

Fullerton Joint Union High School District

FULLERTON UNION HIGH SCHOOL FIELD IMPROVEMENTS AND NEW ATHLETIC BUILDING PROJECT

March 2026 | Initial Study / Mitigated Negative Declaration



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For Fullerton Joint Union High School District

Fullerton Joint Union High School District

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TABLE OF CONTENTS

Environmental Checklist.....	1
Project Information	1
Environmental Factors Potentially Affected.....	5
Determination	6
1. Introduction	7
1.1 Overview	7
1.2 California Environmental Quality Act.....	7
1.3 Initial Study	8
1.4 Mitigated Negative Declaration	9
1.5 Levels of Significance	9
2. Project Description	11
2.1 Project Location	11
2.1.1 Regional Setting	11
2.1.2 Local Setting	11
2.2 Environmental Setting.....	11
2.2.1 Existing Land Use	11
2.2.2 Parking and Access.....	12
2.2.3 Surrounding Land Use.....	23
2.2.4 Existing General Plan Land Use and Zoning.....	23
2.2.5 Existing Programs and Activities	23
2.3 Project Characteristics	24
2.3.1 Proposed Land Use	24
Athletic Building	24
Restroom Building.....	25
Parking and Access.....	25
Landscaping, Hardscape, and Fencing	26
Field Lighting	26
2.3.2 Proposed Programming and Activities.....	35
2.3.3 Project Construction	35
2.4 Required Permits and Approvals.....	35
3. Environmental Evaluation.....	37
I. Aesthetics.....	37
II. Agriculture and Forestry Resources	44
III. Air Quality	47
IV. Biological Resources.....	56

FULLERTON UNION HIGH SCHOOL FIELD IMPROVEMENTS AND
NEW ATHLETIC BUILDING PROJECT INITIAL STUDY/MND
FULLERTON UNION HIGH SCHOOL DISTRICT

TABLE OF CONTENTS

V.	Cultural Resources	61
VI.	Energy	65
VII.	Geology and Soils.....	68
VIII.	Greenhouse Gas Emissions	74
IX.	Hazards and Hazardous Materials.....	78
X.	Hydrology and Water Quality	83
XI.	Land Use and Planning.....	92
XII.	Mineral Resources.....	93
XIII.	Noise	94
XIV.	Population and Housing.....	104
XV.	Public Services.....	105
XVI.	Recreation	110
XVII.	Transportation.....	111
XVIII.	Tribal Cultural Resources.....	117
XIX.	Utilities and Service Systems	125
XX.	Wildfire.....	130
XXI.	Mandatory Findings of Significance.....	133
4.	References	137
5.	List of Preparers	143
	Lead Agency	143
	PlaceWorks.....	143

APPENDICES

Appendix A	Air Quality, Energy, and Greenhouse Gases
Appendix B	Cultural Resource Evaluation Report
Appendix C	Noise
Appendix D	Traffic Impact Study
Appendix E	Sacred Lands File Request

TABLE OF CONTENTS

List of Figures

Figure 1	Regional Location.....	13
Figure 2	Local Vicinity	15
Figure 3	Aerial Photograph with Photo Locations	17
Figure 4	Project Site Photographs	19
Figure 5	Surrounding Site Photographs.....	21
Figure 6	Athletic Building Site Plan	27
Figure 7	Restroom Building Site Plan.....	29
Figure 9	Field Lighting Plan and Vertical Light Spill	33

List of Tables

Table 1	Discretionary Approvals and Permits	36
Table 2	General Light Levels	40
Table 3	Maximum Daily Regional Construction Emissions.....	49
Table 4	Maximum Daily Regional Operation Emissions	51
Table 5	Construction Emissions Compared to Screening-Level LSTs	52
Table 6	Construction Risk Summary.....	53
Table 7	Operation-Related Electricity Consumption.....	67
Table 8	Project-Related Operational GHG Emissions.....	76
Table 9	Hazardous Material Sites On-Site or Within 0.25 Miles of the Project Site	81
Table 10	Existing Roadway Traffic Noise Levels	96
Table 11	City of Fullerton Sound Level Limits	97
Table 12	Project-Related Construction Noise Level, dBA at the Nearest Receptors	100
Table 13	Project-Related Increases in Traffic Noise, dBA CNEL at 50 Feet	101
Table 14	Project-Related Construction Vibration Damage Levels	103
Table 15	Trip Generation and Distribution.....	112
Table 16	Estimated Project Average Daily Traffic Volumes	113

TABLE OF CONTENTS

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ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

Project Title: Fullerton Union High School Field Improvements and New Athletic Building Project

Lead Agency Name and Address:

Fullerton Joint Union High School District
1027 South Leslie Street
La Habra, CA 90631

Contact Person and Phone Number:

Vince Madsen, Senior Director of Facilities, M&O and Transportation
714.680.5601

Project Location: Approximately 4.2 acres of the western portion of the FUHS campus, and approximately 2.5 acres of the eastern portion of the FUHS campus, east of N Lemon Street, for total of approximately 6.7 acres at 201 E Chapman Avenue (Assessor's Parcel Numbers [APNs] 029-020-25; 029-043-10; 029-043-11; 029-043-13; 029-050-02; and 029-080-28), near the center of the City of Fullerton.

Project Sponsor's Name and Address:

Fullerton Joint Union High School District
1027 South Leslie Street
La Habra, CA 90631

General Plan Designation: School (SCH).

Zoning: Public Land (P-L).

Description of Project: The proposed project includes three primary components: (1) a new athletic building; (2) restroom building; and (3) athletic field improvements at the varsity and junior varsity softball fields and the baseball field.

To accommodate the proposed athletic building, the project would require demolition of a portion of the existing northern parking lot, five tennis courts, and landscaped areas. Four trees would be removed as part of this work; however, no buildings would be demolished. The proposed athletic building would be a two-story, approximately 33,270-square-foot facility designed in a Spanish Colonial Revival architectural style consistent with other buildings on the

ENVIRONMENTAL CHECKLIST

FUHS campus and at Fullerton College. The building would reach approximately 41 feet above grade at the roofline and up to 70 feet at the decorative bell tower. The first floor (approximately 17,475 square feet) would include locker rooms, team rooms, coaches' offices, a training area, sports storage, laundry, mechanical rooms, and an elevator. The second floor (approximately 15,795 square feet) would include classrooms, a media room, an athletics pavilion, a dance room, a golf simulator, and offices. Additional features would include outdoor lighting and security cameras, a trash enclosure, bike racks and lockers, and associated landscaping. Landscaping around the athletic building would include 15 ornamental trees, shrubs, grass, and groundcover plants throughout the parking areas and surrounding the facility, along with a synthetic turf area at the southeast corner. Existing fencing and gates east of the athletic building would be replaced with new ornamental fencing and a ten-foot gate, and portions of the paved area would be repaved as part of the site improvements.

The project would also include demolition of existing concrete paving and a double service gate to construct a new one-story restroom building within the Agri-Science Academy's paved agricultural area. The restroom building would contain women's, men's, and all-gender restrooms, a custodial room, and a storage room, and would connect to existing utilities. Vehicular access would be shifted slightly north of its current location, and new chain-link fencing and gates would be installed to the north and south of the restroom building.

To accommodate the new building, the northern parking lot would be reconstructed and reconfigured into an L-shaped layout while maintaining the existing total of 56 parking spaces. The lot would provide three electric-vehicle (EV) charging spaces, 13 EV-capable spaces, and four ADA spaces. A new ingress/egress driveway would be added just south of the existing driveway at E Union Avenue/N Pomona Avenue, which would remain in use. The project would also include 10 bike parking spaces located south of the athletic building, with continued pedestrian access via existing sidewalks along N Pomona Avenue and E Union Avenue. Fencing and a vehicular gate would limit access to the athletic building and parking area from the west, while emergency access between the northern and central parking lots would be maintained. New walkways would connect the athletic building to existing public sidewalks and other campus pathways.

The District proposes to install 16 new sports field light poles with fixtures—eight around the softball fields and eight around the baseball field. The softball fields would include four 60-foot-tall and four 70-foot-tall poles, while the baseball field would include six 70-foot and two 80-foot poles. The addition of field lighting would allow evening practices between 3:30 PM and 8:00 PM for approximately 17 sports and activities, such as soccer, football, track and field, and band, without spectators. No new events, games, or increases in participants or spectators are proposed; major spectator events, such as Friday night football, would continue to occur at Buena Park, Fullerton Union, and La Habra High Schools. Construction is expected to occur in one phase from July 2026 through February 2028, with all staging and worker parking provided

onsite. Construction would comply with the City's noise regulations, which allow such activities between 7:00 AM and 8:00 PM, except on Sundays and City-recognized holidays.

Surrounding Land Uses and Setting:

The western portion of the FUHS campus is bordered by residential and commercial uses to the north and south, residential and commercial uses as well as Brea Creek to the west, and the eastern portion of the FUHS campus and Fullerton College to the east. The eastern portion of the campus is surrounded by residential uses and Fullerton College to the north, Fullerton College to the east and south, and the western portion of the FUHS campus to the west. The western project site is bordered by residential uses to the west, Fullerton Stadium to the north, the FUHS Gymnasium to the east, and an existing tennis court and the FUHS softball field to the south. The eastern project site is bordered by the FUHS Agri-Science Academy parking lot to the west, Agri-Science Academy buildings to the north and west, and the FUHS baseball field to the south.

The properties surrounding the campus have General Plan land use designations of School, Low Density Residential, and Low-Medium Density Residential, as well as Medium Density Residential to the north; Low-Medium Density Residential, Medium Density Residential, and Downtown Mixed Use to the west; School, Downtown Mixed Use, Medium Density Residential, and Religious Institutions to the south; and School and Low Density Residential to the east. Corresponding zoning designations include P-L, One-Family Residential Preservation (R-1-7.2P), and Two-Family Residential Preservation (R-2P) to the north; Central Business District Commercial (C-3 and C-3 ROD), Multiple Residential (R-3), Multiple Residential Preservation (R-3P), and R-2P to the west; C-3, C-3 ROD, and P-L to the south; and P-L and R-1-7.2P to the east.

Other Public Agencies Whose Approval Is Required (e.g., Permits, Financing Approval, or Participating Agreement):

- **Santa Ana Regional Water Quality Control Board (Region 5):**
 - Coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit for stormwater discharges associated with construction activities.
- **California Department of General Services, Division of the State Architect (DSA):**
 - Review and approval of school building plans for structural safety, fire/life safety, and accessibility compliance in accordance with Title 24 of the California Code of Regulations.
- **California Department of Education (CDE), School Facilities Planning Division:**
 - Review of school site layout and verification of compliance with educational facility design standards and siting criteria.

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is

ENVIRONMENTAL CHECKLIST

there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The proposed project would comply with tribal consultation requirements pursuant to Assembly Bill 52 (AB 52). The FJUHSD will provide letters to the applicable Native American tribes inviting the individual Native American tribes to opportunity to consult on the proposed project per the requirements under Public Resources Code Section 21080.3.1.

Fifteen tribes were invited to consult based on the District's AB 52 list—Agua Caliente Band of Cahuilla Indians, Gabrieleno Band of Mission Indians - Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino /Tongva Nation, Gabrielino-Tongva Tribe, Juaneno Band of Mission Indians Acjachemen Nation – Belardes, Juaneno Band of Mission Indians, La Jolla Band of Luiseno Indians, Pala Band of Mission Indians, Pauma Band of Luiseno Indians, Pechanga Band of Luiseno Indians, Pechanga Band of Mission Indians, Rincon Band of Luiseno Indians, San Fernando Band of Mission Indians, San Luis Rey Band of Mission Indians, and Soboba Band of Luiseno. The invitation letters were sent to tribes on December 11, 2025, via mail to the available addresses.

On December 22, 2025, the District received a request for consultation from the Gabrieleno Band of Mission Indians - Kizh Nation regarding the proposed project. The Gabrieleno Band of Mission Indians - Kizh Nation provided mitigation measures to be incorporated into the IS/MND that address the inadvertent discovery of tribal cultural resources and to minimize the potential impacts to tribal cultural resources. The mitigation measures were incorporated into this IS/MND for the proposed project. Tribal consultation with the Gabrieleno Band of Mission Indians - Kizh Nation pursuant to AB 52 was concluded on March 3, 2026 for the proposed project.

On January 28, 2026, the District received a request for consultation from the Juaneno Band of Mission Indians Acjachemen Nation 84A regarding the proposed project. The Juaneno Band of Mission Indians Acjachemen Nation 84A provided mitigation measures to be incorporated into the IS/MND that address the inadvertent discovery of tribal cultural resources and to minimize the potential impacts to tribal cultural resources. The mitigation measures were incorporated into this IS/MND for the proposed project. Tribal consultation with the Juaneno Band of Mission Indians Acjachemen Nation 84A pursuant to AB 52 was concluded on March 3, 2026 for the proposed project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project; that is, at least one impact is a “Potentially Significant Impact,” as indicated by the checklist for that factor in Chapter 3, *Environmental Evaluation*.

- | | | |
|--|---|---|
| ☐ Aesthetics | ☐ Agriculture / Forestry Resources | ☐ Air Quality |
| ☐ Biological Resources | ☐ Cultural Resources | ☐ Energy |
| ☐ Geology / Soils | ☐ Greenhouse Gas Emissions | ☐ Hazards and Hazardous Materials |
| ☐ Hydrology / Water Quality | ☐ Land Use / Planning | ☐ Mineral Resources |
| ☐ Noise | ☐ Population / Housing | ☐ Public Services |
| ☐ Recreation | ☐ Transportation | ☐ Tribal Cultural Resources |
| ☐ Utilities / Service Systems | ☐ Wildfire | ☐ Mandatory Findings of Significance |

DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

DIRECTOR OF FACILITIES

Date

3/30/2026

1. INTRODUCTION

1.1 OVERVIEW

The Fullerton Joint Union School District (District or FJUHSD) proposes to construct an athletic building and a restroom building. The proposed project would install field lighting at the baseball and softball fields. It would include landscaping and installation of fencing and gates.

In compliance with the California Environmental Quality Act (CEQA), the District, as lead agency, is preparing the environmental documentation for the proposed project to determine if implementation and associated discretionary actions would have a significant impact on the environment. As defined by Section 15063 of the CEQA Guidelines, an initial study (IS) is prepared primarily to provide the lead agency with information to use as the basis for determining whether an environmental impact report (EIR), negative declaration, or mitigated negative declaration (MND) would provide the necessary environmental documentation and clearance for the proposed project. This IS has been prepared to support the adoption of an MND.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The environmental compliance process is governed by the California Environmental Quality Act (CEQA) and the CEQA Guidelines (Public Resources Code [PRC], Section 21000 et seq.; California Code of Regulations [CCR], Title 14, Section 15000 et seq.). CEQA was enacted in 1970 by the California Legislature to disclose to decision-makers and the public the significant environmental effects of projects and to identify ways to avoid or reduce the environmental effects through feasible alternatives or mitigation measures. Compliance with CEQA applies to California government agencies at all levels: local, regional, and State agencies, boards, commissions, and special districts (such as school districts and water districts). The Fullerton Union High School District is the lead agency for the proposed project and is therefore required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

PRC Section 21080(a) states that analysis of a project's environmental impact is required for any "discretionary projects proposed to be carried out or approved by public agencies...." In this case, the lead agency has determined that an Initial Study is required to determine whether there is substantial evidence that construction and operation of the proposed project would result in environmental impacts.

1. INTRODUCTION

A “project” means the whole of an action that 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:

- An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100 to 65700.
- An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies. (14 CCR section 15378[a]).

The proposed discretionary actions by the project applicant constitute a “project” because the activity would result in a direct physical change in the environment and would be undertaken by a public agency. All “projects” in the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project.

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

1.3 INITIAL STUDY

The purpose of the initial study is to 1) provide the lead agency with information to use as the basis for deciding the proper type of CEQA document to prepare; 2) enable the lead agency to modify a project, mitigating adverse impacts before an environmental impact report (EIR) is prepared, thereby enabling the project to qualify for a negative declaration; 3) assist in the preparation of an EIR, if one is required; 4) facilitate environmental assessment early in the design of a project; 5) provide documentation of the factual basis for the findings in a mitigated negative declaration (MND) or negative declaration (ND); 6) eliminate unnecessary EIRs; and 7) determine if a project is covered under a previously prepared EIR. When an initial study identifies the potential for immitigable significant environmental impacts, the lead agency must

1. INTRODUCTION

prepare an EIR (14 CCR section 15064); however, if all impacts are found to be less than significant or can be mitigated to a less-than-significant level, the lead agency can prepare an ND or an MND, which incorporates mitigation measures into the project (14 CCR section 15070).

1.4 MITIGATED NEGATIVE DECLARATION

The MND includes information necessary for agencies to meet statutory responsibilities related to the proposed project. State and local agencies will use the MND when considering any permit or other approvals necessary to implement the project. A list of the environmental topics that have been identified for study in the MND is provided in the *Environmental Checklist* that precedes Chapter 1 of this initial study.

1.5 LEVELS OF SIGNIFICANCE

The following terminology is used to describe the level of significance of impacts. 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.
- **Less than significant with mitigation incorporated.** The project would exceed the established significance criteria without mitigation measures, but one or more mitigation measures would successfully reduce the impact to a less-than-significant level.
- **Potentially significant.** The project would exceed the established significance criteria, and either no feasible mitigation measures are available to reduce the impact to a less-than-significant level, or more analysis is needed to determine if feasible mitigation measures are available to reduce the impact to a less-than-significant level. If any impact is identified as potentially significant, an EIR is required.

Mitigation Measures. If, after incorporation and implementation of federal, State, and local regulations, there are still significant environmental impacts, then feasible and project-specific mitigation measures are required to reduce impacts to less-than-significant levels. Mitigation measures must further reduce significant environmental impacts above and beyond compliance with federal, State, and local laws and regulations. Mitigation under CEQA Guidelines Section 15370 includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

1.INTRODUCTION

- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

2. PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Fullerton Union High School (FUHS or campus) is at 201 E Chapman Avenue (APNs 029-020-25, 029-043-10, 029-043-11, 029-043-13, 029-050-02, and 029-080-28) near the center of the City of Fullerton (see Figure 1, *Regional Location*). The Fullerton Union High School Field Improvements and New Athletic Building Project (proposed project) would encompass approximately 4.2 acres of the western portion of the FUHS campus and approximately 2.5 acres of the eastern portion of the FUHS campus, east of N Lemon Street, for total of approximately 6.7 acres (see Figure 2, *Local Vicinity*, and Figure 3, *Aerial Photograph*).

2.1.1 Regional Setting

The city is surrounded by the cities of Brea and La Habra to the north, the cities of La Mirada and Buena Park and unincorporated Los Angeles County to the west, the city of Anaheim to the south, and the City of Placentia to the east. Regional access to the FUHS campus is provided by State Route 91 (SR-91), approximately 1.5 miles south of the campus (see Figure 1).

2.1.2 Local Setting

The western portion of campus is bordered by N Berkeley Avenue to the north, N Pomona Avenue and Brea Creek to the west, E Chapman Avenue to the south, and N Lemon Street to the east. The eastern portion of campus is bounded by N Berkeley Avenue to the north, N Lemon Street to the west, and Fullerton College to the east and south.

2.2 ENVIRONMENTAL SETTING

2.2.1 Existing Land Use

Fullerton Union High School is an approximately 31.9-acre campus encompassing six District-owned parcels. The FUHS serves 9th through 12th grade school and has an enrollment capacity of 2,187 students. It had a 2025 enrollment of 1,851 students. The campus includes 23 permanent academic related buildings, 2 storage sheds, 3 storage containers, 5 shade structures, a lunch shade structure, 5 tennis courts, an aquatics area with a swimming pool, a baseball and softball field, a track and field stadium, and 3 parking lots (2 with solar EV

2. PROJECT DESCRIPTION

systems); the Agri-Science Academy with agricultural stables and associated structures on a paved surface in the eastern portion of the campus; and landscaping and paved walkways throughout the campus (see Figure 3, *Aerial Photograph with Photo Locations*).

