of alternatives considered and rejected, along with the reasons that alternative was not included in the analysis.

4.3.1 Alternative Development Area

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of

the project need be considered for inclusion in the EIR (CEQA Guidelines § 15126.6[f][2][A].) Key factors in evaluating the feasibility of potential off-site locations for EIR project alternatives include:

- If it is in the same jurisdiction.
- Whether development as proposed would require a general plan amendment.
- Whether the project applicant could reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). (CEQA Guidelines Section 15126.6[f][1])

The Alternative Development Area Alternative would result in the development of the proposed project in an alternate site. The proposed project by design is intended for the Mira Costa HS campus. Consequently, an alternative off-site location is not a feasible alternative and would not meet the project objectives. Impacts that are identified as being potentially significant under the proposed project are due to light spill and glare and construction-related activity such as impacts special status species, wetlands, and inadvertent discovery of significant archaeological or cultural resources during excavation. These impacts could potentially occur regardless of the proposed project's location. For these reasons, an alternative that is in another location in the District is not addressed in this chapter. Because the project site is already developed as a school with athletic facilities, constructing the proposed project on a different site would likely increase environmental impacts. It was determined, therefore, that it is unlikely that there is an alternative project site that could potentially meet the objectives of the proposed project and reduce significant impacts of the project as proposed.

4.4 ALTERNATIVES SELECTED FOR ANALYSIS

The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the objectives of the proposed project and that may avoid or substantially lessen any of the significant impacts of the proposed project.

- Alternative 1: No Project Alternative
- Alternative 2: Restricted Hours Alternative
- Alternative 3: No Lighting on the West Field Alternative

4.5 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

The CEQA Guidelines require analysis of a No Project Alternative. The purpose of this alternative is to describe and analyze a scenario under which the proposed project is not implemented so that decision makers can compare the impacts of approving the proposed project with the

impacts of not approving the proposed project. The No Project Alternative analysis must discuss the existing site conditions as well as what would reasonably be expected to occur in the foreseeable future based on any current plans, and it must be consistent with available infrastructure and community services.

Under the No Project Alternative, the District would not approve any portion of the proposed project on the Mira Costa HS campus, and none of the mitigation measures identified within this DEIR would be necessary. Under the No Project Alternative, the proposed improvements at Mira Costa HS would not be implemented. The project site on campus would not have newly installed lighting fixtures, two new e-bike parking areas, and improvements identified in the District's Mira Costa HS FMP. The school would continue to operate under its current conditions, and no changes would take place.

4.5.1 Relationship to Project Objectives

Under the No Project Alternative, none of the District's objectives for the proposed project would be met.

4.5.2 Comparison Analysis of Environmental Effects

AESTHETICS

Under this alternative, the existing field lights at the Waller Football Stadium in the northeast quadrant of the campus would not be replaced, and new field lights would not be installed at the West Field in the northwest quadrant of the campus or on the softball/baseball fields in the southwest quadrant of the campus. The No Project Alternative would not install two new e-bike parking areas on campus or implement various improvements identified in the District's Mira Costa HS FMP. No structural or other visible changes to the existing Mira Costa HS campus would occur, so this alternative would result in no new impacts to visual/aesthetic resources. Specifically, this alternative would not create new sources of light and spill light as a result of installing light poles. Overall, the No Project Alternative would lessen the less than significant aesthetic impacts of the proposed project and avoid the less than significant (after mitigation) light and glare impacts. Impacts under this alternative would be less than those of the proposed project.

AIR QUALITY

No construction would occur under this alternative; therefore, no construction-related air quality impacts would occur, though construction-related impacts of the proposed project are less than significant. Operation (i.e., student enrollment, staffing, and general operational characteristics) under this alternative would remain similar to existing conditions. As discussed

in Chapter 2, *Project Description*, the proposed project would not change enrollment capacity and staffing of Mira Costa HS. Therefore, operational-related air quality impacts under this alternative would be similar to the less-than-significant impacts of the proposed project. Overall, the No Project Alternative would result in air quality impacts that are less than those of the proposed project.

BIOLOGICAL RESOURCES

This alternative would not replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; or install new field lights on the softball/baseball fields in the southwest quadrant of the campus. No new construction activities, including ground disturbance, would occur under the No Project Alternative. Therefore, potential construction-related impacts to endangered species, wildlife corridors, and migratory birds would be avoided. Construction impacts under this alternative would be less than the proposed project. Overall, the No Project Alternative would result in impacts that are less than those of the proposed project.

CULTURAL RESOURCES

The No Project Alternative would not include any ground-disturbing activities; therefore, potential construction-related impacts to subsurface unknown archaeological resources would be avoided. The No Project Alternative would avoid the less than significant (after mitigation) impacts on cultural resources from the proposed project.

GEOLOGY AND SOILS

No new construction activities, including ground disturbance, would occur under the No Project Alternative. Therefore, potential construction-related impacts to unstable soils and subsurface unknown paleontological resources would be avoided. Construction impacts under this alternative would be less than the proposed project. Impacts related to seismic hazards would be similar to the proposed project, as they are determined by site-specific geologic conditions rather than project design or construction. Overall, impacts under this alternative would be less than those of the proposed project, which are less than significant after mitigation.

NOISE

No construction noise impacts would occur under the No Project Alternative. Specifically, this alternative would avoid the construction noise impacts to on-site school receptors and construction vibration impacts. Under this alternative, the campus would continue to operate as is, and no changes to the event schedule would occur. Therefore, operational impacts under the No Project Alternative would be less than the proposed project, which are less than significant.

Overall, the No Project Alternative would result in less noise impacts than the proposed project, and construction noise and vibration impacts would be avoided.

TRANSPORTATION

There would be no construction under the No Project Alternative, and therefore there would be no impacts as a result of construction-related traffic. Operation of the campus would remain the same under this alternative, and increases in VMT under the proposed project would be avoided. Therefore, the less than significant impacts of the proposed project would be reduced under the No Project Alternative. Overall, the No Project Alternative would result in less transportation impacts than the proposed project, and traffic impacts would be avoided.

TRIBAL CULTURAL RESOURCES

The No Project Alternative would not include any ground-disturbing activities; therefore, potential construction-related impacts to subsurface unknown tribal cultural resources would be avoided and impacts would be less than the proposed project. Overall, the No Project Alternative would avoid the cultural resources impacts of the proposed project, which are less than significant after mitigation.

4.6 ALTERNATIVE 2: RESTRICTED HOURS ALTERNATIVE

Under the Restricted Hours Alternative, the proposed Mira Costa High School Field Lighting Improvement Project would be implemented and would replace existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also install two new e-bike parking areas on campus and implement various improvements identified in the District's Mira Costa HS FMP. Under this Alternative, field use would be required to stop at 8:00 p.m. and lights would turn off at 9:00 p.m., whereas the project proposes to stop field use at 9:00 p.m. and turn off the at 10:00 p.m. This alternative would also reduce nighttime use at Waller Stadium by one hour, as compared to existing conditions.

4.6.1 Relationship to Project Objectives

Alternative 2, Restricted Hours Alternative, would meet project objectives, except for Objective 2, which is to provide lighting to allow night use of the athletic fields to accommodate school-related events and activities and community events. Under this alternative, the field's use would be reduced by one hour, requiring the lights to be turned off at 9:00 p.m. This would limit some on-campus games and events.

4.6.2 Comparison Analysis of Environmental Effects

AESTHETICS

Under this alternative, impacts to views, scenic quality, light and glare would be slightly reduced but similar to the proposed project. The Restricted Hours Alternative would require the same amount of construction as the proposed project. The proposed light poles would still be installed on campus, but athletic activities and events would be required to end and lights turned off an hour earlier than the proposed project. The proposed alternative would result in the same lighting level as the proposed project and would not exceed 0.9 foot-candle. The duration of lighting would be reduced, reducing the amount of time that nearby residences could experience light spill or glare from the athletic fields. Similar to the proposed project, Mitigation Measures AES-1 and AES-2 would be required to reduce impacts to less than significant during construction and operation of the proposed project. Therefore, under the Restricted Hours Alternative, aesthetic impacts would be slightly reduced but remain less than significant after mitigation.