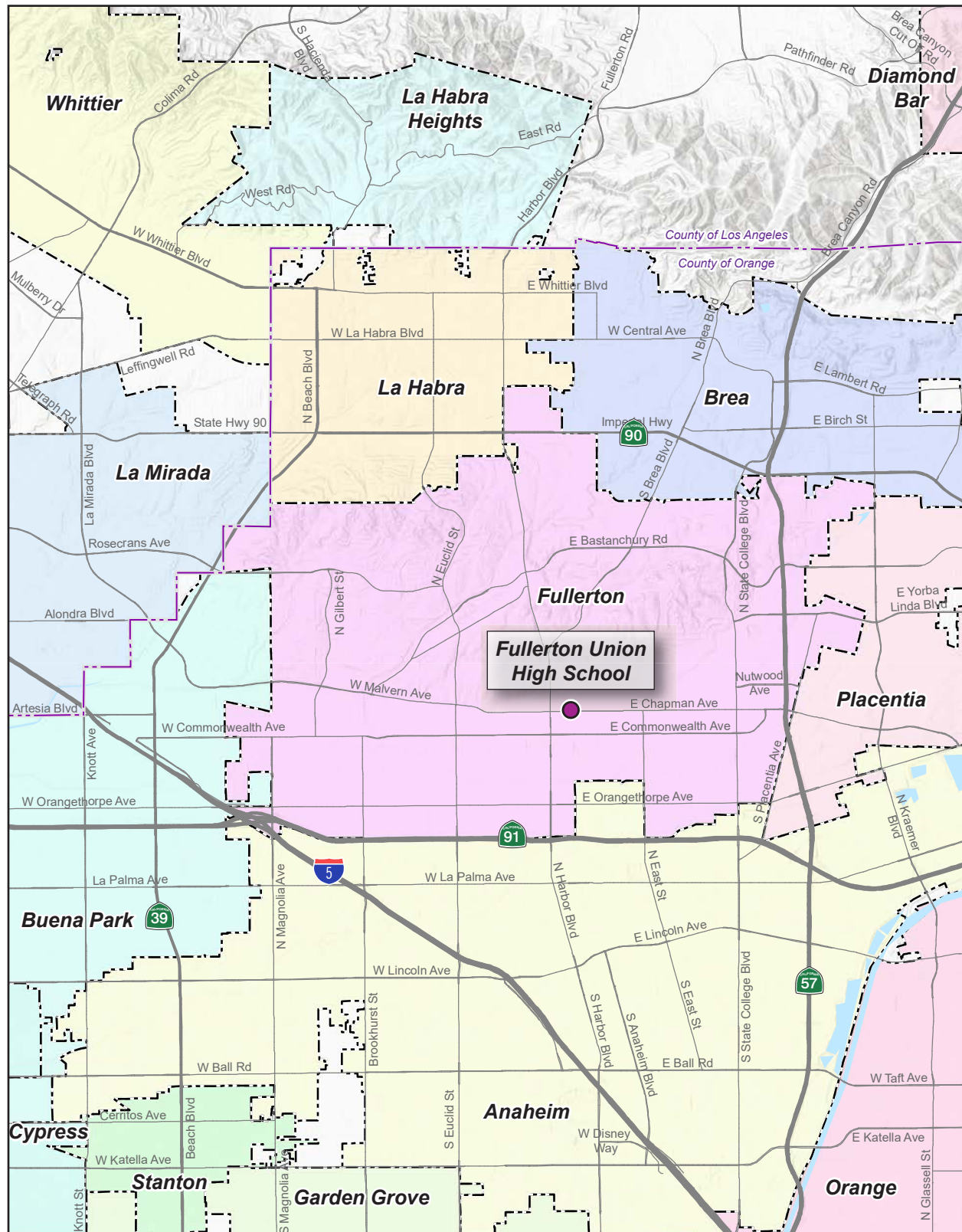
The project site encompasses two areas on the FUHS campus. The western area includes an existing parking lot with 56 parking spaces, including two Americans with Disabilities (ADA) parking spaces; a student pick-up/drop-off area; five tennis courts; the varsity and junior varsity softball field with bleachers; a dugout; and a practice area, and landscaping with trees. The eastern area contains the FUHS baseball field with bleachers, dugouts, and a practice area and a portion of the Agri-Science Academy's paved agricultural facilities area, which includes existing chain-link fencing and a vehicular gate. The project site is primarily flat (see Figure 4, *Project Site Photographs*, and Figure 5, *Surrounding Photographs*).

2.2.2 Parking and Access

The campus has three parking lots in the central, eastern, and northern portions of campus. Vehicular access to the centrally located parking lot is provided by four driveways. These driveways consist of one ingress-only driveway, an ingress-egress driveway, and two-egress only driveways along N Lemon Street. The centrally located parking lot also has a student pick-up/drop-off zone. Vehicular access to the eastern parking lot is provided by one ingress-only driveways and by one egress-only driveway located along N Lemon Street. Vehicular access to the northern parking lot is provided by an ingress-egress driveway along N Pomona Avenue/ E Union Avenue. Additional campus parking is provided at the Fullerton College parking garage for sporting events along N Lemon Street.

Pedestrian access to the campus is provided from sidewalks along public rights-of-way bordering the campus. Alternative forms of transportation to the campus include bicycling and public bus service. A bicycle lane is located along N Berkeley Avenue on the north side of campus. Orange County Transportation Authority (OCTA) operates Route 143, which has two bus stops that serve the campus. Both bus stops are on N Lemon Street. OCTA Route 123 also serves the campus and has two bus stops to the south of the FUHS campus and on the south side of E Chapman Avenue.

Figure 1 - Regional Location



--- City Boundary
 County Boundary
 Note: Unincorporated county areas are shown in white.
 Source: Nearmap 2025.

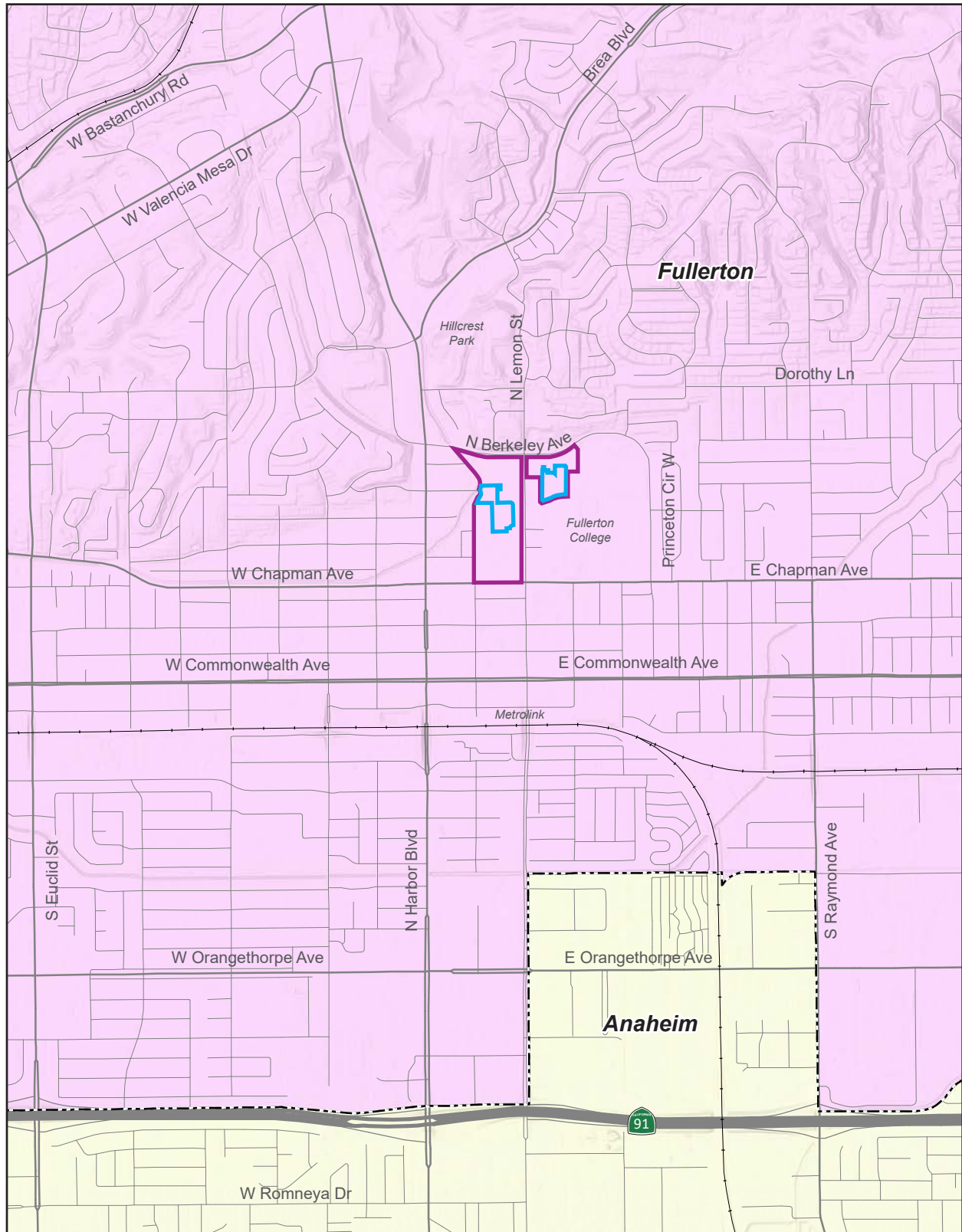
0 1.5
 Scale (Miles)



2. PROJECT DESCRIPTION

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Figure 2 - Local Vicinity



Fullerton Union High School Boundary
Project Boundary

City Boundary

Note: Unincorporated county areas are shown in white.

Source: Nearmap 2025.

0 2,000
Scale (Feet)



2. PROJECT DESCRIPTION

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Figure 3 - Aerial Photograph with Photo Locations



2. PROJECT DESCRIPTION

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Figure 4 - Project Site Photographs



View 1. From the northern end of the varsity softball field, looking southeast at the varsity softball field, storage containers, and soccer field goals on the project site.



View 2. From the western end of the varsity softball field, looking northeast at the tennis courts, varsity softball field, and scoreboard on the project site on the project site.



View 3. From the southern end of the junior varsity softball field, looking northwest at the junior varsity softball field, portable bleachers, and fencing on the project site.



View 4. From the western end of the baseball field looking north at the baseball field backstop, and portable bleachers on the project site.



View 5. From the western end of the baseball field, looking east at the baseball field and the surrounding fencing on project site.



View 6. From the eastern end of the Fullerton Stadium, looking northeast at the Agri-Science Academy paved agricultural facilities area, and eastern parking lot on the project site.



View 7. From the southern end of the Fullerton College Berkeley Center, looking southwest at the Agri-Science Academy paved agricultural facilities area, and baseball field on the project site.



View 8. From the eastern end of E Glenwood Avenue, looking east at the northern parking lot and tennis courts on the project site.



View 9. From the western side of N Pomona Avenue, looking northeast at the tennis courts, northern parking lot, and landscaped area on the project site.

2. PROJECT DESCRIPTION

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Figure 5 - Surrounding Site Photographs



View 10. From the eastern end of the junior varsity softball field, looking northeast at the central campus parking lot, and the Fullerton College parking structure along Lemon Street.



View 11. From the southern end of the baseball field, looking south at the parking structure and educational buildings on the Fullerton College campus surrounding the project site.



View 12. From the southern side of N Berkeley Avenue, looking at the Fullerton College Berkeley Center, and residential uses across Lemon Street surrounding the campus.



View 13. From the eastern campus parking lot, looking southwest across N Lemon Street at the central campus parking lot and Fullerton Stadium surrounding the project site.



View 14. From the southern side of N Berkeley Avenue, looking northwest at the commercial uses across N Berkeley Avenue.



View 15. From eastern side of N Harbor Boulevard, looking north at the commercial uses along N Harbor Boulevard.



View 16. From the western end of the northern campus parking lot, looking northwest at the residential uses along E Union Avenue, and Brea Creek surrounding the project site.



View 17. From the western portion of campus, looking north at the residential uses across N Pomona Avenue surrounding the campus.



View 18. From the southeastern corner of the E Chapman Avenue and N Pomona Avenue intersection, looking northwest at the commercial uses along E Chapman Avenue.

Source: PlaceWorks 2025.

2. PROJECT DESCRIPTION

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2. PROJECT DESCRIPTION

2.2.3 Surrounding Land Use

The western portion of the FUHS campus is surrounded by residential and commercial uses to the north and south, residential and commercial uses and Brea Creek to the west, and the eastern portion of the FUHS campus and Fullerton College to the east. The eastern portion of the FUHS campus is surrounded by residential uses and Fullerton College to the north, Fullerton College to the east and south, and the western portion of the FUHS campus to the west.

The western project site is surrounded by residential uses to the west, Fullerton Stadium to the north, the FUHS Gymnasium to the east, and an existing tennis court. The eastern project site is surrounded by the FUHS Agri-Science Academy parking lot to the west, FUHS Agri-Science Academy buildings to the north and west, and Fullerton College to the south.

2.2.4 Existing General Plan Land Use and Zoning

The campus and project site have a General Plan Land Use designation of School (SCH) and is zoned as Public Land (P-L) (Fullerton 2025).

The properties surrounding the campus have a General Plan land use designation of School, Low Density Residential, Low-Medium Density Residential, Medium Density Residential to the north; Low-Medium Density Residential, Medium Density Residential, Downtown Mixed Use to the west; School, Downtown Mixed Use, Medium Density Residential, and Religious Institutions to the south; and Schools, and Low Density Residential to the east. Additionally, the associated zoning designations includes P-L, One-Family Residential Preservation (R-1-7.2P), Two-Family Residential Preservation (R-2P) to the north; Central Business District Commercial (C-3 and C-3 ROD), Multiple Residential (R-3), Multiple Residential Preservation (R-3P), and R-2P to the west; C-3 and C-3 ROD, and P-L to the south; and P-L; and R-1-7.2P to the east (Fullerton 2024).

2.2.5 Existing Programs and Activities

The campus has 12 different bell schedules throughout the school year. There are 6 different student support schedules, which differ throughout the day. All schedules begin at 8:30 am and conclude at 3:30 pm; however, students with zero period begin at 7:28 am, and after-school activities continue after class dismissal. There are two final exam schedules. The start times at FUHS range from 7:28 am and 8:30 am, and dismissal times at FUHS range from 12:47 pm and 3:30 pm. The District's six high schools share the existing football stadiums at Buena Park, Fullerton Union, and La Habra High Schools.

The FUHS track and field stadium has a public address (PA) system and bleachers with an existing design capacity of 4,642 spectators. Existing stadium uses include, but are not limited

2. PROJECT DESCRIPTION

to, boys and girls soccer practice, games, campus and events (including Troy HS soccer activities); cross country practice and track meets; youth running camp; football practice, games, camps, and events; flag football practice and games; marching band practice and camp; senior year events (i.e., powder puff game, class picture, graduation/graduation practice, etc.); and other events throughout the year. Such events at the track and field stadium occur throughout the year Monday through Sunday within the hours of 6:00 am to 8:00 pm, with activities ranging from 10 participants (Fullerton football youth camp) to up to 5,000 participants (graduation ceremonies). Practices do not have spectators.

The existing varsity and junior varsity softball fields and varsity and junior varsity baseball fields support the following athletic activities, including but not limited to, boys and girls soccer practice; flag football practice; Fullerton football camp; marching band summer camp; softball practices, games, and events; baseball practices, games, and camps; and winter sports practice. Such events at the project site occur throughout the year Monday through Sunday within the hours of 8:00 am to 9:00 pm, with activities ranging from 25 participants (softball practice) to up to 700 participants (FUHS Distance Carnival). Practices do not have spectators.

Additionally, portable speakers are currently used as needed at the project site.

2.3 PROJECT CHARACTERISTICS

2.3.1 Proposed Land Use

The proposed project includes three primary components: (1) a new athletic building; (2) restroom building; and (3) athletic field improvements at the varsity and junior varsity softball fields and the baseball field. Each of these three components are discussed below.

Athletic Building

To accommodate the athletic building, the proposed project would require demolition of a portion of the existing northern parking lot, five tennis courts, and landscaped areas. The proposed project would remove four trees. No buildings would be demolished.

The proposed project would construct a two-story athletic building that would be approximately 33,270 square feet in a Spanish Colonial Revival architectural style that is consistent with other buildings on the campus and at Fullerton College. At the roofline, the athletic building would be approximately 41 feet above grade. The athletic building would extend up to 70 feet above grade at the bell tower, which is a decorative feature. The approximately 17,475-square-foot first floor would include a boys and girls locker room with team rooms, restrooms/showers, and coaches' offices; a training room and trainer's office; sports storage rooms; an ice room; a

2. PROJECT DESCRIPTION

fitness and weight training room; an electrical room and boiler room; a laundry room; and an elevator and stairs. The approximately 15,795-square-foot second floor would include a media room; two classrooms; an athletics pavilion; a dance room; a golf simulator; storage rooms; and offices. The proposed athletic building would also include outdoor lighting and security cameras for safety and security, a trash enclosure, bike-racks, and bike lockers. To accommodate the athletic building, the proposed project would reconfigure and reconstruct the northern parking lot. As a result of the construction of the athletic building, FUHS's enrollment capacity would increase by approximately 54 students, or an increase of 27 students for each second-floor classroom. See Figure 6, *Athletic Building Site Plan*.

Restroom Building

The construction of the restroom building would require demolition of concrete paving and double service gate.

The proposed project would develop a 1-story restroom building on the Agri-Science Academy paved agricultural facilities area. The restroom building would include women's, men's, and all-gender restrooms; a custodial room; and a storage room. The restroom building would connect to existing utilities. Additionally, the existing vehicular access would be moved from its current location to just north of the restroom building, and new chain-link fencing and gate would be installed to the north and south of the restroom building, replacing the current gate and fencing. See Figure 7, *Restroom Building Site Plan*.

Parking and Access

To accommodate the athletic building, a portion of the existing northern parking lot, tennis courts, and landscaped area would be demolished.

The northern parking lot would continue to utilize the existing driveway at the eastern end of E Union Avenue/N Pomona Avenue. A new ingress-egress driveway would be constructed just south of the existing driveway. The northern parking lot would be reconfigured to an L-shaped lot and include 56 parking stalls, which would be the same number of parking stalls that currently exist. The proposed parking lot would include 3 electric vehicle (EV) charging parking spaces, 13 EV-capable parking spaces, and four ADA parking spaces.

The proposed project would include a total of 10 bike parking spaces on the project site, on the south side of the athletic building. Additionally, the sidewalks along N Pomona Avenue, and E Union Avenue would continue to provide pedestrian access via sidewalks to the northern parking lot entrances.

2. PROJECT DESCRIPTION

No other improvements to other parking lots are proposed. Access to the proposed restroom building would be provided from existing driveways to the eastern parking lot.

Fencing and a vehicular gate would limit access to the athletic building and northern parking lot from the west. Emergency access from the northern parking lot to the centrally located parking lot to the east would continue to be provided. The proposed project would also install walkways around the athletic building site that would connect to the existing public sidewalks located along N Pomona Avenue and E Union Avenue and to the rest of the FUHS campus.

Landscaping, Hardscape, and Fencing

As part of the athletic building, landscaping would be installed around the building, which includes 15 ornamental trees along with shrubs, grass, and groundcover plants distributed throughout the parking areas and around the building. Additionally, a synthetic turf area would be installed at the southeast corner of the athletic building. The athletic building improvements would require the removal of four trees.

The existing fencing and pedestrian gate to the east of the proposed athletic building would be replaced. Fencing would be installed along the eastern boundary of the proposed athletic building site along with a vehicular gate. In addition, a ten-foot ornamental gate with an associated fence post would replace the existing fencing and gate. To accommodate the proposed athletic building, the proposed project would repave a portion of the paved area.