AIR QUALITY

The Restricted Hours Alternative would require the same amount of construction as with the proposed project and would generate the same amount of criteria air pollutants. Operation under this Alternative would be similar to the proposed project; however, reduced hours would reduce the number of events, which would result in a minor decrease in air pollutants. Therefore, the Restricted Hours Alternative air quality impacts would be slightly reduced compared to the proposed project but remain less than significant.

BIOLOGICAL RESOURCES

The Restricted Hours Alternative would require the same ground-disturbing activities as with the proposed project. However, construction and operation of the proposed project would still have potential impacts on special status species and wetlands. Similar to the proposed project, Mitigation Measures BIO-1 through BIO-4 would be required to reduce impacts to less than significant during construction and operation of the proposed project. Therefore, potential construction and operation related impacts to biological resources would be similar to the proposed project. Therefore, the Restricted Hours Alternative would result in similar impacts to biological resources compared to the proposed project.

CULTURAL RESOURCES

The Restricted Hours Alternative would require the same ground-disturbing activities as with the proposed project. Similar to the proposed project, Mitigation Measure CUL-1 would be required to reduce impacts to less than significant. Therefore, potential construction-related

and operational-related impacts to subsurface unknown archaeological resources would be similar to the proposed project. Therefore, the Restricted Hours Alternative would result in similar impacts to cultural resources compared to the proposed project.

GEOLOGY AND SOILS

The Restricted Hours Alternative would require the same ground-disturbing activities as the proposed project. Thus, potential construction-related impacts to unstable soils and subsurface unknown paleontological resources would be similar to the proposed project. Impacts related to seismic hazards would be similar to the proposed project, as they are determined by site-specific geologic conditions. Similar to the proposed project, Mitigation Measure GEO-1 would be required to reduce impacts to less than significant. Therefore, the Restricted Hours Alternative would result in similar construction-related and operational-related impacts to geology and soils compared to the proposed project.

NOISE

Construction noise, vibration, and operational noise would still be generated under the Restricted Hours Alternative. Additionally, sensitive receptors close to the project site would still be exposed to minor increases in operational noise due to the increase in events. Under this alternative, athletic activities and events would be required to end and lights to be shut off by 9:00 p.m. compared to the proposed project, under which events end by 9:00 p.m. and lights turned off by 10:00 p.m. Compared to the proposed project, this alternative would reduce the impact of the proposed project by shortening the duration of noise exposure by one hour each evening. Therefore, under the Restricted Hours Alternative, noise impacts would be reduced but remain less than significant.

TRANSPORTATION

Construction activities would still take place under the Restricted Hours Alternative, and impacts as a result of construction-related traffic would be similar to the proposed project. Operation of the campus would be the same as the proposed project under this alternative, games and practices would be held on-site, and increases in VMT would be similar as the proposed project. However, reduced hours would potentially lead to reduce number of events and which would result in a minor decrease in VMT. Therefore, the Restricted Hours Alternative transportation impacts would be slightly reduced but remain less than significant compared to the proposed project.

TRIBAL CULTURAL RESOURCES

The Restricted Hours Alternative would include the same ground-disturbing activities as the proposed project, and potential construction-related and operational-related impacts to subsurface unknown tribal cultural resources would be the same. Similar to the Proposed

Project, Mitigation Measures TCR-1 through TCR-3 would be required to reduce impacts to less than significant. Overall, the Restricted Hours Alternative would result in similar impacts to tribal cultural resources compared to the proposed project.

4.7 ALTERNATIVE 3: NO LIGHTING ON WEST FIELD ALTERNATIVE

The No Lighting on West Field Alternative would include the replacement of existing field lights at the Waller Football Stadium in the northeast quadrant of the campus and installation of new field lights on the softball/baseball fields in the southwest quadrant of the campus. The alternative would also include the installation of two new e-bike parking areas on campus and implement various improvements identified in the District's Mira Costa HS FMP. Under this Alternative, the difference from the proposed project is that new lighting would not be installed for the West Field at the northwestern quadrant of the campus .

4.7.1 Relationship to Project Objectives

Alternative 3, No Lighting on West Field, would meet project objectives except for Objective 1, which is to provide adequate athletic facilities to accommodate school sport games, other school events and community events, and Objective 2, to provide updated lighting to allow night use of athletic fields to accommodate school-related events, sport games, and community events. Under this alternative, no lighting would be installed on the West Field, which is adjacent to residential properties. This would limit some on-campus sports games and events and community events hosted on campus.

4.7.2 Comparison Analysis of Environmental Effects

AESTHETICS

Under this alternative, impacts to views, scenic quality, and light and glare would be slightly reduced but similar to the proposed project. Lights at the Waller Football Stadium would still be replaced and new field lights would still be installed on the softball/baseball fields. However, no lights would be installed on the West Field. The proposed alternative would result in lower lighting levels than the proposed project at the West Field and the same lighting levels as the proposed project for Waller Football Stadium and the softball/baseball fields. Similar to the proposed project, lighting levels surrounding the campus would not exceed 0.9 foot-candle at sensitive receptors. The West Field is adjacent to residential properties to the north of campus, and this alternative would reduce light spill and glare at the sensitive receptors adjacent to and north of the field. Therefore, Mitigation Measures AES-1 and AES-2 would not be necessary to reduce impacts to sensitive receptors north of the West Field. Additionally, no light on the West

Field would mean the proposed event schedule would not be extended from 8:00 p.m. to 9:00 p.m., and the number of events, attendees, and start and end times would not change at this field. Therefore, under this Alternative, aesthetic impacts along the northern boundary of the campus would be slightly reduced and remain less than significant.

AIR QUALITY

Under this alternative, the amount of construction would be slightly reduced. Lights at the Waller Football Stadium would still be replaced, and new field lights would still be installed on the softball/baseball fields. However, no lights would be installed on the West Field and event timing would not be extended. Operation under this alternative would be similar to the proposed project because lighting would still be installed at the other two fields. However, no lighting on the West Field would reduce the number of proposed events, which would result in a minor decrease in air pollutants. Therefore, the No Lights on the West Field Alternative air quality impacts would be slightly reduced compared to the proposed project, which impacts are less than significant.

BIOLOGICAL RESOURCES

The No Lights on the West Field Alternative would require slightly reduced ground-disturbing activities than the proposed project. However, construction and operation of the proposed project would still have potential impacts on special status species and wetlands. Similar to the proposed project, Mitigation Measure BIO-1 through BIO-4 would be required to reduce construction and operation related impacts to less than significant. Therefore, potential construction-related and operational-related impacts to biological resources would be similar to the proposed project.

CULTURAL RESOURCES

The No Lights on the West Field Alternative would require slightly reduced ground-disturbing activities than the proposed project. However, similar to the proposed project, Mitigation Measure CUL-1 would be required to reduce impacts to less than significant. Therefore, potential construction-related and operational-related impacts to subsurface unknown archaeological resources would be similar to the proposed project. This Alternative would result in similar impacts to cultural resources compared to the proposed project.

GEOLOGY AND SOILS

The No Lights on the West Field Alternative would require slightly reduced ground-disturbing activities than the proposed project. Thus, potential construction-related and operational-related impacts to unstable soils and subsurface unknown paleontological resources would be similar to the proposed project. Impacts related to seismic hazards would be similar to the proposed project because they are determined by site-specific geologic conditions. Similar to

the proposed project, Mitigation Measure GEO-1 would be required to reduce impacts to less than significant. Therefore, this Alternative would result in similar impacts to geology and soils as the proposed project.

NOISE

Construction noise, vibration, and operational noise would still be generated under this Alternative, similar to the proposed project. However, sensitive receptors close to the West Field would experience slightly less exposure to increases in operational noise due to events. Under this alternative, lighting would not be installed on the West Field and events on that field would not be extended. Compared to the proposed project, this alternative would reduce operational noise at nearby sensitive receptors. Therefore, under this Alternative, noise impacts would be reduced and remain less than significant.