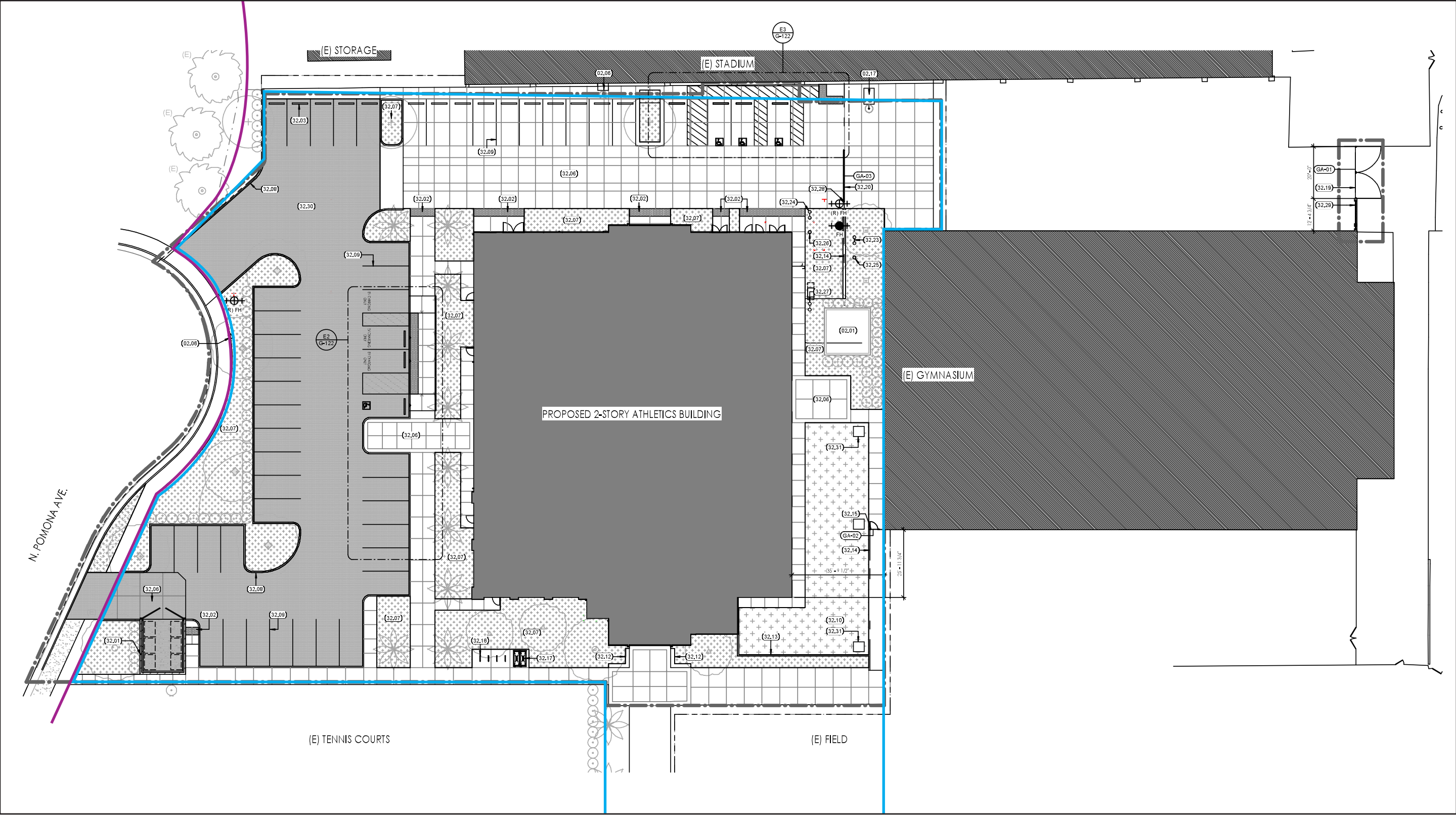
Field Lighting

The District proposes to install field lighting at the baseball and softball fields. As shown by Figure 8, *Horizontal Sports Field Lighting Plan and Light Spill*, and Figure 9, *Vertical Sports Field Lighting Plan and Light Spill*, 16 sports field lights (light fixtures and poles) would be installed as part of the proposed project.

- Eight field lights would be located along the perimeter of the junior varsity and varsity softball fields. Four field lights would have a height of 60 feet, and four field lights would have a height of 70 feet.
- Eight field lights would be installed around the perimeter of the baseball field, on the Fullerton College and FUHS joint use field. Six field lights would have a height of 70 feet and two field lights would have a height of 80 feet.

Figures 8 and 9 also outline the potential light spill in foot-candles (fc) of the proposed sports field lighting.

Figure 6 - Athletic Building Site Plan



Fullerton Union High School Boundary
Project Boundary

Source: HPI Architecture 2025.

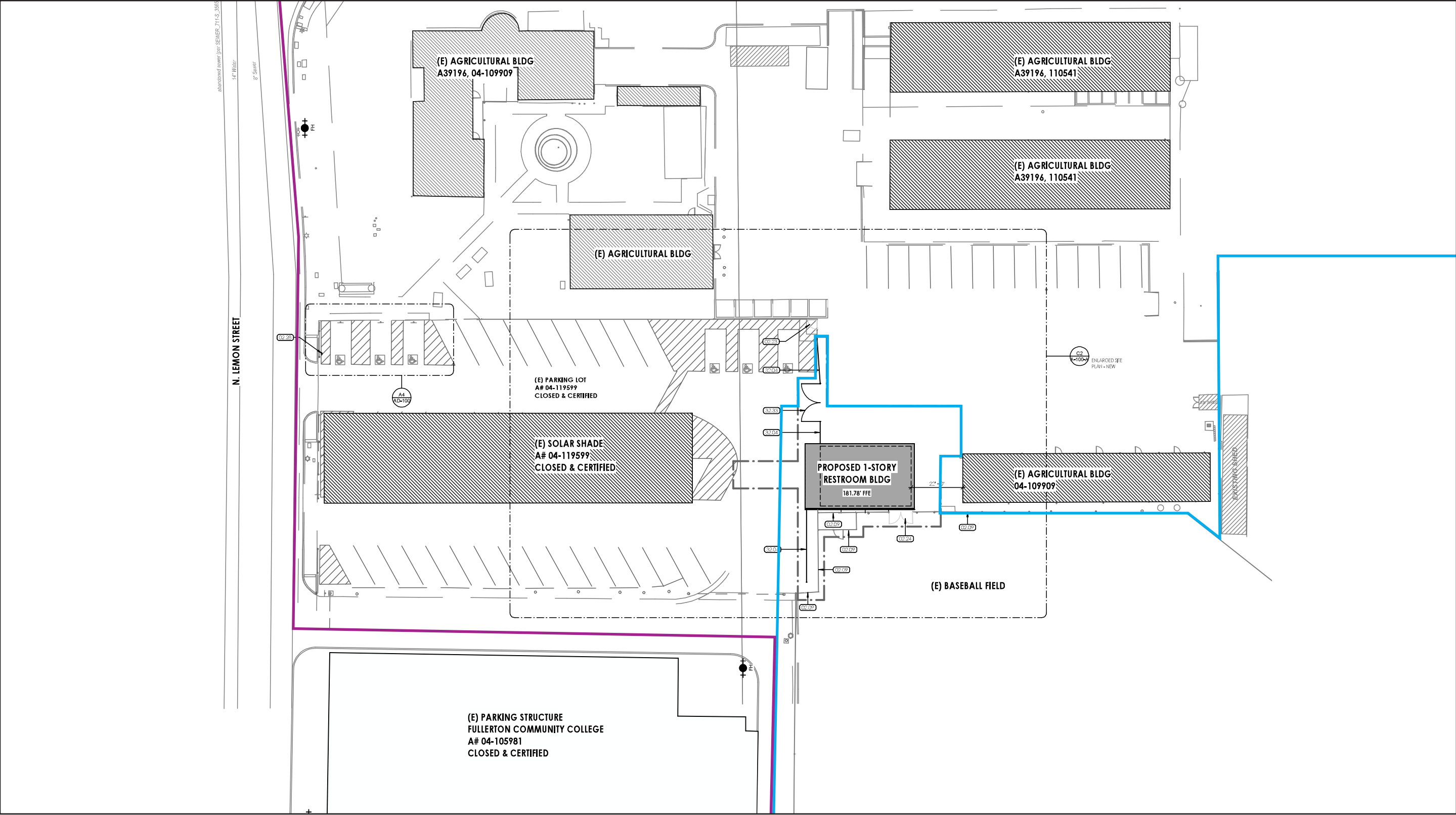
0 40
Scale (Feet)



2. PROJECT DESCRIPTION

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Figure 7 - Restroom Building Site Plan



2. PROJECT DESCRIPTION

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Figure 8 - Sports Field Lighting Plan and Horizontal Light Spill



Fullerton High School

Fullerton, CA

Grid Summary	
Name:	Spill @ 3ft.
Spacing:	30.0'
Height:	3.0' above grade

Illumination Summary	
INITIAL HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.0001
Maximum:	0.00
Minimum:	0.00
CU:	0.00
No. of Points:	304
LUMINAIRE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Luminaires:	86
Total Load:	91.31 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 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.

Pole/Fixture Summary					
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load
A1-A2	60'	60'	1	TLC-LED-1200	1.17 kW
		60'	2	TLC-LED-900	1.76 kW
		50'	1	TLC-LED-550	0.54 kW
		16'	1	TLC-BT-575	0.57 kW
A3-A4	70'	70'	4	TLC-LED-1200	4.68 kW
		50'	1	TLC-LED-550	0.54 kW
		16'	1	TLC-BT-575	0.57 kW
		16'	1	TLC-LED-1200	1.17 kW
A5-A6	60'	60'	1	TLC-LED-1200	1.17 kW
		60'	2	TLC-LED-900	1.76 kW
		16'	1	TLC-BT-575	0.57 kW
		16'	1	TLC-BT-575	0.57 kW
B1	70'	70'	4	TLC-LED-1500	5.64 kW
		16'	1	TLC-BT-575	0.57 kW
		70'	2	TLC-LED-1200	2.34 kW
		70'	4	TLC-LED-1500	5.64 kW
B2	70'	70'	1	TLC-LED-1500	5.64 kW
		16'	1	TLC-BT-575	0.57 kW
		80'	5	TLC-LED-1500	7.05 kW
		16'	1	TLC-BT-575	0.57 kW
B3-B4	80'	80'	5	TLC-LED-1500	7.05 kW
		16'	1	TLC-BT-575	0.57 kW
		70'	2	TLC-LED-1500	2.82 kW
		70'	4	TLC-LED-1200	4.68 kW
B5	70'	70'	2	TLC-LED-1500	2.82 kW
		70'	4	TLC-LED-1200	4.68 kW
		16'	2	TLC-BT-575	1.15 kW
		70'	1	TLC-LED-1200	1.17 kW
B6	70'	70'	5	TLC-LED-1500	7.05 kW
		16'	2	TLC-BT-575	1.15 kW
		70'	3	TLC-LED-1200	3.51 kW
		16'	1	TLC-BT-575	0.57 kW
C1-C2	70'	70'	3	TLC-LED-1200	3.51 kW
		16'	1	TLC-BT-575	0.57 kW
		70'	3	TLC-LED-1200	3.51 kW
		16'	1	TLC-BT-575	0.57 kW
D1	70'	70'	1	TLC-LED-1500	1.41 kW
		70'	2	TLC-LED-1200	2.34 kW
		16'	1	TLC-BT-575	0.57 kW
		16'	1	TLC-BT-575	0.57 kW
16			86		91.31 kW

Fullerton Union High School Boundary

Project Boundary

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

Source: MUSCO 2025.



2. PROJECT DESCRIPTION

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Figure 9 - Sports Field Lighting Plan and Vertical Light Spill



Fullerton High School

Fullerton, CA

Grid Summary	
Name:	Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary	
	INITIAL MAX VERTICAL FOOTCANDLES
Entire Grid	
Scan Average:	0.0006
Maximum:	0.02
Minimum:	0.00
CU:	0.00
No. of Points:	304
LUMINAIRE INFORMATION	
Applied Circuits:	A,B,C,D,E
No. of Luminaires:	86
Total Load:	91.31 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 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.

Pole/Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	60'	60'	1	TLC-LED-1200	1.17 kW	A
		60'	2	TLC-LED-900	1.76 kW	A
		50'	1	TLC-LED-550	0.54 kW	B
		16'	1	TLC-BT-575	0.57 kW	A
A3-A4	70'	70'	4	TLC-LED-1200	4.68 kW	C
		50'	1	TLC-LED-550	0.54 kW	D
		16'	1	TLC-BT-575	0.57 kW	C
		16'	1	TLC-LED-1200	1.17 kW	E
A5-A6	60'	60'	1	TLC-LED-1200	1.17 kW	E
		60'	2	TLC-LED-900	1.76 kW	E
		16'	1	TLC-BT-575	0.57 kW	E
		16'	1	TLC-LED-1500	5.64 kW	A
B1	70'	70'	4	TLC-LED-1500	5.64 kW	A
		16'	1	TLC-BT-575	0.57 kW	A
		70'	2	TLC-LED-1200	2.34 kW	E
		70'	4	TLC-LED-1500	5.64 kW	A
B2	70'	70'	1	TLC-BT-575	0.57 kW	A
		80'	5	TLC-LED-1500	7.05 kW	C
		16'	1	TLC-BT-575	0.57 kW	C
		70'	2	TLC-LED-1500	2.82 kW	E
B3-B4	80'	70'	4	TLC-LED-1200	4.68 kW	E
		16'	1	TLC-BT-575	1.15 kW	E
		70'	2	TLC-LED-1500	2.82 kW	E
		16'	2	TLC-BT-575	1.15 kW	E
B5	70'	70'	1	TLC-LED-1200	1.17 kW	E
		70'	5	TLC-LED-1500	7.05 kW	E
		16'	2	TLC-BT-575	1.15 kW	E
		70'	3	TLC-LED-1200	3.51 kW	C
B6	70'	70'	1	TLC-LED-1200	1.17 kW	E
		70'	3	TLC-LED-1500	3.51 kW	C
		16'	1	TLC-BT-575	0.57 kW	C
		70'	3	TLC-LED-1200	3.51 kW	C
C1-C2	70'	70'	1	TLC-LED-1500	1.41 kW	C
		70'	2	TLC-LED-1200	2.34 kW	C
		16'	1	TLC-BT-575	0.57 kW	C
		70'	1	TLC-LED-1500	1.41 kW	C
D1	70'	70'	1	TLC-LED-1500	1.41 kW	C
		70'	2	TLC-LED-1200	2.34 kW	C
		16'	1	TLC-BT-575	0.57 kW	C
		70'	1	TLC-LED-1500	1.41 kW	C
D2	70'	70'	1	TLC-LED-1500	1.41 kW	C
		70'	2	TLC-LED-1200	2.34 kW	C
		16'	1	TLC-BT-575	0.57 kW	C
		70'	1	TLC-LED-1500	1.41 kW	C
16			86		91.31 kW	

Fullerton Union High School Boundary

Project Boundary

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

Source: MUSCO 2025.

0 300
Scale (Feet)



PlaceWorks

2. PROJECT DESCRIPTION

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2. PROJECT DESCRIPTION

2.3.2 Proposed Programming and Activities

With the addition of field lights, the proposed project would add evening practices between the hours of 3:30 pm to 8:00 pm for 17 sports/activities, including soccer, band, basketball, cross-country, football, flag football, graduation, marching band/rehearsal, softball, track and field, and winter sports practice. Practices would not have spectators.

No other changes to operations are proposed as part of the proposed project. Specifically, the proposed project would not result in any changes to the number of participants, time of year (season), or number of spectators for such practice. The proposed project would not introduce any new games or events at the fields or on-campus. Major spectator events, such as Friday night football, will continue to occur at Buena Park, Fullerton Union, and La Habra High Schools.

2.3.3 Project Construction

Construction of the proposed project would occur in a single phase and is anticipated to start in July 2026 and end in February 2028. All construction staging and worker parking would be provided on-site. Additionally, the proposed project would comply with the City's noise standards and regulations, found in Chapter 15.90 of the City's Municipal Code, which states that construction, repair, remodeling, or grading of any real property shall be exempt from the noise level standards provided they take place between the hours of 7:00 am and 8:00 pm on any day except Sunday or a City-recognized holiday.

2.4 REQUIRED PERMITS AND APPROVALS

The District is the lead agency under CEQA and is carrying out the proposed project. The District Board of Trustees (Board) must approve the proposed project and adopt the IS/MND and Mitigation Monitoring and Reporting Program (MMRP). The Board will consider the information in the IS/MND when making its decision to approve or deny the proposed project, or in directing modifications to the proposed project in response to the IS/MND's findings and mitigation measures. The IS/MND is intended to disclose to the public the proposed project's details, analyses of the proposed project's potential environment impacts, and identification of feasible mitigation that would lessen or reduce significant impacts to less-than-significant levels.

The District is the lead agency under CEQA and has approval authority over the proposed project. The proposed project would also require approval and/or coordination from responsible agencies. See Table 1, *Discretionary Approvals and Permits*.

2. PROJECT DESCRIPTION

Table 1 **Discretionary Approvals and Permits**

Lead Agency	Action
Fullerton Union High School District	<ul style="list-style-type: none"> • Approve the proposed project • Adopt the Initial Study/Mitigated Negative Declaration • Adopt the Mitigation Monitoring and Reporting Program
Responsible Agencies	Action
Department of General Services, Division of State Architect	<ul style="list-style-type: none"> • Approval of construction drawings
California Department of Education, School Facilities Planning Division	<ul style="list-style-type: none"> • Approval of school site layout • Verify compliance with educational facility design standards and siting criteria
Santa Ana Regional Water Quality Control Board	<ul style="list-style-type: none"> • Review of Notice of Intent to obtain permit coverage • Issuance of general permit for discharges of stormwater associated with construction activity • Review of Storm Water Pollution Prevention Plan

3. ENVIRONMENTAL EVALUATION

This section includes a checklist for each environmental topic, evaluates the significance criteria in the checklists, and, if necessary, provides mitigation measures to reduce potential impacts.

I. Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION

a) *Would the proposed project have a substantial adverse effect on a scenic vista?*

The Fullerton General Plan and Fullerton Municipal Code (FMC) do not identify any scenic vistas within the city. However, the General Plan EIR identifies that gently rolling hills offer long-range views and broad vistas that include, but are not limited to, East and West Coyote Hills (Fullerton

3. ENVIRONMENTAL EVALUATION

2012a). East Coyote Hills are approximately 1.5 miles northeast of the project site. The campus is not visible from the East Coyote Hills area, nature preserve, or public rights-of-ways due to the existing residential development and vegetation. There is a residential hillside to the north providing views of the campus and Fullerton College. The project site is primarily blocked by existing academic related buildings, track and field stadium, and vegetation, and the proposed project would not affect or change views from the residential hillside. Thus, the proposed project would not obstruct or have a substantial adverse effect on a scenic vista.

The General Plan EIR states the dominant visual resources elements in the city are existing buildings and roadways, as well as views of canyons, hillsides, and ridges primarily associated with the East and West Coyote Hills area (Fullerton 2012b). Although the project site is partially visible from the residential hillside to the north, the project site and surrounding area are developed and contain vegetation that block views to and from the project site. In addition, East Coyote Hills and other nearby hills or ridgelines are not visible from the project site or public right-of-way (see Figure 4 and Figure 5). As seen in Figure 4 and Figure 5, no notable visual resources are visible from the project site, and the surrounding area. Although View 12 in Figure 5 captures a portion of the residential hillside, vegetation can primarily be seen. The proposed project would construct a new athletic building, a restroom building, and athletic field lighting improvements at the varsity and junior varsity softball fields and the baseball field.

The proposed new athletic building and restroom building would have a height similar to existing buildings on the campus and the one- to two-story residential uses surrounding the project site. In addition, the proposed athletic field lighting poles would have a height similar to the existing field lighting poles at the campus football stadium or Fullerton College track and field. The athletic field lighting poles would potentially be visible from the public right-of-way or other publicly accessible vantage point, depending on the distance. However, the installation of the athletic field lighting poles would not substantially degrade views of the site or surrounding area, due to the existing academic related buildings, vegetation, and surrounding uses (educational, and residential uses). Therefore, public right-of-way views, including long-range views toward the hillsides, would largely remain in their existing condition, and the project would not substantially block views of ridgelines or hillsides. The proposed project would not have a substantial effect on scenic resources or vistas. Impacts would be **less than significant**.

b) *Would the proposed project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Scenic resources in the City include buildings and roadways, canyons, hillsides, and ridges primarily associated with the East and West Coyote Hills (Fullerton 2012b). As discussed in Section I(a), the proposed project and surrounding areas are developed and include vegetation with no notable visual resource visible from the project site or public rights-of-way (see Figure 4 and Figure 5). The proposed project would have a height compatible with educational related buildings on-site and the one- to two-story residential uses surrounding the project site. The

3. ENVIRONMENTAL EVALUATION

project site is flat, with no ridgelines, hillsides, or rock outcroppings on-site. Four trees would be removed as part of the proposed project.

The nearest officially designated state scenic highway is a section of State Route 91 (SR-91) near Anaheim Hills, approximately 5.8 miles southeast of the project site (Caltrans 2018). The nearest eligible state scenic highway to the project site is a section of SR-57, approximately 3.1 miles east of the project site. Due to the distance, topography, and intervening development, the project site is not visible from SR-91 or SR-57. Therefore, the proposed project and the removal of trees associated with the project would not damage scenic resources within a state scenic highway, and **no impact** would occur.

- c) ***Would the proposed project, 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?***

As defined by Public Resources Code Section 21071, for an incorporated city, an “urbanized area” is a city that either by itself or in combination with two contiguous incorporated cities has a population of at least 100,000 persons. The City of Fullerton has an estimated population of 140,051 people (US Census 2024). Therefore, the project site is in an urbanized area.

The campus and project site have a General Plan Land Use designation of SCH and a zoning designation of P-L (Fullerton 2025a). The proposed project would not alter the site’s land use and zoning; would not conflict with any applicable land use plans, policies, or regulations; and would adhere to the architectural design guidelines of the Division of State Architects (DSA). As discussed in Section I(a), the proposed project would not degrade or damage scenic vistas and resources. Therefore, the proposed project would not conflict with applicable zoning or regulations governing scenic quality, and a **less than significant** impact would occur.

- d) ***Would the proposed project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

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. Full moon produces approximately 0.01 fc, and direct sunlight can produce up to 10,000 fc. The general light levels are shown in Table 2, *General Light Levels*.

3. ENVIRONMENTAL EVALUATION

Table 2 **General Light Levels**

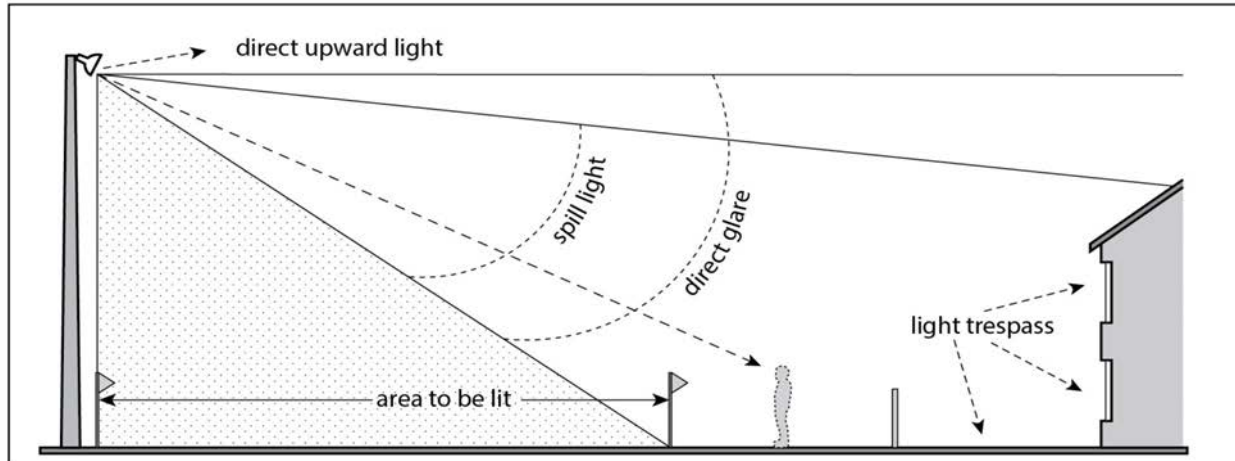
Outdoor Light	Foot-Candles
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Dusk	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Moonless Night	0.0001
Overcast Night	0.00001

Source: HIS 2019.

- **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.

3. ENVIRONMENTAL EVALUATION

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



- **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.
- **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.
- **Spill light** is caused by misdirected light that illuminates areas outside the area intended to be lit. Spill light can contribute to light pollution.

3. ENVIRONMENTAL EVALUATION

Regulatory Setting and Industry Standard

Municipal Code

The City of Fullerton does not establish a significant threshold for light spill for outdoor lighting near residential areas. The FMC does identify light spill thresholds for automotive dealerships (FMC Section 15.30.040), movie arcades (FMC Section 7.122.200), peep show establishments (FMC Section 7.120.200), and adult uses (FMC Section 7.95.070), none of which apply 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 in the City's General Plan, Municipal Code, or website.

It is assumed that the proposed project would include typical light and glare control practices, such as lights needing to be directed, controlled, screened, or shaded so they don't 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 so as not to shine directly on surrounding properties.

Industry Standard

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'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

3. ENVIRONMENTAL EVALUATION

Establishing an Appropriate Threshold

Since the City of Fullerton does not identify a light spill threshold, we referred to industry standards 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 Lighting Zone E3 most closely matches the urban context of the proposed project from among the above thresholds. In addition, this threshold was selected because it includes both pre- and post-curfew standards that consider the time of day at which lighting impacts would occur, which is an important consideration for lighting associated with the proposed project.

Curfew hours are defined by the FMC Chapter 6.20, Nighttime Curfew for Minors, which sets a curfew of 10:00 pm to 6:00 am. Since the proposed project's operations would end at 8:00 pm, the following discussion evaluates the potential for 0.9 fc; any residential/suburban property receiving a 0.9 fc or greater level of spill light would be considered impacted.

Sensitive Receptors

Certain land uses are particularly sensitive to light and glare. The Fullerton General Plan and Municipal Code do not specify land uses sensitive to light and glare. Sensitive receptors for lighting are existing uses that could be negatively affected by excessive nighttime lighting, such as residences, residential care facilities, schools, hotels, and motels. Sensitive receptors for glare are motorists/drivers, residences, residential care facilities, schools, hotels, and motels.

The proposed project is surrounded primarily by the FUHS and Fullerton College campus, with residential uses beyond the campuses. The closest light-sensitive receptor to the project site are the single-family residential uses to the west and north beyond the campuses. The residential property lines to the west are approximately 310 feet from the nearest light pole (A5 and B5), and the residential property lines to the north are approximately 500 feet from the closest light pole (C1) on the project site. The closest field lights are located along the project site boundaries (see Figures 8 and 9).

Field Lighting and Spill Light

The proposed light poles are set back from the campus perimeter fencing. The closest light poles (A5 and B5) along the western boundary of the western project site are approximately 310 feet from the residential property line to the west. The closest light pole (C1) along the northern boundary of the eastern project site is approximately 470 feet from the residential property line to the northwest. The 16 proposed field lights would vary in height, ranging from 60 to 80 feet. See Figure 8 and Figure 9.

As discussed in the project description, the proposed project would allow for existing practices, games, and events to continue until 8:00 pm. Figure 8 and Figure 9 show that the proposed sports field lighting system would create a maximum horizontal and vertical light spill of 0.0 fc at

3. ENVIRONMENTAL EVALUATION

adjacent sensitive receptor property lines, which is below the 0.9 fc threshold. Once practices, games, and events conclude, field lights would be lowered to allow for safe exit and cleanup after 8:00 pm until curfew hours, keeping light levels below the 0.2 fc post-curfew CIE threshold. The maximum hours of operation of the proposed field lights would not exceed the City's 10:00 pm to 6:00 am curfew hours. Thus, the proposed project would comply with the City of Fullerton curfew and would be below the CIE threshold pre- and post-curfew. Therefore, the proposed project is anticipated to result in a **less than significant** impact.

Glare

As discussed in the project description, the proposed project would allow for identified existing practices, games, and events to continue until 8:00 pm. The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at the varsity and junior varsity softball fields and the baseball field. The proposed project would not result in a major source of reflective surfaces and would largely remain consistent with existing conditions on the project site, and the existing campus and surrounding walls and vegetation would block sources of glare.

Since the proposed project would not generate new students or spectators, vehicles associated with the proposed project would be similar to existing conditions and would not generate a new substantial source of nighttime glare. Additionally, the LED luminaires would be shielded and directed downward and away from the adjacent sensitive uses. FUHS sporting events would adhere to the District's 8:00 pm lighting restriction, with field lights being lowered to allow for safe exit and cleanup after 8:00 pm until curfew hours. Additionally, the field lights would include an automated shut-off timer. Thus, the District would not create glare impacts past curfew hours (10:00 pm to 6:00 am) and therefore, impacts associated with glare would be **less than significant**.

II. Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

FULLERTON UNION HIGH SCHOOL FIELD IMPROVEMENTS AND
NEW ATHLETIC BUILDING PROJECT INITIAL STUDY/MND
FULLERTON UNION HIGH SCHOOL DISTRICT

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

DISCUSSION

- a) ***Would the proposed project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

The project site is designated as Urban Built-Up Land—not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance—on the California Important Farmland Finder (DOC 2025a). The proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and **no impact** would occur.

3. ENVIRONMENTAL EVALUATION

b) *Would the proposed project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The project site has a General Plan land use designation of SCH and is zoned P-L, which is consistent with the proposed construction of an athletic building, restroom facility, and field lighting improvements on the existing Fullerton Union High School campus. The surrounding properties have a mix of School, Residential (Low to Medium Density), and Downtown Mixed-Use designations, with corresponding zoning districts. There are no lands contracted under the Williamson Act for agricultural use on-site or within the immediate vicinity of the site (DOC 2025b). Therefore, the proposed project is consistent with the applicable General Plan and zoning designations, and **no impact** would occur.

c) *Would the proposed project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

The project site is developed and has a land use designation of SCH and is zoned P-L. No forested land nor timberland exists onsite. Further, the proposed project site is not zoned for forest land or timberland. Therefore, development of the proposed project would not conflict with existing zoning for forestland or timberland. **No impact** would occur.

d) *Would the proposed project result in the loss of forest land or conversion of forest land to non-forest use?*

The project site is located on the campus of an existing high school within an urbanized area, and no forest land uses are present onsite nor in the immediate vicinity. Development of the proposed project would not require any changes to the existing environment that could result in the conversion of forest land to non-forest use. Therefore, **no impact** would occur.

e) *Would the proposed project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

As shown in Figure 3, the project site is not adjacent to agricultural uses and is located on the campus of an existing high school within an urbanized area. Development of the proposed project would not result in any changes to the existing environment that could result in the conversion of farmland to nonagricultural uses or forest land to non-forest use. Therefore, **no impact** would occur.

3. ENVIRONMENTAL EVALUATION

III. Air Quality

The Air Quality section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling can be found in Appendix A.

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O₃), carbon monoxide (CO), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb). Areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD), is designated nonattainment for O₃, and PM_{2.5} under the California and National AAQS, nonattainment for PM₁₀ under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2026).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation.

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. Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

DISCUSSION

a) *Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?*

The South Coast AQMD adopted the 2022 Air Quality Management Plan (AQMP) on December 2, 2022. Regional growth projections are used by South Coast AQMD to forecast future emission levels in the SoCAB. For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations included in city/county general plans. Typically, only large, regionally significant projects have the potential to affect the regional growth projections. In addition, the consistency analysis is generally only required in connection with the adoption of General Plans, specific plans, and significant projects.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. These demographic trends are incorporated into SCAG's 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Connect SoCal, to determine priority transportation projects and vehicle miles traveled (VMT) in the SCAG region. As discussed in Section XIV, *Population and Housing*, the proposed project would increase enrollment capacity at FUHS by approximately 54 students. However, the proposed project would not substantially affect housing, employment, or population projections within the region. The proposed project is local serving and is a response to the existing and future demand for school services in the community.

Additionally, as demonstrated in Air Quality impact b), the regional emissions that would be generated by the operational phases of the proposed project would be less than the South Coast AQMD emissions thresholds and would therefore not be considered by South Coast AQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the proposed project would not affect the regional emissions inventory or conflict with strategies in the 2022 AQMP. Impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

- b) *Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?***

The following describes project-related impacts from regional short-term construction activities and regional long-term operation of the proposed project.

Regional Short-Term Construction Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust from off-road diesel-powered construction equipment; 2) dust generated by construction activities; 3) exhaust from on-road vehicles; and 4) off-gassing of volatile organic compounds (VOCs) from paints.

Construction would occur between June 2026 and January 2028. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1, and are based on the preliminary construction durations provided by the District. Where specific information regarding project-related construction activities was not available, CalEEMod default information was used.

As shown in Table 3, *Maximum Daily Regional Construction Emissions*, maximum daily emissions for VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. Projects that do not exceed the South Coast AQMD regional significance thresholds would not result in an incremental increase in health impacts in the SoCAB from project-related increases in criteria air pollutants. Therefore, air quality impacts from project-related construction activities would be **less than significant**.

Table 3 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lbs./day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 2026						
Demolition	1	14	16	<1	2	1
Site Preparation	1	14	13	<1	4	2
Grading	1	13	15	<1	<1	<1
Building Construction	1	9	11	<1	<1	<1
Year 2027						
Building Construction	1	8	11	<1	<1	<1
Paving	1	4	7	<1	<1	<1
Architectural Coating	17	1	1	<1	<1	<1

3. ENVIRONMENTAL EVALUATION

Construction Phase	Pollutants (lbs./day) ^{1, 2}					
	VOC	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 2028						
Architectural Coating	17	1	1	<1	<1	<1
Impact Analysis						
Maximum Daily Construction Emissions	17	14	16	<1	4	2
South Coast AQMD Significance Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: Appendix A. Based on CalEEMod Version 2022.1. South Coast AQMD 2023.

Notes: Highest winter or summer emissions are reported.

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.

Long-Term Operation-Related Air Quality Impact

Typical long-term air pollutant emissions are generated by area sources (e.g., landscape fuel use, aerosols, architectural coatings, and asphalt pavement), energy use (natural gas), and mobile sources (i.e., on-road vehicles). Under the proposed project, emissions would result from area sources associated with operation of the athletic facility improvements and from new weekday trips to the FUHS campus associated with an increase in school enrollment. The proposed project does not require natural gas connections and therefore no energy-related criteria air pollutant emissions would be generated. As shown in Table 4, *Maximum Daily Regional Operation Emissions*, operation of the proposed project would result in overall minimal emissions and would not exceed the South Coast AQMD regional operation-phase significance thresholds. Impacts to the regional air quality associated with operation of the proposed project would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

Table 4 Maximum Daily Regional Operation Emissions

Construction Phase	Pollutants (lbs./day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Mobile ¹	<1	<1	2	<1	<1	<1
Area	1	<1	1	<1	<1	<1
Total Operational Emissions	1	<1	3	<1	<1	<1
South Coast AQMD Significance Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Sources: Appendix A; CalEEMod Version 2022.1; South Coast AQMD 2023.

Notes: Highest winter or summer emissions are reported.

1. Represents emissions from new trips to the FUHS campus associated with an increase in enrollment.

c) *Would the proposed project expose sensitive receptors to substantial pollutant concentrations?*

The proposed project could expose sensitive receptors to elevated pollutant concentrations if it causes or significantly contributes to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Localized Construction Impacts

Construction LSTs

South Coast AQMD has developed localized significance thresholds (LSTs) which are based on the California AAQS, the most stringent AAQS, to provide a margin of safety in the protection of public health and welfare. They are designated 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 people engaged in strenuous work or exercise. The screening-level construction LSTs are based on the size of the project site, distance to the nearest sensitive receptor, and Source Receptor Area (SRA). The nearest off-site sensitive receptors are residences along Pomona Avenue approximately 100 feet west of the FUHS campus, and Fullerton College, which is adjacent to FUHS to the south and east. On-site receptors would consist of students and employees of FUHS.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 5, *Construction Emissions Compared to Screening-Level LSTs*, shows the maximum daily construction emissions (pounds per day) generated during on-site construction activities compared with the South Coast AQMD's screening-level LSTs for sensitive receptors within 82 feet (25 meters), the closest and most conservative distance available, for

3. ENVIRONMENTAL EVALUATION

NO_x, CO, PM₁₀ and PM_{2.5}. As shown in Table 5, construction activities would not generate on-site criteria air pollutants that exceed the screening-level LSTs for any pollutants. Thus, project-related construction activities would not expose sensitive receptors to substantial pollutant concentrations. Localized air quality impacts from construction activities would be **less than significant**.

Table 5 Construction Emissions Compared to Screening-Level LSTs

Construction Phase Based on Acreage Disturbed per Day	Pollutants(lbs./day) ¹			
	NO _x	CO	PM ₁₀ ²	PM _{2.5} ²
Building Construction (2026)	9	10	<1	<1
Building Construction (2027)	8	10	<1	<1
Paving (2027)	4	6	<1	<1
Architectural Coating (2027)	1	1	<1	<1
Architectural Coating (2028)	1	1	<1	<1
≤1.00-acre LST³	103	732	6	4
Exceeds Screening-Level LST?	No	No	No	No
Site Preparation (2026)	11	12	3	2
1.44-acre LST	122	627	5	3
Exceeds Screening-Level LST?	No	No	No	No
Grading (2026)	13	14	4	2
1.88-acre LST	142	732	6	4
Exceeds Screening-Level LST?	No	No	No	No
Demolition (2026)	13	15	1	1
2.00-acre LST	147	762	6	4
Exceeds Screening-Level LST?	No	No	No	No

Sources: Appendix A; CalEEMod Version 2022.1; South Coast AQMD 2008, 2011.

Notes: In accordance with South Coast AQMD methodology, only on-site stationary sources and mobile equipment on the project site 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 NO_x, CO, PM₁₀, and PM_{2.5} in SRA 16.

3. ENVIRONMENTAL EVALUATION

Construction Health Risk

The proposed project would elevate concentrations of toxic air contaminants (i.e., diesel particulate matter [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. As described previously, the nearest off-site sensitive receptors would be single-family residences west of the FUHS campus, and Fullerton College, which operates facilities east and south of the FUHS campus. Additionally, during construction activities, school would continue at FUHS, and receptors would be present at FUHS facilities.

A site-specific construction health risk assessment (HRA) was prepared to quantify potential health risk emissions during construction (see Appendix A). The results of the analysis are shown in Table 6, *Construction Risk Summary*, and demonstrate that construction activities associated with the proposed project would not exceed the South Coast AQMD thresholds at any of the locations of the maximum exposed receptors in the project area.

Table 6 Construction Risk Summary

Receptor ¹	Cancer Risk (per million)	Chronic Hazards
Residential MER	4.73	<0.1
High School MER: FUHS	1.64	<0.1
College MER: Fullerton College	0.26	<0.1
South Coast AQMD Threshold	10	1.0
Exceeds Threshold?	No	No

Source: Appendix A.

Notes: Prepared in accordance with guidance from the Office of Environmental Health and Hazard Assessment (2015).

MER = Maximally Exposed Receptor

1. Each MER 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.

As shown in Table 6, 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**.

3. ENVIRONMENTAL EVALUATION

Localized Operational Impacts

Operation LSTs

Because the installation and use of stationary source equipment is not proposed as part of the project, operation of the proposed project would not generate substantial emissions from on-site stationary sources. 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. The proposed project would construct improvements at FUHS's athletic facilities, which do not fall within this category of uses. Localized air quality impacts related to operation-related emissions would be **less than significant**.

Carbon Monoxide 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 ambient air quality standards 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. The SoCAB has been designated in attainment under both the national and California AAQS for CO. 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 mixing is substantially limited—in order to generate a significant CO impact (BAAD 2023).

The proposed project would result in approximately 28 AM peak hour trips and 8 PM peak hour trips. In the project's operational year of 2028, the roadway segment in the vicinity of the project with the highest average daily trips (ADT)—East Chapman Avenue, between North Harbor Boulevard and North Lemon Street—is projected to have a total of 25,728 ADT with project traffic (see Appendix D). Assuming that AM or PM peak hour trips account for 10 percent of ADT, the 2,573 peak hour trips at this segment would not 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 improvements would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project area. Impacts would be **less than significant**.

- d) ***Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?***

3. ENVIRONMENTAL EVALUATION

The proposed project would not result in objectionable odors. 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.

The type of facilities that are considered to have objectionable odors include wastewater treatments 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.

The improvements associated with the proposed project would not fall within the aforementioned land uses and no operational odors are anticipated. Emissions from construction equipment, such as diesel exhaust and from VOCs associated with architectural coatings and paving activities, may generate odors. However, these odors would be temporary, intermittent, and are not expected to affect a substantial number of people. In addition, land uses accommodated under the proposed project would be subject to South Coast AQMD Rule 402, which would contribute to minimizing odor-related nuisances. Therefore, odor impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

IV. Biological Resources

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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?	☐	☐	☐	☒

3. ENVIRONMENTAL EVALUATION

DISCUSSION

- a) ***Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 has been previously disturbed by the development of the existing FUHS campus. As identified on Exhibit 25 of the Fullerton General Plan, the project site is not in an open space/habitat conservation area (Fullerton 2020a). Orange County, including the project site, is within the OCTA Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP); however, the City is not a participant in the HCP/NCCP (CDFW 2026a). The closest critical habitat for threatened and endangered species is approximately 1.5 miles northeast of the project site (USFWS 2026a). Based on the BIOS6 mapper, the project site is not within an Orange County reserve or habitat core area (CDFW 2026b). The proposed project would remove three *C. equisetifolia*¹ trees. The four trees that would be removed are not state or federally listed endangered, threatened, or rare plants (CDFW 2026c). The tree species has been identified by California Invasive Plant Council with a “Watch” rating, which identifies plants that are starting to spread and cause concern but are not yet on the Invasive Plant Inventory (Cal-IPC 2026). In addition, the four *C. equisetifolia* trees are not identified in the City’s Community Forest Management Plan or the FMC (Chapter 9.06, Community Forestry). The project site is already disturbed and developed and surrounded by urban development; the proposed project would not impact any candidate, sensitive, or special status species. A **less than significant** impact would occur.