TRANSPORTATION

Construction activities would still take place under this Alternative, and therefore impacts as a result of construction-related traffic would be similar to the proposed project. Operation of the campus would be the same as the proposed project under this alternative, with games and practices held on-site. However, with no lights, the West Field would not extend the start and end time of events, which would lead to a reduced number of events and a minor decrease in VMT. Therefore, transportation impacts would be slightly reduced compared to the proposed project but remain less than significant.

TRIBAL CULTURAL RESOURCES

The No Lights on the West Field Alternative would require slightly reduced ground-disturbing activities as the proposed project; thus, potential construction-related and operational-related impacts to subsurface unknown tribal cultural resources would be the same. Similar to the proposed project, Mitigation Measures TCR-1 through TCR-3 would be required to reduce impacts to less than significant. Overall, this Alternative would result in similar impacts to tribal cultural resources compared to the proposed project.

4.8 SUMMARY OF ALTERNATIVES EVALUATION

Table 4-1, *Comparison of Project Alternative Impacts*, compares the impact of each alternative to impacts of the proposed project. The impacts of each alternative are classified as having a reduced (↓), similar or comparable to (=), or greater (↑) level of impact when compared to the proposed project.

Table 4-1 Comparison of Project Alternative Impacts

Environmental Topic	Proposed Project[1]	Alternative 1: No Project Alternative	Alternative 2: Restricted Hours Alternative	Alternative 3: No Lights on West Field Alternative
3.1 Aesthetics	LTS/M	↓	↓	↓
3.2 Air Quality	LTS	↓	↓	↓
3.3 Biological Resources	LTS/M	↓	=	=
3.4 Cultural Resources	LTS/M	↓	=	=
3.5 Geology and Soils	LTS/M	↓	=	=
3.6 Noise	LTS	↓	↓	↓
3.7 Transportation	LTS	↓	↓	↓
3.8 Tribal Cultural Resources	LTS/M	↓	=	=

Notes:

The impacts listed in this column represent the highest significance determination for each respective topic.

NI No Impact
LTS Less than Significant
LTS/M Less than Significant with Mitigation

↓ Reduced impact in comparison to the proposed project
= Similar impact in comparison to the proposed project
↑ Greater impact in comparison to the proposed project

Table 4-2, *Ability to Meet Proposed Project Objectives*, identifies the ability of each of the project alternatives to meet the proposed project's objectives.

Table 4-2 Ability to Meet Proposed Project Objectives

Objective	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Restricted Hours Alternative	Alternative 3: No Lights on West Field Alternative
a) Provide adequate athletic facilities at Mira Costa HS to accommodate school sport games, other school events, and community events on the campus	Yes	No	No	No
b) Provide updated lighting to allow night use athletic fields to accommodate school-related	Yes	No	No	No

Table 4-2 Ability to Meet Proposed Project Objectives

Objective	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Restricted Hours Alternative	Alternative 3: No Lights on West Field Alternative
events and activities as well as community events				
c) Upgrade buildings and facilities on campus consistent with the FMP to support current needs and to guide future growth, renovations, and improvements.	Yes	No	Yes	Yes

4.8.1 Summary of Alternative 1: No Project Alternative

The No Project Alternative would not include any ground-disturbing activities and would eliminate the proposed project's potentially significant impacts on aesthetic resources, biological resources, cultural resources, geology and soils, and tribal cultural resources. This alternative would not create new sources of light or cause light spill as a result of installing light poles. Additionally, all impacts related to construction for the proposed project would be avoided with this alternative. Overall, this alternative would result in reduced impacts across all environmental topics. However, the No Project Alternative would not meet any of the project objectives.