- b) ***Would the proposed 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. Although the project site is within the OCTA HCP/NCCP area, the City is not a participant in the OCTA HCP/NCCP (CSFW 2026a). No federally designated critical habitat exists on-site or in the vicinity of the project site (USFWS 2026a). As discussed in Section IV(a), the project site is not within an open space/habitat conservation area

¹ The common name is beach sheoak, Australian pine, or horsetail tree.

3. ENVIRONMENTAL EVALUATION

identified by the Fullerton General Plan (Fullerton 2020a). The National Wetlands Mapper, maintained by the US Fish and Wildlife Service, identified a riverine habitat within Brea Creek approximately 30 feet west of the project site (USFWS 2026b). The project site does not contain any riparian habitat and would not impact the Brea Creek riverine habitat because all project activities would occur on the FUHS campus. The project site does not contain any riparian habitat or other sensitive natural community and would not impact riverine habitat or other sensitive natural community. Therefore, a **less than significant** impact would occur.

c) *Would the proposed 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 at FUHS is developed with an existing parking lot, campus buildings, paved walkways, and athletic fields. As discussed in Section IV(b), the National Wetlands Mapper identified a riverine habitat within Brea Creek. However, no wetlands exist within the project site or in the project's immediate area. The nearest wetland to the project site is approximately 1.2 miles north of the project site (USFWS 2025b). Additionally, all construction-related activities would occur within the boundaries of the project site. Therefore, the proposed project would not have a substantial adverse effect on protected wetlands, and **no impact** would occur.

d) *Would the proposed 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?*

Based on the CDFW BIOS6 data viewer, the project site is not within a California essential habitat connectivity area, interstate connection, natural landscape block, natural areas small, core reserves and corridor, connectivity core, or vegetation nature reserve. The project site is terrestrial connectivity rank 1, Limited Connectivity Opportunity, the lowest connectivity rank (CDFW 2026b). No federally designated critical habitat exists on the project site or in the vicinity of the project site (USFWS 2026a).

The project site is in an urbanized area in Fullerton and is surrounded by residential, commercial, and school uses (FUHS and Fullerton College). The project site at FUHS is developed with an existing parking lot, paved walkways, and athletic fields. To accommodate the proposed project, four trees would be removed, which could have a potential impact on nesting birds.

Nesting birds are protected by the Migratory Bird Treaty Act (MBTA), which governs the take, kill, possession, transportation, and importation of migratory birds, their eggs, parts, and nests (US Code, Title 16, Sections 703–712). The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations. The United States Fish and Wildlife Service administers permits to take migratory birds in accordance with the MBTA.

3. ENVIRONMENTAL EVALUATION

To minimize impacts, implementation of Mitigation Measure BIO-1 (MM BIO-1) would be required. MM BIO-1 states that tree removal activities should be conducted during the non-breeding season (September 1 to February 14) to limit impacts to nesting birds. If vegetation clearing or tree removal activities need to take place during breeding season (February 15 through August 31), a preconstruction nesting bird survey(s) will be required to remain in compliance with the MBTA. The last survey should be conducted no more than three days prior to the start of work. Compliance with the MBTA, CDFW regulations, and implementation of MM BIO-1 would ensure that potential impacts to nesting and migratory birds resulting from the proposed project would be reduced to a less-than-significant level. Therefore, impacts to nesting and migratory birds would be **less than significant with mitigation incorporated**.

Mitigation Measure BIO-1: Preconstruction Avian Survey. To the extent feasible, in order to minimize potential impacts to avian species, vegetation clearing or tree removal activities should be conducted during the non-breeding season (September 1 to February 14) to limit impacts to nesting birds. If vegetation clearing or tree removal activities need to take place during breeding season (February 15 through August 31), a pre-construction avian survey(s) will be required. The last survey should be conducted a minimum of three days prior to the start of work. The District shall hire a qualified biologist to prepare the preconstruction avian survey.

If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site or within the area of vegetation or tree removal activities, an adequate protective buffer zone shall be established by a qualified biologist to protect the nesting site. The distance shall be determined by a qualified biologist based on the site conditions (e.g., topography, if the nest is in a line of sight of the construction, and the sensitivity of the birds nesting). Additional protective measures shall include establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by a qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance, and proximity to existing development. The nest site(s) shall be monitored by a qualified biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project construction zones (typically by August), the project can proceed without further regard to the nest site(s).

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

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.

3. ENVIRONMENTAL EVALUATION

The Fullerton General Plan includes policies to protect sensitive natural resources, conservation areas, sensitive areas, waterways, and tree and wildlife management. Policy P25.4 of the General Plan states that the City supports programs, policies, and regulations to manage and promote trees throughout the City. Although four trees would be removed as part of the project, a total of 15 trees would be planted within the project site, increasing the number of trees in the City in accordance with the policy P25.4. As discussed in Section IV(a), the species of tree (*C. equisetifolia*) to be removed is not identified in the Community Forest Management Plan (FMC Chapter 9.06) and is not state or federally listed endangered, threatened, or rare (CDFW 2026c; Fullerton 2023). The tree species has been given a “watch” rating by the California Invasive Plant Council (CAL-IPC 2026). Additionally, as discussed in Section IV(a) through (d), the project site contains no biological resources, conservation areas, critical habitats, riparian habitat, wetland habitat, HCP/NCCP, or wildlife connectivity link. The closest critical habitat for threatened and endangered species is approximately 1.5 miles northeast of the project site (USFWS 2025a). In addition, the project site has been previously disturbed by the development of the existing campus. Therefore, no local policies regarding tree preservation, apply to the proposed project, and **no impact** would occur.

f) *Would the proposed 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?*

Orange County, including the project site, is within the OCTA HCP/NCCP, but the City is not a participant in the OCTA HCP/NCCP (CDFW 2025a). The project site is not within any other HCP/NCCP or other approved local, regional, or state habitat conservation plan. Therefore, **no impact** would occur.

3. ENVIRONMENTAL EVALUATION

V. Cultural Resources

Would the project:

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

DISCUSSION

a) *Would the proposed project cause a substantial adverse change in the significance of a historical resource pursuant to § 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:

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

CRM TECH prepared a cultural evaluation report evaluating the campus and proposed project for eligibility for listing in the California Register of Historical Resources (CRHR) and as historical

3. ENVIRONMENTAL EVALUATION

resources under CEQA, following established guidelines (see Appendix B). CRM TECH conducted a historical/archaeological records search, pursued historical background research, consulted with local community representatives, and carried out a field inspection of the campus (Appendix B).

The project site is on the FUHS campus and adjacent to the Fullerton College campus. The FUHS campus was originally developed in 1912 and 1913, and the Fullerton College campus was originally developed in 1934 and 1935. Additional rounds of construction and improvements continued throughout the modern era. According to South Central Coastal Information Center (SCCIC) records, the western and eastern portions of the project site are within the boundaries of previously recorded cultural resources, namely, the historical campuses of the FUHS (Site 30-0157211) and Fullerton College (Site 30-0157212) and recorded into the California Historical Resources Inventory in the 1970s. The records are focused primarily on the pre-WWII buildings of each campus, covering 24 acres of 37-acre high school campus and 46 acres of the 83-acre college campus, mostly around buildings constructed in the 1930s under the auspices of the Works Progress Administration. Among these buildings, Fullerton Auditorium on the FUHS campus, known then as the Louis E. Plummer Auditorium, was officially listed in the National Register of Historic Places in 1993 (NRHP No. 93001019). In 2020, the *Pastoral California* mural on the exterior wall of the auditorium was added to the National Register on its own merits. In 2023, the entire Fullerton College campus was listed in the National Register as a historic district (NRHP No. 100008709). Fullerton Auditorium has also been designated by the City of Fullerton as Landmark No. 10. As any property listed in the National Register is automatically included in the California Register of Historical Resources, Fullerton College, Fullerton Auditorium, and the mural meet the CEQA definition of “historical resources.”

Although the FUHS as a whole was not evaluated under the California Register criteria, due to its 110-year history as the first high school in the Fullerton area (and the second in Orange County), the campus can be presumed to qualify as a “historical resource” for the purpose of this project with a local level of significance.

The proposed project would disturb approximately 6.7 acres of the FUHS campus and would have little potential to affect the character and integrity of the existing buildings. The athletic fields, parking lots, and other features date to post-1972, after the historically significant age of the two sites (Site 30-0157211 and 30-0157212). The proposed project would occur within the boundaries of the project site and would not significantly diminish the historic integrity of the FUHS campus or that of the historical buildings. Pursuant to Public Resources Code 21084.1, the cultural evaluation report concluded that the proposed project would not constitute a substantial adverse change in the significance of a historical resource (Appendix B). Therefore, a **less than significant impact** would occur.

b) *Would the proposed project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*

3. ENVIRONMENTAL EVALUATION

Implementation of the proposed project would result in limited ground disturbance to provide field lighting improvements, and the construction of the athletic building, and reconfiguration of the northern parking lot at the existing FUHS. Implementation of the proposed project would require limited earthwork, which would include grading for proper base and slope for the athletic building and northern parking lot, drill holes for installation of proposed light poles, and utility trenching. The earthwork would generally be surface level since no subterranean levels are proposed. Additionally, the project site has been previously disturbed since it is currently developed with the existing northern parking lot, tennis courts, athletic fields, paved walkways, and landscaped areas.

The Cultural Resources Compliance Report identified 46 additional cultural resources, including a few archaeological sites from previous cultural resources studies in the project area (Appendix B). However, the Fullerton General Plan does not identify or discuss archaeological resources in the city.

Although there are no known archaeological resources within the project site, unknown archaeological cultural materials have the potential to exist. Ground-disturbing activities from the proposed project may uncover unknown archaeological resources. Implementation of Mitigation Measure CUL-1 would ensure that, in the event archaeological resources are discovered during ground-disturbing activities, they would be recovered in accordance with state and federal requirements. Additionally, as part of the Historical/Archaeological Resources Survey Report, the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was searched and yielded a positive result, which indicates that known sacred sites or tribal cultural resources (TCR) exist in the vicinity of the project site (Appendix E). Thus, the potential for unearthing TCRs exists. Implementation of Mitigation Measure CUL-1 would ensure applicable Native American tribal contact(s) are contacted in the events significant Native American cultural resources are discovered. Implementation of Mitigation Measures CUL-1 and TCR-KIZH-1 through TCR-KIZH-3 and TCR-ACH-1 through TCR-ACH-5 would reduce impacts to archaeological resources to **less than significant with mitigation incorporated**.

Mitigation Measure CUL-1: Prior to initiating any ground-disturbing activities for the proposed project, the District shall ensure that an archaeologist who meets the Secretary of the Interior's standards for professional archaeology has been retained for the project and will be on-call during all grading and other significant ground-disturbing activities. The qualified archaeologist shall ensure that the following measures are followed for the project:

- Prior to any ground disturbance, the qualified archaeologist shall provide worker environmental awareness protection training to construction personnel regarding regulatory requirements for the protection of cultural resources (prehistoric and historic). As part of this training, construction personnel shall be briefed on proper

3. ENVIRONMENTAL EVALUATION

procedures to follow should unanticipated cultural resources be discovered during construction.

- In the event that unanticipated cultural material is encountered during any phase of project construction, all construction work within 100 feet of the find shall cease and the qualified archaeologist shall assess the find for importance. Construction activities may continue in other areas. If the discovery is determined to not be important by the qualified archaeologist, work will be permitted to continue in the area.
- If a find is determined to be important by the qualified archaeologist, he or she shall immediately notify the District. The qualified archaeologist shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the California Register of Historical Resources (CRHR). Work may not resume within the no-work radius until the qualified archaeologist and District, through consultation as appropriate, determine that either: (1) the site is not eligible for the CRHR; or (2) the treatment measures have been completed to their satisfaction.
- If significant Native American cultural resources are discovered, the archaeologist on call shall contact the applicable Native American tribal contact(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, return of artifacts to tribe).

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

Given that the project site was previously disturbed, it is unlikely to support conditions conducive to the discovery of human remains. However, there is a remote possibility that human remains could be encountered during excavation and grading activities associated with the proposed project.

If human remains are encountered during ground-disturbing activities, California Health and Safety Code Section 7050.5 requires that disturbance of the site would halt and remain halted. The county coroner would 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 make a determination within two working days of being notified of the discovery of the human

3. ENVIRONMENTAL EVALUATION

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 would contact, by telephone within 24 hours, the NAHC, who will contact the “most likely descendant.” The most likely descendant would receive access to the discovery and will 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, would 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.

While unlikely, any accidental discovery of human remains during project construction and operation would be required to comply with all applicable laws and regulations establishing the proper handling of human remains. Compliance with these laws and regulations would ensure that proposed project would result in a **less than significant** impact.

VI. Energy

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

DISCUSSION

- a) ***Would the proposed project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

The following discusses the potential energy demands from short-term construction and long-term operational energy consumption associated with the proposed project.

3. ENVIRONMENTAL EVALUATION

Short-Term Construction Impacts

Electrical Energy

Electricity use during construction of the proposed project would vary during different phases of construction. Construction of the proposed project would not require electricity to power most construction equipment. Later construction phases could result in the use of electricity-powered equipment for interior construction and architectural coatings. It is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws) and lighting, which would result in minimal electricity usage during construction activities. Therefore, project-related construction activities would not result in wasteful or unnecessary electricity demands, and impacts would be less than significant.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, no impacts would occur with respect to natural gas usage during construction.

Transportation Energy

Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles. In addition, transportation energy demand would come from the use of off-road construction equipment. It is anticipated that the majority of off-road construction equipment, such as those used during demolition, grading, building construction, and paving, would be gas or diesel powered.

The use of energy resources by vehicles and equipment would fluctuate according to the phase of construction and would be temporary. In addition, all construction equipment would cease operating upon completion of proposed project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure.

Moreover, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. Construction trips would also not result in unnecessary use of energy since the project site is centrally located in an urbanized and residential area of the city served by numerous regional freeway systems (e.g., State Routes 57 and 91) that provide the most direct routes from various areas of the region. Thus, energy use during construction of the proposed

3. ENVIRONMENTAL EVALUATION

project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

Long-Term Impacts During Operation

Operation of the proposed buildings, parking areas, and field lighting would generate a nominal increase in demand for electricity on the project site. No natural gas would be used for operation of these improvements. The net increase in electricity consumption from the proposed project is shown in Table 7, *Operation-Related Electricity Consumption*.

Table 7 Operation-Related Electricity Consumption

Land Use	Electricity (kWh/year)
Athletic and Field House Buildings	184,885
Parking Areas	8,552
Field Lighting ¹	109,481
Total	302,918

Source: Appendix A. Based on CalEEMod Version 2022.1.

Notes: Based on CalEEMod defaults and a conversion of default natural gas use to electricity using a conversion rate of 3,412 British thermal units for 1 kWh.

kWh = kilowatt-hours

1. Based on the durations of events that would be rescheduled in order to use the proposed field lighting and the total kW load for all field lighting, as provided in the Musco lighting plans.

The proposed project would be required to comply with the latest Building Energy Efficiency Standards and CALGreen standards. In addition to compliance with these energy efficiency standards, impacts associated with electricity use would decrease over time as the project's electricity provider, Southern California Edison (SCE), is required to comply with the state's renewable portfolios standard (RPS). This program mandates utilities to procure a certain proportion of electricity from eligible renewable and carbon-free sources and increase the proportion through the coming years, with an ultimate procurement requirement of 100 percent by 2045. The RPS requirements would support use of electricity by the proposed project that is generated from renewable or carbon-free sources. Overall, the proposed project would generally be consistent with the goals outlined in Appendix F of the CEQA Guidelines regarding increasing energy efficiency, decreasing reliance on fossil fuels, and increasing renewable energy sources.

The proposed project would be consistent with the requirements of these energy-related regulations, which would decrease electricity use and increase renewable electricity, and would not result in wasteful or unnecessary electricity demands. Therefore, the proposed project would have **less than significant** impacts with respect to energy consumption.

3. ENVIRONMENTAL EVALUATION

b) *Would the proposed project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

This impact analysis evaluates consistency of the proposed project with California's RPS Program, which is the primary plan driving the transition of the state's electricity grid to renewable energy. Eligible renewable sources under the RPS include wind, small hydropower, solar, geothermal, biomass, and biogas. The RPS goals have been updated since adoption of SB 1078 in 2002. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), 90 percent by 2035 (SB 1020), and 100 percent carbon free by 2045 (SB 100 and SB 1020).

The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as SCE, whose compliance with RPS requirements would contribute to the state objective of transitioning to renewable energy. As previously stated, the proposed project would be required to comply with the current Building Energy Efficiency Standards to ensure that electricity use associated with the proposed improvements would be minimized. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of California's RPS program or other plans or policies adopted for renewable energy and energy efficiency. Impacts would be **less than significant**.

VII. Geology and Soils

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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 18-1-B 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 waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

DISCUSSION

- a) *Would the proposed project 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?

3. ENVIRONMENTAL EVALUATION

Fault Rupture

Alquist-Priolo Earthquake Fault Zones are regulatory zones surrounding the surface traces of active faults in California that have ruptured in the last 11,000 years (DOC 2025c). An active fault has the potential for surface rupture, and a structure for human occupancy cannot be placed over the fault but must be a minimum distance from the fault (generally 50 feet).

Based on the California Geological Survey's Earthquake Zones of Required Investigation mapper, there are no Alquist-Priolo Earthquake Fault Zones on or near the project site (DOC 2025d). The nearest Alquist-Priolo Earthquake Fault Zones are the faults in the West Coyote Hills, and the Whittier Fault Zone is approximately three miles northwest. No active faults, trace faults, or any other faults traverse the project site or encroach on its boundaries (DOC 2025d, 2025e). Since no active faults or any other faults exist on site, surface rupture would not occur. **No impact** would occur.

Seismic Ground Shaking

As discussed above, the project site is not located within an established Alquist-Priolo Earthquake Fault Zone. However, the project site, like all areas in Southern California, is subject to ground movement associated with earthquakes along the active faults. The degree of ground shaking and earthquake-induced damage is dependent on multiple factors, such as distances to causative faults, earthquake magnitudes, and expected ground accelerations. The proposed project would be required to comply with the seismic design parameters of the California Building Code (CBC), which regulates all building and construction projects and implements a minimum standard for building design and construction that includes specific requirements for seismic safety and evacuation. Compliance with the CBC would ensure impacts related to seismic shaking would be **less than significant**.

Liquefaction

Liquefaction refers to loose, saturated sand or gravel deposits that lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based upon three main contributing factors:

- Cohesionless, granular soils having relatively low densities (usually of Holocene age).
- Shallow groundwater (generally less than 50 feet).
- Moderate to high seismic ground shaking.

Cohesionless and granular soils are sand or gravel, typically with little or no clay content. Soil liquefaction generally occurs in submerged granular soils and non-plastic silts during or after strong ground shaking. As identified by the Fullerton Safety Element Supplement Exhibit 3, the project site is within an area of historical occurrences of liquefaction, confirmed by the California Department of Conservation (DOC 202d). The proposed project would be required to

3. ENVIRONMENTAL EVALUATION

comply with the latest CBC, and project review by DSA would ensure that impacts related to liquefaction would be **less than significant**.

Landslides

According to the US Land Slide Inventory and Susceptibility Mapper, a portion of the northwestern corner of the project site is within a possible landslide area (USGS 2025a). In contrast, according to the DOC's Landslide Zone map, the project site is not within an official landslide zone, and the nearest landslide zone is approximately 0.5 mile north within the residential hillside, and the project site is primarily flat (DOC 2025d). Therefore, the potential for landslides to occur on the project site or be caused by the proposed project is low. However, the proposed project would be designed and constructed consistently with the CBC, which would ensure impacts related to landslides are **less than significant**.

b) *Would the proposed project result in substantial soil erosion or the loss of topsoil?*

Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed, or dissolved and removed from one place and transported to another. The project site contains relatively flat terrain or is already developed, which decreases the project's potential to accelerate erosion. The project site at FUHS is developed with an existing parking lot, paved walkways, and athletic fields.

Implementation of the proposed project would require limited earthwork, which includes grading for proper base and slope for the reconfigured parking lot, new athletic building, and restroom building; drilling holes for installation of proposed light poles; and utility trenching. The proposed project would not contain any subterranean levels and would not require extensive excavation, which could expose more soil to erosion.

Because the project site encompasses an area of more than one acre, the proposed project would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements. These include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program. The SWPPP for the proposed project would describe minimum and advanced construction best practices for erosion control at the site. Additionally, adherence with existing state and local laws regulating construction activities would minimize soil erosion. At project completion, the project site would be developed with a new parking lot, athletic building, restroom building, walkways, and other paved areas, and landscaping; thus, soil on-site would not be susceptible to substantial erosion. Therefore, the proposed project would not result in substantial soil erosion or loss of topsoil, and a **less than significant** impact would occur.

c) *Would the proposed project 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?*

3. ENVIRONMENTAL EVALUATION

The project site is primarily flat and, as discussed in Section VII(a), the project site is not in an identified landslide zone but is within a liquefaction zone; however, adherence with the CBC and project review by DSA would ensure that impacts would be less than significant.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer (Caltrans 2020). Since the project site is within an identified liquefaction susceptibility zone, there is the potential for lateral spreading to occur. However, the proposed project would excavate and recompact the upper soils and any loose fill soils within the project site. Due to recompacting of the soil and adherence to CBC policies, seismic settlement or lateral spreading would not occur.

Subsidence occurs when the level of the ground decreases, as if the surface is sinking. Subsidence can either be sudden (as in a sinkhole) or happen gradually over time. It can be caused by mining, groundwater pumping, or fossil fuel extraction, creating empty underground spaces that can collapse and cause the soil above to drop. Erosion, natural cave collapses, and seismic activity can also cause subsidence.

The project site is in an area of Orange County that has experienced land subsidence due to groundwater pumping (USGS 2025b). However, the proposed project would not involve excessive groundwater withdrawal during construction or operation that could contribute to subsidence. The project would be designed and constructed in compliance with CBC and DSA requirements. Therefore, impacts related to land subsidence would be less than significant.

The collapse of soils occurs with (1) an open, partially unstable, partially saturated fabric; (2) sufficient total stress to make the soil structure metastable; (3) the presence of a bonding agent or sufficient soil suction to stabilize the soil in the metastable condition; and (4) the addition of water, which reduces soil suction or softens/destroys the bonding agent, thereby causing shear failures at the inter-aggregate or inter-particle contacts (Caltrans 2024). The project site does not contain shallow groundwater in the area; the nearest well with a 2025 measurement is 1.5 miles southeast and has a depth of 82.09 feet to groundwater (CDWR 2026a). Thus, the potential for groundwater to create collapsible soils on-site is not present. The proposed project would be designed and constructed in accordance with the CBC to withstand landslide, liquefaction, lateral spreading, subsidence, or collapse potential. Therefore, this impact is **less than significant**.

d) *Would the proposed project be 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?*

Expansive soils contain certain types of clay minerals that shrink when they dry out and swell when soils become wet, resulting in the potential for cracking building foundations and, in some cases, structural distress of the buildings themselves.

3. ENVIRONMENTAL EVALUATION

Based on the web soil survey mapper, the underlying soil primarily contains San Emigdio fine sandy loam (194), and a small area of Xerorthents loamy, cut and fill (219) (USDA 2026). Soil Plasticity Index (PI) identifies the soil's ability to change shape, and the IBC states a PI of 15 or greater (IBC Section 1803.5.3) is considered an expansive soil. The San Emigdio fine sandy loam (194) has a PI of 8 percent, and the Xerorthents loamy does not have a rating (USDA 2026). Although it is unlikely for the PI of Xerorthents loamy to be high, the presence of expansive soil is commonly and effectively reduced by various design techniques such as 1) proper design of foundations, slabs, streets, and other improvements subject to the influence of the soils; 2) overexcavation of the expansive soils/bedrock and replacement with less-expansive fill soils; 3) control of surface and subsurface drainages to prevent moisture variations; and 4) combinations of these various techniques (UFC 2004). In addition, the project would comply with the seismic design parameters of the CBC, ensuring impacts associated with expansive soils are **less than significant**.

- e) ***Would the proposed project 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?***

The proposed project would not require the installation or use of a septic tank or alternative wastewater disposal system. Therefore, **no impact** would occur.

- f) ***Would the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Paleontological resources or fossils are remains of ancient plants and animals that can provide scientifically significant information about the history of life on Earth. This sensitivity is determined by rock type, the history of the geologic unit in producing significant fossils, and fossil localities that are recorded from that unit.

Based on a USGS report, the San Pedro formation in Coyote Hills contains significant paleontological resources within Fullerton and Buena Park. Fossil localities in East Coyote Hills, approximately 1 mile north of the project site, have been discovered (USGS 2000). Due to the distance from East Coyote Hills, and the developed nature of the site paleontological resources are not expected to be discovered during project construction. However, it is possible that unknown paleontological resources could be discovered during earthwork activities. Implementation of Mitigation Measure GEO-1 (MM GEO-1), requiring the contractor to notify a qualified paleontologist to investigate paleontological resources in the event they are uncovered, would ensure that impacts associated with paleontological resources would be **less than significant with mitigation incorporated**.

Mitigation Measure GEO-1: In the event that fossils or fossil locality deposits are discovered during construction, excavations within 50-feet of the fossil locality shall be temporarily halted until removal of the fossil localities. The contractor shall notify a

3. ENVIRONMENTAL EVALUATION

qualified paleontologist to investigate its significance. If the fossil locality is determined to be significant by the qualified paleontologist the paleontologist shall work with the District to follow accepted professional standards such as further testing for evaluation or data recovery, as necessary. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important.

VIII. Greenhouse Gas Emissions

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☐

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHG), into the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.²

² Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

3. ENVIRONMENTAL EVALUATION

Information on manufacture of cement, steel, and other “life cycle” emissions that would occur as a result of the project are not applicable and are not included in the analysis.³ Black carbon emissions are not included in the GHG analysis because the California Air Resources Board (CARB) does not include this short-lived climate pollutant in the state’s Senate Bill 32 (SB 32) and Assembly Bill 1279 (AB 1279) inventory but treats it separately.⁴ A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

DISCUSSION

a) *Would the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

As seen in Table 8, *Project-Related Operational GHG Emissions*, the proposed project would generate 142 metric tons of CO₂ equivalence (MTCO_{2e}) per year. Annual average construction emissions were amortized over 30 years and are included in the emissions inventory to account for one-time GHG emissions from the construction phase of the proposed project. Operational emissions associated with the proposed project include mobile source emissions from new trips resulting from an increase in enrollment at FUHS. These trips are based on the traffic analysis conducted by DJ&A (see Appendix D). No new events or activities at the FUHS sport facilities would result from the proposed project, though existing events/activities would be rescheduled and use the proposed field lighting, resulting in emissions from field lighting use. Additionally, the proposed improvements would result in a slight increase in water demand, wastewater and

³ Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (CNRA 2018). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (LCI 2008).

⁴ Particulate matter emissions, which include black carbon, are analyzed in Section III, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The state's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017).

3. ENVIRONMENTAL EVALUATION

solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., electricity for the buildings and parking areas).

Table 8 Project-Related Operational GHG Emissions

Source	GHG Emissions (MTCO ₂ e/Year)
Mobile	48
Area	1
Energy	47
Water	3
Solid Waste	12
Refrigerants	<1
Field Lighting ¹	17
30-Year Amortized Construction Emissions	14
Total	142
South Coast AQMD Bright-Line Threshold	3,000 MTCO₂e/Year
Exceeds Bright-Line Threshold?	No

Sources: Appendix A. Based on CalEEMod, Version 2022.1; South Coast AQMD 2008b.

Notes: MTons = metric tons; MTCO₂e = metric ton of carbon dioxide equivalent

¹ Emissions from field lighting calculated off-model based on average hours of lighting per event (Appendix A).

As shown in Table 8, construction and operation of the proposed project would not generate an increase of annual emissions that exceed the South Coast AQMD Working Group bright-line threshold of 3,000 MTCO₂e per year (South Coast AQMD 2010). Therefore, the proposed project's cumulative contribution to GHG emissions would be **less than significant**.

b) *Would the proposed project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). A consistency analysis with these plans is presented below.

CARB Scoping Plan

CARB's latest Climate Change Scoping Plan (2022) outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, and AB 1279 (CARB 2022). The Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result,

3. ENVIRONMENTAL EVALUATION

local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard (LCFS) and changes in the corporate average fuel economy standards (e.g., California Advanced Clean Cars program).

The proposed project would not use natural gas, consistent with the Scoping Plan's decarbonization goals. The proposed project is a local-serving, K-12 public school, and therefore screens out of VMT analysis per the City of Fullerton's Transportation Assessment and Procedures document, as discussed in Section XVII. The proposed project would also comply with the applicable mandatory CALGreen electric vehicle charging standards and includes 13 EV-capable spaces and three EV charging spaces. In addition, the project would comply with statewide measures pertaining to on-road vehicles, off-road equipment, and transportation fuels that have been adopted since AB 32, SB 32, and AB 1279 were adopted. Therefore, the proposed project would not obstruct implementation of the 2022 Scoping Plan, and impacts would be less than significant.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2024-2050 RTP/SCS, Connect SoCal, in April 2024. Connect SoCal is a long-term plan for Southern California region that details the development, integrated management, and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area (SCAG 2024). This plan outlines a forecast development pattern that demonstrates how the region can sustainably accommodate needed housing and job centers with multimodal mobility options. The overarching vision is to expand alternatives to driving, advance the transition to clean-transportation technologies, promote integrated and safe transit networks, and foster transit-oriented development in compact and mixed-use developments (SCAG 2024).

In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG-emission-reduction goals and federal Clean Air Act requirements. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region. The Connect SoCal Plan does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers.

As discussed in Section XVII, the proposed project is a local-serving, K-12 public school that screens out of VMT analysis. Furthermore, the proposed project would not change the underlying zoning or uses on the project site and would continue to serve the local student population and neighboring communities. Accordingly, the proposed project would not

3. ENVIRONMENTAL EVALUATION

interfere with SCAG's ability to implement the regional strategies outlined in the SCS, and impacts would be **less than significant**.

IX. Hazards and Hazardous Materials

Would the project:

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

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

DISCUSSION

- a) *Would the proposed project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Construction

Construction of the proposed project would require small amounts of hazardous materials such as vehicle fuels, lubricants, grease and transmission fluids, paints, and coatings. The handling, use, transport, and disposal of hazardous materials during the construction phase of the proposed project would comply with existing regulations of several agencies—the US Environmental Protection Agency (EPA), California Division of Occupational Safety and Health (Cal/OSHA), United States Occupational Safety and Health Administration, and United States Department of Transportation.

Operation

Operation of the proposed project would involve the use of hazardous materials typical of school facilities such as cleaning and maintenance supplies (cleaners, gasoline, paint and pesticides). The proposed project includes field lighting improvements, the construction of an athletic building, and construction of a restroom building that would use cleaners and other chemicals in relatively small quantities, which are not typically considered hazardous materials that could result in a significant hazard to the public or the environment.

Furthermore, the use, storage, transport, and disposal of hazardous materials during both construction and operational phases would be governed by existing regulations of several agencies, including the EPA, US Department of Transportation, Cal/OSHA, Orange County Health Care Agency, and Orange County Environmental Health Division, similar to the construction phase. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts.

3. ENVIRONMENTAL EVALUATION

Therefore, substantial hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials would be **less than significant**.

b) *Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

California Government Code Section 65962.5 requires referencing a list of hazardous materials sites, hazardous waste discharges for which the State Water Resources Control Board has issued certain types of orders, public drinking water wells collecting detectable levels of organic contaminants, underground storage tanks with reported unauthorized releases, and solid waste disposal facilities from which hazardous waste has migrated.

The project site is currently developed with the existing FUHS's northern parking lot, paved walkways, and athletic fields. Seven environmental lists were searched for hazardous materials on the project site:

- GeoTracker. State Water Resources Control Board (SWRCB 2025)
- EnviroStor. Department of Toxic Substances Control (DTSC 2025a)
- EnviroStor. Cortese List (DTSC 2025b)
- Cortese List Data Resources. CalEPA (CalEPA 2025a)
- California EPA. CalEPA (CalEPA 2025b)
- Solid Waste Information System (SWIS). California Department of Resources Recovery and Recycling (CalRecycle 2025)
- Well Finder. Geologic Energy Management Division (CalGEM)(DOC 2025f)

The FUHS campus was identified by two hazardous waste databases, as shown in Table 9, *Hazardous Materials Sites On-Site or Within 0.25 Miles of the Project Site*. However, the two identifiers (school investigation and Chemical Storage Facilities, Hazardous Waste Generator) are typical of school campuses and indicate the campus stores chemical/hazardous materials on-site, as discussed in Section IX(a). As discussed above, the campus currently and would continue to utilize hazardous materials typical of school facilities, such as cleaning and maintenance supplies, which would be stored in accordance with federal, state, and local policies. Therefore, no hazardous material sites of concern exist on the project site or campus.

FULLERTON UNION HIGH SCHOOL FIELD IMPROVEMENTS AND
NEW ATHLETIC BUILDING PROJECT INITIAL STUDY/MND
FULLERTON UNION HIGH SCHOOL DISTRICT

3. ENVIRONMENTAL EVALUATION

Table 9 Hazardous Material Sites On-Site or Within 0.25 Miles of the Project Site

Location	Database	Identifier	Cleanup Status	Proximity to Site
201 E Chapman Avenue, Fullerton, CA 92832	EnviroStor	School Investigation	No Further Action as of 1/16/2004	On-Site
	CalEPA	Chemical Storage Facilities, Hazardous Waste Generator	Routine Oversight by local agencies	
321 E Chapman Avenue, Fullerton, 92634	GeoTracker, CalEPA	LUST Cleanup Site	Completed – Case Closed as of 12/22/1994	0.15 miles southeast
	CalEPA	Chemical Storage Facilities, Hazardous Waste Generator	Routine Oversight by local agencies	
117 Chapman Avenue, Fullerton, 92634	GeoTracker	LUST Cleanup Site	Completed – Case Closed as of 1/12/1987	0.25 miles southwest
245 E Wilshire Avenue, Fullerton, CA 92832	CalEPA	Chemical Storage Facilities	Routine Oversight by local agencies	0.24 miles southwest
800 N Harbor Boulevard, Fullerton, CA 92632	CalEPA	LUST Cleanup Site	Completed – Case Closed as of 3/30/1994	0.24 miles west
	CalEPA	Chemical Storage Facilities, Hazardous Waste Generator	Routine Oversight by local agencies	

Sources: CalEPA 2025a; SWRCB 2025; DTSC 2025a.

The remaining four sites have a cleanup status of completed–case closed and do not have the potential for accidental release of hazardous materials. As such, there are no hazardous waste sites on-site or in the surrounding area that would create a significant hazard to the public or environment due to upset or accidental release of hazardous material. Therefore, impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

c) *Would the proposed project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The project site is located on the FUHS campus, and Fullerton College borders the project site to the east. As discussed in Section IX(a), construction and operation of the proposed project would handle small amounts of hazardous materials typical of construction activities and school related activities (during operation). The use, transportation, and storage of hazardous materials would be required to comply with all applicable state and federal regulations that would ensure the proper handling of such materials. As discussed in Section IX(b), there is no evidence that a hazardous materials release or threatened release has occurred on the project site or within a 0.25-mile radius of the project site. The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Thus, impacts would be **less than significant**.

d) *Would the proposed project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Seven environmental lists were searched for hazardous materials sites on the project site:

- GeoTracker. State Water Resources Control Board (SWRCB 2025)
- EnviroStor. Department of Toxic Substances Control (DTSC 2025a)
- EnviroStor. Cortese List (DTSC 2025b)
- Cortese List Data Resources. CalEPA (CalEPA 2025a)
- California EPA. CalEPA (CalEPA 2025b)
- Solid Waste Information System (SWIS). California Department of Resources Recovery and Recycling (CalRecycle 2025)
- Well Finder. Geologic Energy Management Division (CalGEM)(DOC 2025f)

As discussed in Section XI(b), the project site is identified on EnviroStor and CalEPA with a school investigation, as a hazardous waste generator, and a chemical storage facility. However, this is typical of all public schools due to the use of hazardous materials typical of school facilities, such as cleaning and maintenance supplies, which would be stored in accordance with federal, State, and local policies. Routine school investigations by the applicable local agencies ensure accordance with such policies. The other four hazardous waste sites identified have a cleanup status of completed—case closed and do not have the potential for an accidental release of hazardous materials. Therefore, the proposed project would not create a hazard to the public because of a hazardous materials site compiled pursuant to Government Code Section 65962.5. Impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

- e) ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed project result in a safety hazard or excessive noise for people residing or working in the project area?***

The closest public airport to the project site is Fullerton Municipal Airport 3.15 miles west of the project site. The project site is not within the Fullerton Municipal Airport land use plan airport impact zones or noise contours (OC ALUC 2019). The project site is not within two miles of a public airport or public use airport. **No impact** would occur.

- f) ***Would the proposed project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Please refer to Section XX(a), *Wildfire*, for discussion on interference with an adopted emergency response plan or emergency evacuation plan. A **less than significant** impact to an adopted emergency response plan or emergency evacuation plan was identified.

- g) ***Would the proposed project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

The project site is in a highly developed and urbanized residential area in the City of Fullerton. As discussed in Section XX, *Wildfire*, according to the Fullerton Safety Element Supplement, the project site and the surrounding area are not within a Very High Fire Hazard Severity Zone, and there are no areas in the city in a wildland-urban interface or within a historic fire perimeter (Fullerton 2025b). The proposed project would not expose any additional persons or structures directly or indirectly to a significant risk of loss, injury, or death involved by wildland fires. **No impact** would occur.

X. Hydrology and Water Quality

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

DISCUSSION

- a) *Would the proposed project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

3. ENVIRONMENTAL EVALUATION

Urban runoff from storms or nuisance flows (runoff during dry periods) from development projects can carry pollutants to receiving waters. Runoff can contain pollutants such as oil, fertilizers, pesticides, trash, and sediment. This runoff can flow directly into local streams or into storm drains and continue through stormwater pipes until it is released untreated into a local waterway and eventually the ocean. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats. The construction and operational phases of the proposed project could have the potential to impact water quality. The following is a discussion of the potential impact that the construction and operational phases of the proposed project could have on water resources and quality.

Construction

Clearing, grading, excavation, and construction activities associated with the proposed project may impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

The proposed project would be required to comply with all applicable regulatory requirements governing water quality. The proposed project would be required to comply with the National Pollutant Discharge Elimination System Construction General Permit (CGP) (2022-0057-DWQ). The CGP requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) that incorporates best management practices (BMP) to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The State Water Resources Control Board (SWRCB) mandates that projects that disturb one or more acres of land must obtain coverage under the Statewide CGP. Prior to the start of construction activities, the project applicant must file Permit Registration Documents (PRD) with the SWRCB, which include a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The construction contractor is required to maintain a copy of the SWPPP on-site at all times and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the commencement of a grading activities, the project applicant is required to provide proof of coverage under the CGP with the SWRCB.

The SWPPP must describe construction BMPs that address pollutant source reduction and provide measures/controls to mitigate potential pollutant sources. These include, but are not limited to:

- Erosion controls (e.g., earth dikes and swales, mulching, slope drains, compost blankets)
- Sediment controls (e.g., silt fence, sediment trap, sandbag or straw bale barriers)

3. ENVIRONMENTAL EVALUATION

- Tracking controls (e.g., stabilized construction entrance/exit, tire wash)
- Nonstorm water management (e.g., dewatering practices, vehicle and equipment cleaning)
- Materials and waste management (e.g., material storage, hazardous waste management, soil management)
- Good housekeeping practice

Coverage under the CGP and implementation of the SWPPP and its associated BMPs throughout the construction phase would result in an impact of **less than significant**.

Operation

Once the proposed project has been constructed, urban runoff could include a variety of contaminants that are typical of operation of educational uses, that could impact water quality. The proposed project would be required to comply with applicable federal and state laws and local regulations governing the use, storage, transport, and disposal of hazardous materials and would ensure impacts would be less than significant.

The proposed project is required to comply with the post-construction performance standards under the SWRCB's CGP. Additionally, requirements for waste discharges to stormwater from operation of developed land uses are set forth in the Municipal Stormwater Permit (MS4 Permit), Order No. R8-2009-0030 as amended by Order R8-2010-0062, issued by the Santa Ana Regional Water Quality Control Board (RWQCB). The proposed project is required to prepare and implement a WQMP pursuant to the MS4 Permit, specifying BMPs to be used during project design and operation to minimize stormwater pollution. The WQMP is required to be prepared in accordance with the Model Water Quality Management Plan and Technical Guidance Document. In compliance with the MS4 Permit, specific nonstructural and structural source control BMPs would be incorporated into the proposed project. Typical site-design BMPs and source-control BMPs include the examples below.