4.8.2 Summary of Alternative 2: Restricted Hours Alternative

The Restricted Hours Alternative would have the same construction and operation characteristics as the proposed project, except field use would be required to stop at 8:00 p.m. and lights would turn off at 9:00 p.m., instead of field use stopping at 9:00 p.m. and lights turning off at 10:00 p.m. As a result, impacts related to biological resources, cultural resources, geology and soils, and tribal cultural resources, would be similar to those of the proposed project. However, this Alternative would reduce the duration of exposure to light and noise, and impacts to aesthetics and noise would be slightly reduced but would remain less than significant, as with the proposed project. This alternative has the potential to reduce the number of events that can be accommodated on campus, thereby reducing project-generated trips and daily VMT; therefore, impacts to air quality and transportation would be slightly reduced but would still remain less then significant. The Restricted Hours Alternative would not

meet Objective 2, which is to provide lighting to allow night use of the athletic fields to accommodate school-related events and activities and community events. Under this alternative, the field's use would be reduced by one hour, which would limit some on-campus games and events.

4.8.3 Summary of Alternative 3: No Lights on West Field Alternative

The No Lights on West Field Alternative would have slightly less construction and operation as the proposed project. As a result, impacts related to biological resources, cultural resources, geology and soils, and tribal cultural resources would be similar to those of the proposed project. However, this Alternative would reduce the amount of light spill and glare and operational noise at adjacent residential properties; therefore, impacts to aesthetics and noise would be slightly reduced but would remain less than significant, as with the proposed project. This alternative would reduce the number of events that can be accommodated on campus, thereby reducing project-generated trips and daily VMT, and impacts to air quality and transportation would be slightly reduced but would still remain less then significant. The No Lighting on West Field Alternative would not meet Objective 1, to provide adequate athletic facilities to accommodate school sport games, other school events and community events, or Objective 2, to provide updated lighting to allow night use athletic fields to accommodate school-related events, sport games, and community events. Under this alternative, no lighting would be installed on the West Field, which is adjacent to residential properties. This would limit some on-campus sports games and events and community events hosted on campus.

4.9 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative to the proposed project that would be expected to generate the least number of significant impacts. Identification of the environmentally superior alternative is an informational procedure, and the alternative to the proposed project selected may not be the alternative to the proposed project that best meets the goals or needs of the District. Because CEQA Guidelines Section 15126.6(c) requires an evaluation of a reasonable range of alternatives to the proposed project, the proposed project under consideration cannot be identified as the environmentally superior alternative. Additionally, in accordance with CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives.

The Restricted Hours Alternative is identified as the environmentally superior alternative. By requiring all field use and lighting at the Mira Costa HS athletic fields to end at 8:00 p.m. instead of 9:00 p.m., this Alternative would reduce the duration of impacts associated with aesthetics, air quality, noise, and transportation. All impacts would be less than significant with mitigation incorporated. The Restricted Hours Alternative would limit some on-campus games and events, ultimately requiring that they continue to be held off campus; thus, this alternative would not meet all of the project objectives and would not meet the needs and goals of the school and the District.

5. OTHER CEQA CONSIDERATIONS

This chapter provides a discussion of the effects of the proposed project based on the analyses presented in Sections 3.1 through 3.7 of this Draft Environmental Impact Report (DEIR). The topics covered in this chapter include significant and unavoidable impacts, significant irreversible changes to the environment, growth-inducing effects, and effects found not to be significant. More detailed analyses of the effects that the proposed project would have on the environment, and proposed mitigation measures to minimize significant impacts, are provided in Chapter 3, *Environmental Analysis*, of this Draft EIR.

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(a) requires that "Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects." CEQA Guidelines Section 15126.2(c) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Table ES-1, *Summary of Significant Environmental Impacts and Mitigation Measures*, in the *Executive Summary* of this Draft EIR summarizes the significant impacts, mitigation measures, and levels of significance with and without mitigation.

Mitigation measures would reduce the level of impact for all significant impacts to a less-than-significant level, and no impacts would remain significant and unavoidable after mitigation measures are applied.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss whether "Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely." The discussion shall consider primary and secondary impacts that generally commit future generations to similar uses, irreversible damage from environmental accidents, and irretrievable commitments of resources.