Site Design BMPs

Site design BMPs would be incorporated into the project's design to reduce the potential impacts on surface and groundwater quality. These may include, but are not limited to:

- Maximizing pervious areas and minimizing directly connected impervious areas
- Using on-site ponding areas (i.e., at-grade detention basins)
- Constructing hardscape with permeable materials and implementing hydrologically functional landscape design.
- Incorporating trees, open space, and landscaping to mitigate urban heat island impacts.
- Including mostly native plants and drought-tolerant plants in landscaping plans.
- Using effective irrigation systems to minimize water usage.

3. ENVIRONMENTAL EVALUATION

Source Control BMPs

Source control BMPs effectively minimize the potential for typical urban pollutants to contact stormwater, thereby limiting water quality impacts downstream. Source control BMPs would be incorporated into the proposed project and implemented throughout the operation of the campus. These BMPs could include the following:

- Educational uses related to urban runoff provided to all employees, and staff.
- Inspection and maintenance of site BMPs—catch basins, grate inlets, etc.
- Providing storm drain stenciling or signage on all storm drain inlets and catch basins.
- Properly designing and inspecting all trash storage areas, loading docks, outdoor storage areas, and outdoor work areas on a regular basis.

The proposed project would include a combination of BMPs, including but not limited to the BMPs listed above, to meet SWRCB's requirements. As part of the statewide mandate to reduce trash in receiving waters, the proposed project would adhere to the requirements of the SWRCB Trash Amendments. The requirements include the installation and maintenance of full-capture trash screening devices at curb inlets, grate inlets, and catch basin inlets. The trash screening devices must be certified by the SWRCB.

Although the City does not have its own water quality control plan, the City ensures that policies and programs such as the Water Control Plan for the Santa Ana River Basin (Basin Plan) and NPDES permits are implemented to preserve water quality in the city. Furthermore, the proposed project would be required to meet the City of Fullerton's water quality ordinance (FMC Chapter 12.18). With the implementation of the BMP features, described above, to control the amount and quality of the stormwater leaving the project site, and compliance with State and local regulations, the proposed project would not violate any water quality standards, plans, or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Thus, impacts would be **less than significant**.

b) *Would the proposed project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The project site is located within the Coastal Plain of the Orange County groundwater basin (OC Basin), which is classified as a medium-priority basin due to heavy reliance on the Basin as a source of water supply (CDWR 2026b).

The City of Fullerton is a retail water supplier that provides water to its residents and other customers using the imported potable water supply obtained from its regional wholesaler, Metropolitan Water District of Southern California (MET), and local groundwater from the OC Basin, which is managed by the Orange County Water District (OCWD) (Fullerton 2021). The

3. ENVIRONMENTAL EVALUATION

City's water utility operates 15 reservoirs with a capacity of 67.5 million gallons (MG), 12 booster pumping stations, and 8 active groundwater wells and manages about 424 miles of water mains with 31,936 service connections. In 2019-20, the City relied on 79 percent groundwater and 21 percent imported water. It is projected that by 2045, the water supply portfolio will shift to approximately 85 percent groundwater and 15 percent imported water. If needed, the City's agreement with the MET allows the City to purchase significantly more imported water.

The project site is currently developed with the northern parking lot, paved walkways, and athletic fields. The two proposed buildings would be constructed on existing impervious areas, such as the existing northing parking lot and the Agri-Science Academy's paved agricultural area. Stormwater from the project site percolates into the ground in pervious areas or is directed to storm inlets on campus or to storm drains along the public right-of-way. The proposed project would result in a slight increase in impervious surfaces compared to existing conditions with the construction of the athletic building and reconfiguration of the northern parking lot. Additionally, the landscaped area southwest of the northern parking lot would be paved to accommodate the reconfigured parking lot (see View 9 of Figure 4). The proposed project would introduce approximately 5,494 square feet,⁵ or 0.12 acre, of additional impervious surfaces, and stormwater flows would be similar to existing conditions. Stormwater runoff would be directed into the newly constructed storm drain system and existing storm drains on-site, percolate into the ground, and flow into storm drains in the public right-of-way. The project site is not used for groundwater recharge, nor does it represent a significant or important source of groundwater recharge or extraction. The project does not propose groundwater wells that would extract groundwater from an aquifer, and it would not substantially interfere with groundwater supplies, recharge, or a groundwater management plan. Therefore, impacts on groundwater supplies would be **less than significant**.

- c) ***Would the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***
- i) **result in a substantial erosion or siltation on- or off-site;**
 - ii) **substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
 - iii) **create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

⁵ Not including footings for field lighting poles.

3. ENVIRONMENTAL EVALUATION

iv) impede or redirect flood flows?

Erosion or Siltation

Erosion and siltation impacts that could result from alteration of drainage patterns would, for the most part, occur during the proposed project's construction phase, which would include site preparation and grading activities. Environmental factors that affect erosion include topography, soil type, wind, and rainfall. Siltation is associated with sediment transport and deposition in waterways. The proposed project would not involve the alteration of any natural drainage channels or any watercourse, since none exist on-site. As stated in Section X(b), the proposed project would result in an increase in impervious surfaces compared to existing conditions. The proposed project's construction includes grading, utilities trenching, and asphalt demolition. If not controlled, the transport of soil from earthwork to local waterways could temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways.

As discussed in Section X(a), the proposed project would be required to submit PRDs and a SWPPP to the SWRCB for approval prior to any construction activities. The SWPPP would describe the BMPs to reduce the impact of erosion and siltation (as described above). The operational phase of the project would be required to comply with State and local regulations, which would include SWRCB Trash Amendments, site design, and source control BMPs, as described in Section X(a), to reduce erosion and siltation. Implementation of the project BMPs during the construction and operational phase would ensure that erosion and siltation impacts would be **less than significant**.

Flooding On-Site or Off-Site

The project site is developed with the existing FUHS's northern parking lot, paved surfaces, and athletic fields. The proposed project would not involve the alteration of any natural drainage or watercourse, since none exist on-site.

The proposed project would not substantially alter the existing drainage on-site. Stormwater runoff would be directed into new storm inlets and existing storm drains on-site, percolate into the ground, and flow into the existing storm drains in the public right-of-way.

As stated in Section X(b), the proposed project would result in an increase of impervious surfaces on the project site; however, with the implementation of site BMPs (as discussed in Section X(a)), the amount of stormwater runoff reaching the City's storm drain system would be similar to existing conditions and not induce flooding on-site. The proposed project site design and source BMPs would assist in directing stormwater and water quality on-site. In addition, the proposed project would not substantially increase the rate or amount of surface runoff in a

3. ENVIRONMENTAL EVALUATION

manner that would cause flooding. Therefore, impacts related to stormwater drainage and flooding are **less than significant**.

Stormwater Drainage Systems

The project site is developed with the existing FUHS's northern parking lot, paved surfaces and athletic fields.

As stated in Section X(b), the proposed project would result in an increase in impervious surfaces compared to existing conditions with the reconfiguration of the northern parking lot. However, the increase in impervious surfaces would be considered negligible, as discussed in Section X(b), and similar to existing conditions. Stormwater from the proposed project would be directed into the new stormwater inlets and existing storm drains on-site, percolate into the ground, and flow into storm drains in the public right-of-way. In addition, construction and operation of the proposed project would be required to implement BMPs that would control the amount and quality of stormwater leaving the project site (see discussed in Section X(a)).

Construction and operation of the proposed project would use small quantities of hazardous materials, such as oil, solvents, paint, and gasoline during construction (among other materials), and chemicals used for cleaning and maintenance, and paints during operation (among other materials). All potentially hazardous materials used onsite are typical of construction activities and of educational uses. All potentially hazardous materials would be properly handled, stored, used and disposed of, and would not represent a substantial source of pollution, nor a new use on-site.

The proposed project would not exceed the capacity of existing stormwater drainage systems and would not create substantial additional sources of polluted runoff. Impacts would be **less than significant**.

Impede or Redirect Flood Flows

The project site is not within a Federal Emergency Management Act (FEMA) 100-year flood zone (FEMA 2026). The existing landscape areas and the proposed new driveway location to the reconfigured parking lot is within Flood Zone X (0.2 percent annual chance flood hazard, areas of 1 percent annual chance flood with average depth less than one foot or with drainage areas of less than one square mile). The majority of the site is identified as Flood Zone X, areas of minimal flood hazard, which is outside the outside the 100-year floodplain.

According to the California Department of Water Resources' Dam Breach Inundation Map, the project site is not within any inundation area (CDWR 2026c). As discussed above, construction of the proposed project would not greatly impede or redirect flood flows. The proposed project would be designed and constructed to be consistent with the CBC and other Title 24 building requirements. With adherence to the CBC and federal, State, and local policies, the proposed project would not substantially alter the drainage of the project site, including through the

3. ENVIRONMENTAL EVALUATION

alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that impede or redirect flood flows. Impacts would be **less than significant**.

d) *In flood hazard, tsunami, or seiche zones, would the proposed project risk release of pollutants due to project inundation?*

The project site is not within a tsunami hazard area (DOC 2026). Therefore, the proposed project would not risk the release of pollutants due to tsunamis.

The project site is not within a FEMA 100-year flood zone; the site is within Zone X, areas of minimal flood hazard (FEMA 2026). On the western part of the campus, areas closest to Brea Creek are identified by the FEMA National Flood Hazard Layer Viewer as Flood Zone X .

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. Although there are no large water tanks in the area that could impact the proposed project site, there are dams in the region that could create flooding impacts. Based on the National Inventory of Dams, the project site is within the Brea Dam inundation zone or potential inundation zone (USACE 2026). Although the proposed project is expected to use small amounts of hazardous materials during construction and operation (e.g., paints, cleaners, oils, etc.), the construction and operation of the proposed project would be required to comply with applicable regulations for proper handling, usage, and storage of potentially hazardous materials (see Section IX, *Hazards and Hazardous Materials*). With adherence to State and local policies and DSA review, the proposed project would not release pollutants in the event of project inundation or flood. A **less than significant** impact would occur.

e) *Would the proposed project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

As mentioned in Impact X(b), the proposed project would not substantially interfere with groundwater supplies or recharge and would not obstruct implementation of a sustainable groundwater management plan. The proposed project would be required to submit construction drawings to DSA for approval and would comply with existing local and State regulations.

In addition, the project would not conflict or obstruct any water quality standards or plans but would comply with the Basin Plan and all applicable State and local water quality regulations. The project would comply with the NPDES permit requirements, the City of Fullerton's water quality ordinance (FMC Chapter 12.18), and site BMPs to manage the quantity and quality of stormwater runoff. Therefore, this impact is **less than significant**.

3. ENVIRONMENTAL EVALUATION

XI. Land Use and Planning

Would the project:

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

DISCUSSION

a) *Would the proposed project physically divide an established community?*

The proposed project would not divide an established residential community because the project site is entirely within the existing FUHS campus. Therefore, the proposed project would not physically divide an established community and **no impact** would occur.

b) *Would the proposed project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

As stated in Section 2.2.4, *Existing General Plan Land Use and Zoning*, the project site has a land use designation of SCH and is zoned P-L. The land use designation and zoning allow for educational uses, which is consistent with the project site's existing land use designation and zoning. The proposed project consists of a new athletic building, a restroom building, and athletic field lighting improvements. The proposed project would not alter or modify the project site's current land use and zoning designations. Development of the proposed project would not conflict with any applicable land use plans, policies or regulations. Therefore, there would be **no impact**.

3. ENVIRONMENTAL EVALUATION

XII. Mineral Resources

Would the project:

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

DISCUSSION

a) *Would the proposed project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?*

In 1975, the state legislature adopted the Surface Mining and Reclamation Act, which designated mineral resources zones (MRZ) of statewide or regional importance. The classifications used to define MRZs are:

- **MRZ-1:** Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- **MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits.
- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. For this report, areas classified MRZ-2b contain discovered mineral deposits that are significant inferred resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration work could result in upgrading areas classified MRZ-2b to MRZ-2a.

3. ENVIRONMENTAL EVALUATION

- **MRZ-3a:** Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration work within these areas could result in the reclassification of specific localities into MRZ-2a or MRZ-2b categories. MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources.
- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-4:** Areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources.

The project site is in a MRZ-1, which indicates that the presence of significant mineral resources is unlikely (CGS 2025). Additionally, mining on the project site would be incompatible with the surrounding uses, which consist mostly of educational and residential uses. Mining is also not a permitted use under the site's general plan land use and zoning designations. Implementation of the proposed project would not result in the loss of availability of a known mineral resource or resource recovery site. **No impact** would occur.

b) *Would the proposed project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

As discussed in Section XII(a), no mineral resources are identified on the project site, and it is unlikely that mineral resources are located on the project site. Additionally, the City of Fullerton's General Plan indicates that no locally important mineral resource recovery sites exist within the city (Fullerton 2012a). Therefore, **no impact** would occur.

XIII. Noise

Would the project result in:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Generation of 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?	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located 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?	☐	☐	☐	☒

Noise is defined as unwanted sound. It 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, State of California, and City of Fullerton have established criteria to protect public health and safety and to prevent disruption of certain human activities. Additional information on noise and vibration fundamentals is contained in Appendix C.

Certain land uses are particularly sensitive to noise and vibration. The City of Fullerton General Plan considers residential uses, schools, hospitals, residential care facilities, churches, hotels, motels, and parks as noise sensitive. Noise sensitive receptors near the project site are single- and multi-family residential uses to the west along Pomona Avenue and single-family residential land uses north along Berkeley Avenue.

Existing Conditions

The project site is within the central portion of the campus, in a predominantly residential neighborhood, with mixed uses to the southwest of the campus. The dominant noise environment is traffic noise on Lemon Street, which bisects the campus complex; Berkeley Avenue to the north and east of the project site; and Harbor Boulevard to the west of the project site. Typical noise conditions would include noise associated with existing school marching band practice, after-school sports activities, summer sports programs, graduation and promotion events, and children yelling and playing on existing school grounds. In addition, typical residential activities, such as dogs barking, birds, and wind noise, also contribute to the existing ambient noise environment.

3. ENVIRONMENTAL EVALUATION

The traffic noise levels for this project were estimated using a version of the FHWA Highway Traffic Noise Prediction Model. The FHWA model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, speed, truck mix, varying distances from the roadway, and length of exposed roadway. Vehicle speeds on each roadway were assumed to be the posted speed limit, and no reduction in speed was assigned due to congested traffic flows. Current roadway characteristics, such as the number of lanes and speed limits, were determined from field observations and according to roadway classification. Average daily traffic volumes were based on the existing daily traffic volumes provided by DJ&A (see Appendix D). The results of existing traffic noise modeling indicates that average noise levels along project area roadway segments currently range from approximately 57 dBA to 69 dBA CNEL (as calculated at a distance of 50 feet from the centerline of the road). Traffic noise levels for existing conditions along analyzed roadways are presented in Table 10, *Existing Roadway Traffic Noise Levels*, including distances to the 70 dBA, 65 dBA, and 60 dBA CNEL contours.

Table 10 Existing Roadway Traffic Noise Levels

Roadway	Segment		Daily Traffic Volumes	Noise Level at 50 Feet (dBA CNEL)	Distance to Noise Contour (feet)		
	From	To			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
E. Chapman Avenue	N. Harbor Blvd	N. Lemon Street	24,907	69	42	91	195
N. Lemon Street	N. Berkeley Avenue	E. Chapman Avenue	13,959	68	35	76	164
N. Pomona Avenue	N. Union Avenue	E. Chapman Avenue	2,614	57	7	16	34
N. Berkeley Avenue	N. Harbor Blvd	N. Lemon Street	15,526	68	38	82	176

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided DJ&A (Appendix D). Calculations included in Appendix C.

Applicable Noise Standards

City of Fullerton Noise Standards

The City of Fullerton's regulations with respect to noise are included in Chapter 15.90, Noise Standards and Regulation, of the Municipal Code, also known as the Noise Ordinance. Construction-related and operational noise restrictions are discussed below.

3. ENVIRONMENTAL EVALUATION

Section 15.90.030, Noise Standards, defines the interior and exterior noise level limits for residential land uses that apply at all property within the Residential Noise Zone. Table 11, *City of Fullerton Sound Level Limits*, shows the noise limits applied to sensitive uses, defined as private or public schools, hospitals, residential care facilities for the elderly, and religious institutions. The City does not have specific noise level limits for commercial or industrial zones.

Table 11 **City of Fullerton Sound Level Limits**

Land Use	Noise Level (dBA) Property Line	Time Period
Exterior Noise Limits	55	7:00 am to 10:00 pm
	50	10:00 pm to 7:00 am
Interior Noise Limits	55	7:00 am to 10:00 pm
	45	10:00 pm to 7:00 am

Source: Fullerton General Plan Noise Element, Table N-3, "City of Fullerton Exterior and Interior Noise Limits."

1. The noise standard for a cumulative period of more than 30 minutes in any hour;
2. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes but less than 30 minutes in any hour;
3. The noise standard plus 10 dBA for a cumulative period of more than 5 minutes but less than 15 minutes in any hour;
4. The noise standard plus 15 dBA for a cumulative period of more than one minute but less than five minutes in any hour; and
5. The noise standard plus 20 dBA for a cumulative period of less than one minute in an hour.

Section 15.90.040, Activities exempt from standards, states that the following activities shall be exempt from the noise level standards specified by this chapter:

- School bands, school athletic and school entertainment events.
- Outdoor gatherings, public dances, shows and sporting and entertainment events provided the events are conducted pursuant to a permit and/or license issued by the city.
- Activities conducted on public parks, public playgrounds and public or private school grounds.

Section 15.90.050, Activities with special provisions, of the Municipal Code states the following activities shall be exempt from the noise level standards specified by this chapter provided they take place between the hours of 7:00 am and 8:00 pm on any day except Sunday or a City-recognized holiday.

- Noise sources associated with construction, repair, remodeling, or grading of any real property.

3. ENVIRONMENTAL EVALUATION

- Noise sources associated with the maintenance of real property, including normal maintenance and repair by city and utility crews.

Federal Transit Administration Guidelines

The City does not have regulatory standards for construction or operational noise and vibration sources. The Federal Transit Administration (FTA) guidelines are used to determine compliance for construction noise at residential uses of 80 dBA Leq; a vibration standard of 0.2 inches per second (in/sec) peak particle velocity (PPV) to protect normal residential buildings; and a standard of 0.08 in/sec PPV to protect old or historically significant structures.

DISCUSSION

- a) ***Would the proposed project result in the generation of 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

Improvements to the school campus include a new athletic building, restroom building, and athletic field improvements at the varsity and junior varsity softball fields and the baseball field. As part of the athletic building process, demolition of a portion of the existing northern parking lot, five tennis courts, and landscaped areas would be required. Construction of the one-story restroom building would require demolition of concrete paving and double service gate. Proposed athletic field improvements would install 16 sports field lights at the baseball and softball fields.

The proposed project would extend evening practices within the hours of 3:30 pm to 8:00 pm for 17 sports/activities, including soccer, band, basketball, cross-country, football, flag football, graduation, marching band/rehearsal, softball, track and field, and winter sports practices. Practices would not have spectators. The proposed project would be constructed in a single phase and is anticipated to start in June 2026 and end in January 2028. All construction staging and worker parking would be provided on-site. No nighttime work or the use of pile-driving equipment is proposed.

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.

3. ENVIRONMENTAL EVALUATION

The noise produced at each construction phase is determined by combining the Leq 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. 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 off-site sensitive receptor for project construction activities, construction-related noise levels would be up to 74 dBA Leq at multi-family residential uses to the west during paving activities for the proposed athletics building. Construction noise levels at receptors further away are estimated to be less. The results are summarized in Table 12, *Project-Related Construction Noise Levels, dBA at the Nearest Receptors*.

3. ENVIRONMENTAL EVALUATION

Table 12 Project-Related Construction Noise Level, dBA at the Nearest Receptors

Construction Activity Phase	Noise Levels in dBA Leq				
	RCNM Reference Noise Level	Receptor to North	Receptor to South	Receptor to East	Receptor to West
<i>Distance (feet)</i>	50	445	700	335	225
Demolition	84	65	61	67	71
Site Prep	83	64	60	66	70
Grading	84	65	61	67	71
<i>Distance (feet)</i>	50	425	650	265	175
Building Construction	79	60	57	65	68
Architectural Coating	77	58	55	63	66
<i>Distance (feet)</i>	50	400	600	200	95
Paving	80	62	58	68	74
<i>Distance (feet)</i>	50	450	300	95	200
Light Pole Installation	76	57	60	70	64
Exceeds 80 L_{eq} Standard?		No	No	No	No

Source: FHWA's RCNM software. See Appendix C.