The following are the significant irreversible changes that would be caused by the proposed project, should it be implemented:

- Future development facilitated by the proposed project would include construction that would entail the commitment of nonrenewable and/or slowly renewable energy resources;

human resources; and natural resources such as sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Operation of the proposed project would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of growth and development facilitated by the proposed project would limit the availability of such resources for future generations or for other uses during the life of the proposed project.

Given the low likelihood that the land in would revert to lower intensity uses, the proposed project would generally commit future generations to these environmental changes. The commitment of resources to the proposed project is not unusual or inconsistent with projects of this type and scope. However, once these commitments are made, it is improbable that the proposed project would revert to its current condition. Thus, the proposed project would result in significant irreversible changes to the environment.

5.3 GROWTH-INDUCING EFFECTS

Section 15126.2(e) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical factors may include the removal of obstacles to population growth, such as through a major expansion of a wastewater plant.

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

As discussed in Section XIV, *Population and Housing*, of the Initial Study (see Appendix A), the proposed project would serve the existing surrounding residents and would not increase student enrollment or capacity. Additionally, project development facilitated by the FMP would be entirely within the existing school campus boundary and does not include changes to land use regulations. Therefore, the proposed project would not remove obstacles to growth.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

The proposed project is located in a fully urbanized area that is well served by existing infrastructure. As discussed in Section XIX, *Utilities and Service Systems*, of the Initial Study (see Appendix A) and Section 3.6, *Transportation and Traffic*, of this EIR, existing infrastructure in Manhattan Beach would be adequate to serve the project. Minor improvements to water, sewer, and drainage connection infrastructure could be needed, but would be sized to specifically serve the proposed project. No new roads would be required. Because the project constitutes redevelopment within an urbanized area and does not require the extension of new infrastructure through undeveloped areas, project implementation would not result in the need to expand one or more public services.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Implementation of the proposed project would encourage or facilitate economic effects. Temporary jobs would be created during development of future projects (e.g., design, planning, engineering, construction, etc.), facilitated by the proposed project, which would result in direct economic effects. However, project operation would be localized and would not increase student enrollment or capacity. The proposed project would not include the construction or extension of major infrastructure or utilities that could support new development in the surrounding area. Therefore, the project would not encourage or facilitate economic effects that could result in other activities that would significantly affect the environment.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Approval of the proposed project would not represent a precedent-setting action. The proposed project consists of replacing existing field lights at the Waller Football Stadium in the northeast quadrant of the campus; install new field lights at the West Field in the northwest quadrant of the campus; and install new field lights on the softball/baseball fields in the southwest quadrant of the campus. The project would also include the installation of two new e-bike parking areas

and improvements identified in the District's Mira Costa High School Facilities Master Plan, which includes demolition, new construction, modernization, and renovation of buildings and facilities on campus. The project would not establish a new policy, regulation, or approval process that would encourage or facilitate other development or set a precedent for future projects with the potential to significantly affect the environment. Any future facility improvements would be subject to their own independent environmental review, as required by CEQA. Therefore, approval of this project would not involve a precedent-setting action that could encourage or facilitate other activities that could significantly affect the environment.

5.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

California Environmental Quality Act (CEQA) Guidelines Section 15128, "Effects Not Found to Be Significant," allows environmental issues for which there is no likelihood of significant impact to be "scoped out" and not analyzed further in the EIR. Based on the analysis in the Initial Study (see Appendix A), it was determined that the proposed project would not result in significant environmental impacts related to the following environmental impact topics, and they are not analyzed in Chapter 3, *Environmental Analysis*, of this Draft EIR. Please refer to Appendix A for the details of why the proposed project would not result in significant impacts to these environmental impact topics.

The following topics were found not to be significant and were scoped out of further analysis in this DEIR.

- Aesthetics
  - The proposed project would have no impact on scenic vistas.
  - The propose project would have no impact on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Agriculture and Forestry Resources
- Energy
- Geology and soils
  - The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving; Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides.
  - The proposed project would not result in substantial soil erosion or the loss of topsoil.

- The proposed project is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- The proposed project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- The proposed project does not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

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This Draft Environmental Impact Report (EIR) was prepared by the District in consultation with the following organizations, consultants, and individuals.

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