Note: Distance measurements were taken using Google Earth (2025), from the boundary of work areas to the nearest receptors (see Figure 5 for the boundaries of the work areas associated with the proposed project).

The nearest sensitive receptor to project construction activities are multi-family residential uses between 95 and 225 feet west of the proposed athletics building and athletic field light poles. Receptors to the south would be exposed to temporary, periodic, short-term noise levels of up to 70 dBA Leq during light pole installation activities. The proposed project's construction activities would occur within the noise standard exempt time frame identified in Section 15.90.050 of the City of Fullerton Municipal Code, 7:00 am and 8:00 pm on any day except Sunday or a City-recognized holiday. The proposed project's construction activities would not exceed FTA's construction noise standard at residential uses (80 dBA Leq). Therefore, the proposed project's construction-related noise impacts would be **less than significant**.

Operational Off-Site 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. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 dBA to 3 dBA under quiet, controlled conditions. Changes of less than 1 dBA are usually

3. ENVIRONMENTAL EVALUATION

indiscernible. A significant impact would occur if the following traffic noise increases occur relative to the existing noise environment:

- 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

Traffic volume data for the new trips associated with the project are provided by DJ&A (Appendix D). The proposed project is expected to increase existing daily trips by 105 new daily project associated trips, with 28 AM and 8 PM peak-hour trips. Appendix D presents the street and locations with scenarios for existing, existing with project conditions, 2028 no-project, and 2028 with-project conditions. With project trip additions, noise levels along all analyzed roadway segments would increase by less than 1 dBA. Table 13, *Project-Related Increases in Traffic Noise, dBA CNEL at 50 Feet*, shows that the addition of proposed project trips would not result in a 1.5, 3, or 5 dBA increase over existing conditions. Therefore, project-related traffic noise impacts would be **less than significant**.

Table 13 Project-Related Increases in Traffic Noise, dBA CNEL at 50 Feet

Roadway	Segment		Average Daily Traffic Noise Levels, dBA CNEL					
	From	To	Existing	Existing With Project	Project Increase (Existing)	2028 No Project	2028 With Project	Project Increase (2028)
E. Chapman Avenue	N. Harbor Blvd	N. Lemon Street	69	69	<1	69	69	<1
N. Lemon Street	N. Berkeley Avenue	E. Chapman Avenue	68	68	<1	68	68	<1
N. Pomona Avenue	N. Union Avenue	E. Chapman Avenue	57	57	<1	58	58	<1
N. Berkeley Avenue	N. Harbor Blvd	N. Lemon Street	68	68	<1	68	68	<1

Source: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) in Appendix C. Based on traffic volumes provided by DJ&A in Appendix D.

Operational On-Site Noise

Existing public address systems and bleachers with an existing design capacity of 4,642 spectators would continue to host major spectator events. Existing stadium uses include, but are not limited to, boys and girls soccer practice, games, camps, and events, including Troy HS soccer activities; cross-country practice and track meets; youth running camp; football practice, games, camps, and events; flag football practice and games; marching band practice and camp;

3. ENVIRONMENTAL EVALUATION

senior year events (i.e., powder puff game, class picture, graduation/graduation practice, etc.); and other events throughout the year. Such events at the track and field stadium occur throughout the year Monday through Sunday between the hours of 6:00 am and 11:15 pm, with activities ranging from 10 participants (Fullerton football youth camp) to up to 5,000 participants (graduation ceremonies). Practices do not have spectators.

The existing varsity and junior varsity softball fields and varsity and junior varsity baseball fields support boys and girls soccer practice; flag football practice; Fullerton football camp; marching band summer camp; softball practices, games, and events; baseball practices, games, and camps; and winter sports practice. Such events at the project site occur throughout the year Monday through Sunday between the hours of 8:00 am and 9:00 pm, with activities ranging from 25 participants (softball practice) to up to 700 participants (FUHS Distance Carnival). Practices do not have spectators.

Sixteen new sports field lighting poles would be installed at the existing baseball and softball fields on campus as part of the proposed project. With the addition of field lights, the proposed project would add evening practices between the hours of 3:30 pm and 8:00 pm for 17 sports/activities, including soccer, band, basketball, cross country, football, flag football, graduation, marching band/rehearsal, softball, track and field, and winter sports. No other changes to operations are proposed as part of the proposed project. Practices would not have spectators, and the proposed project would not result in any changes to the number of participants or time of year (season), or introduce any new games or events at the fields or on campus.

Proposed project noise levels attributable to practice field activities would be similar to existing noise levels but would occur during the evening hours, not extending past 8:00 pm. In addition, Section 15.90.040 of the Municipal Code exempts school bands, athletic, school entertainment events, and activities conducted at public school grounds from the noise level standards in Chapter 15.90 of the Fullerton Municipal Code. Therefore, project-related operational noise impacts would be **less than significant**.

b) *Would the proposed project result in the generation of excessive groundborne vibration or groundborne noise levels?*

Potential vibration impacts associated with the projects are usually related to the use of heavy construction equipment. Construction can 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. Vibration from construction activities rarely reaches the levels that can damage structures.

3. ENVIRONMENTAL EVALUATION

Table 14, *Project-Related Construction Vibration Damage Levels*, summarizes vibration levels for typical construction equipment at a reference distance of 25 feet. Typical construction equipment for this project can generate vibration levels ranging up to 0.21 inch per second (in/sec) PPV at 25 feet due to a roller during paving activities. Vibration levels at a distance greater than 95 feet would attenuate to 0.028 in/sec PPV or less.

Table 14 Project-Related Construction Vibration Damage Levels

Equipment	Levels, PPV (in/sec)				
	FTA Reference at 25 Feet	Receptor to North 400 feet	Receptor to South 300 feet	Receptor to East 95 feet	Receptor to West 95 feet
Vibratory Roller	0.21	0.003	0.005	0.028	0.028
Hoe Ram	0.089	0.001	0.002	0.012	0.012
Large Bulldozer	0.089	0.001	0.002	0.012	0.012
Caisson Drilling	0.089	0.001	0.002	0.012	0.012
Loaded Trucks	0.076	0.001	0.002	0.010	0.010
Jackhammer	0.035	0.001	0.001	0.005	0.005
Small Bulldozer	0.003	0.000	0.000	0.000	0.000
Exceed 0.2 in/sec PPV Standard?		No	No	No	No

Source: FTA 2018. See Appendix C.

Note: Distance measurements were conducted using Google Earth (2025) from the boundary of work areas to the nearest receptors.

As shown in Table 14, the proposed construction activities would not exceed the 0.2 in/sec PPV FTA standard. In addition, the proposed project would not include any new operational vibration sources. Therefore, project-related vibration impacts would be **less than significant**.

- c) *For a project located 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 proposed project expose people residing or working in the project area to excessive noise levels?*

3. ENVIRONMENTAL EVALUATION

The nearest airport to the project site, Fullerton Municipal Airport, is located 3.15 miles to the west. The project site is located outside of 60 dBA CNEL noise contour for Fullerton Municipal Airport. Therefore, implementation of the proposed project would not result in increased exposure of people working at or visiting the project site to aircraft noise. Therefore, **no impact** would occur.

XIV. Population and Housing

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

- a) ***Would the proposed project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

The proposed project includes the construction of a new athletic building with classrooms that are expected to increase the school's enrollment capacity by approximately 54 students. While this represents a small increase in the school's enrollment, the proposed project is anticipated to accommodate the increased enrollment because the new students would come from existing residences within the District's service boundary. These new students would also be accommodated by the existing FUHS staff. The proposed project does not involve the construction of new housing or businesses, or the extension of roads or off-site infrastructure. Therefore, the project is not expected to induce substantial new population growth in the area, and impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

- b) *Would the proposed project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

Project construction would be restricted to the existing campus, and no housing would be displaced or necessitate replacement housing. **No impact** would occur.

XV. Public Services

Would the project:

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

DISCUSSION

- a) *Would the proposed project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

Fire protection?

Fire protection and emergency services in the City of Fullerton, including the project site, are provided by the Fullerton Fire Department (FFD). The FFD provides fire control and suppression,

3. ENVIRONMENTAL EVALUATION

rescue, medical aid, hazardous materials control, and basic and advanced life support services (Fullerton 2026a).

The closest FDD fire station to the project site is Fire Station #1 at 312 E. Commonwealth Avenue and is 0.52 mile south of the project site. The FDD does not include online resources describing their personnel, equipment, call volume, and response time. The FDD has an automatic aid agreement with the Orange County Fire Authority and the City of Placentia (Fullerton 2020b).

Construction

During the construction phase of the proposed project, there would be a temporary increase in construction workers on-site. Construction of the proposed project would be required to comply with the California Fire Code (CFC) to ensure on-site safety during construction. The code includes standards for building and construction, requirements for emergency access, hazardous material handling, and fire protection systems. Construction of the proposed project would further implement Occupational Safety and Health Administrative (OSHA) regulations to ensure on-site safety during construction. Construction plans for the proposed project would be reviewed and inspected by the DSA to ensure all requirements are met, such as adequate emergency access to the project site during construction. The FFD would review project plans to confirm fire personnel accessibility, fire hydrant locations and distribution, water supply requirements for fire flow, and automatic fire sprinklers.

Therefore, project construction would not affect fire/emergency response protection services to the extent that new or physically altered fire facilities would be needed to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. Therefore, construction-related impacts on fire protection would be **less than significant**.

Operation

The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at the varsity and junior varsity softball fields and the baseball field. As discussed in Section 2.3, FUHS's enrollment capacity would increase by approximately 54 students. In addition, with the installation of field lights, the proposed project would add evening practices between the hours of 3:30 pm and 8:00 pm. However, there are no other changes to operations (practices, games, or events), employees, participants, time of year (season), or number of spectators.⁶ The proposed project would not result in the construction of any new housing. The proposed project is not expected to increase fire service demand from evening practices, but the increase in FUHS's enrollment capacity is expected to result in a negligible increase in fire services.

⁶ Practices would not have any spectators.

3. ENVIRONMENTAL EVALUATION

The proposed project would be designed to accommodate emergency access to the new development in accordance with the CFC. The proposed project would be designed to accommodate emergency access to the facility in accordance with the CFC. The fire department and DSA would review ensure that plans, specifications, and construction comply with access, fire, and life safety design standards established by DSA and California's building codes (Title 24 of the California Code of Regulations).

Although the proposed project may result in a minor increase in demand for fire protection services compared to existing conditions, it would not require new or substantially expanded fire protection facilities or personnel. Therefore, impacts would be **less than significant**.

Police protection?

The Fullerton Police Department (FPD) provides police protection services from its main station at 237 Commonwealth Avenue, approximately 0.6 mile southwest of the project site. FPD has approximately 180 employees, with 125 sworn and 55 civilian positions. The FPD handles close to 50,000 calls for service annually (Fullerton 2026b).

Construction

During the construction of the proposed project, construction workers would temporarily be on-site. Construction of the proposed project would maintain emergency access routes during project construction, to the extent feasible, because the project would reconfigure the northern parking lot. Active construction areas would be fenced during the construction phase, and construction site access would be limited to authorized personnel. The storage and staging of construction equipment would be on the project site and fenced in.

Construction of the campus already includes several design features and security measures that would reduce the opportunity for criminal activity on-site. For example, during construction, equipment and tools would be locked and hidden from view, and fencing would be maintained around the perimeter of the project site. The project site would include security lighting and fencing and gates limiting access to the campus. The construction managers will be responsible for maintaining the safety and security of the project site and will maintain a list of contractors and key personnel with key access. The FPD and DSA would ensure the site adheres to CFC requirements to ensure on-site safety during construction, and ensure all requirements are met, such as adequate emergency access to the project site during construction. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities that would necessitate the need for new or physically altered police protection facilities. Construction related impacts on police protection would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

Operation

The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at the varsity and junior varsity softball fields and the baseball field. As discussed in Section 2.3, FUHS's enrollment capacity would increase by approximately 54 students. In addition, with the installation of field lights, the proposed project would add evening practices between the hours of 3:30 pm and 8:00 pm. However, there are no other changes to operations (practices, games, or events), employees, participants, time of year (season), or number of spectators. The proposed project would not result in the construction of any new housing. The proposed project is not expected to increase police service demand from evening practices, but the increase in FUHS's enrollment capacity is expected to result in a negligible increase in police services.

In addition, operation of the campus already includes several design features and security measures that would reduce the opportunity for criminal activity on-site. For example, security lighting is installed throughout the campus and fencing and gates limit access to the campus and project site. The proposed project would be designed to accommodate emergency access to the proposed project in accordance with the federal, State and local regulations, which would be reviewed by DSA and the FPD for consistency. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities that would necessitate the need for new or physically altered police protection facilities. The proposed project would have a **less than significant** impact on police protection services during operation of the proposed project.

Schools?

Demand for schools is largely generated by new housing developments. The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at FUHS. No housing would be constructed as part of the proposed project. In addition, the project would not result in the generation of new employees. Although the proposed project would increase FUHS's enrollment capacity by approximately 54 students, or a 2.47 percent increase,⁷ FUHS would continue to serve students already within the District's enrollment boundaries and would not constitute a significant increase in demand for school facilities. Therefore, the proposed project would not generate an increase in demand for school facilities or personnel in manner that would require new or physically altered school facilities. Thus, **no impacts** on schools would occur.

Parks?

The Fullerton Parks and Recreation Department manages 53 parks and all trails and recreation facilities within the city (Fullerton 2026c). In addition, Ted Craig Regional Park in the city is a 124-acre park with athletic fields, playgrounds, hiking trails, open space, walkways, picnic

⁷ (54 additional enrollment capacity ÷ 2,187 existing enrollment capacity) 100 = 2.469

3. ENVIRONMENTAL EVALUATION

tables, park benches, a small lake, three year-round creeks, and a rose garden. The nearest park is Fullerton Community Park, 0.35 mile southwest of the project site.

Typically, an increase in demand for parks is created by the development of new housing and/or population generating actions. The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at FUHS.

Although the project would increase FUHS's enrollment capacity by approximately 54 students, such students are already within the District's enrollment boundaries. The project would not generate new students, employment, or housing that could increase the demand for parks. The proposed project would serve the existing needs of the campus. The proposed project would not increase the use of existing parks or recreational facilities, or create the need for new parks or recreational facilities. The project site and proposed improvements would continue to be available to authorized community groups, subject to District facility use policies and the Civic Center Act. Thus, the proposed project would provide improved recreational opportunities to the school and surrounding community. A **less than significant** impact on parks would occur.

Other public facilities?

The Fullerton Public Library's main library and Hunt branch library provide library services, public events, college and career resources, computers and printing, ebook, and audiobooks (Fullerton Library 2026). The main library at 353 Commonwealth Avenue is 0.73 mile southwest of the project site. In addition, Fullerton residences can use Orange County Public Libraries, which provide library services, a digital library, online resources, workshops, public events, and other resources (OCPL 2026).

Typically, an increase in demand for library services is created by the development of new housing and/or population-generating actions. The proposed project would not construct any new housing or result in an increase in population. The proposed project would serve the existing needs of the campus. The proposed project would not increase the use of existing library facilities or the need for new library facilities. The proposed project would not require new or physically altered library facilities. **No impact** on libraries would occur.

3. ENVIRONMENTAL EVALUATION

XVI. Recreation

Would the project:

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

DISCUSSION

- a) ***Would the proposed project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

According to Section 5.15, Parks and Recreation, of the Fullerton Plan EIR, there are 640.4 acres of public parks and recreational facilities in the city. The Parks and Recreation Department provides a wide range of recreational, sports, cultural, and senior programs, services, and events for all age groups and is responsible for maintaining the City's parks and recreation facilities. The Fullerton Plan establishes a long-term goal to provide 4 acres of useable park area per 1,000 residents. Additionally, the City has entered into a number of agreements with the District for use of various school facilities for public recreation with use limited to after school hours, weekends, and summer programs (Fullerton 2026c).

The proposed project would not result in an increase in population and the increase in enrollment at FUHS as a result of the proposed project would not be substantial. Additionally, the proposed project includes enhanced sports facilities, which would be available to authorized community groups during weekends and outside school hours, subject to District facility use policies and the Civic Center Act. Therefore, the proposed project would not generate an increased demand for existing neighborhood, regional facilities or other recreational facilities and would not result in substantial physical deterioration of such facilities nor cause

3. ENVIRONMENTAL EVALUATION

deterioration to accelerate. The proposed project would have **less than significant** impact on recreation.

b) *Does the proposed project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The proposed project would not require the construction or expansion of off-site recreational facilities. Furthermore, the proposed project would neither increase population through construction of homes nor induce population growth that would require expanded recreational facilities and the increase in enrollment at FUHS as a result of the proposed project would not be substantial. Therefore, impacts would be **less than significant**.

XVII. Transportation

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines § 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?	☐	☐	☒	☐

DISCUSSION

a) *Would the proposed project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Construction

Construction of the project would include large construction equipment, transportation of equipment to and from the project site, and worker vehicles. However, construction traffic

3. ENVIRONMENTAL EVALUATION

would be temporary, and all construction activity and staging areas would be on the project site. Therefore, the proposed project would not obstruct traffic lanes or have any long-term effects on the circulation system.

Operation

The proposed project would reconfigure the northern parking lot; construct a new athletic building, restroom building, walkways, other paved areas, and landscaping; and install field lighting at the athletic fields. As discussed in Section 2.3, *Project Characteristics*, FUHS's enrollment capacity would increase by approximately 54 students. In addition, with the installation of field lights, the proposed project would add evening practices between the hours of 3:30 pm and 8:00 pm. However, there are no other changes to operations (practices, games, or events), employees, participants, time of year (season), or number of spectators. The addition of lighting fixtures and its impact on evening sporting activities would not significantly change the number of students and/or athletes during the AM or PM peak hour trips (Appendix D).

The trip generation for FUHS after-school activities is estimated using rates published in the ITE *Trip Generation Manual* (12th edition) for Land Use Code 525: High School. As seen in Table 15, *Trip Generation and Distribution*, during the AM peak hour, the proposed project is expected to generate 28 new vehicle trips. Of those, 68 percent (19 trips) are forecast to enter the project site, and 32 percent (9 trips) are forecast to exit the site. During the PM peak hour, the proposed project is expected to generate 8 new vehicle trips, of which 48 percent (4 trips) are forecast to enter the project site, and 52 percent (4 trips) are forecast to exit the site. In total, the proposed project is expected to generate 105 daily new trips on the weekdays.

The City of Fullerton's threshold for conducting an intersection level of service analysis (LOS) is a generation of at least 50 peak hour vehicle trips as a result of a proposed project. The proposed project would not require an intersection LOS analysis because peak hour trips for both the AM and PM peak hours are less than 50 vehicles.

Table 15 Trip Generation and Distribution

Land Use and Time Period	Students	Trip Generation Rate	Distribution		2025 With Project		Total
			Inbound	Outbound	Inbound	Outbound	
High School – Weekday	54	1.94 trips / student	50%	50%	52	53	105
High School – AM Peak	54	0.52 trips / student	68%	32%	19	9	28
High School – PM Peak	54	0.15 trips / student	48%	52%	4	4	8

Source: Appendix D.

3. ENVIRONMENTAL EVALUATION

Additionally, the average daily trips (ADT) volumes were estimated using a combination of the existing ADT volumes, the ITE *Trip Generation* estimate of 105 new daily trips, and proportions of vehicle traffic volumes on each of the roadway segments (see Table 16, *Estimated Project Average Daily Traffic Volumes*) and were used to forecast the future volumes. The Opening Year (2028) With Project ADT volumes were estimated assuming an ambient growth rate of 1 percent per year from the 2025 With Project scenario ADT volumes and shows an increase in ADT during the 2028 With Project scenario at all roadway locations as compared to the 2028 No Project scenario.

Table 16 **Estimated Project Average Daily Traffic Volumes**

Roadway	Existing ADT	2028 No Project	2025 With Project	2028 With Project
E Chapman Avenue, between N Harbor Boulevard and N Lemon Street	24,907	25,662	24,972	25,728
N Lemon Street, between N Berkeley Avenue and E Chapman Avenue	13,959	14,382	14,047	14,473
N Pomona Avenue, between E Union Avenue and E Chapman Avenue	2,614	2,693	2,631	2,710
N Berkeley Avenue, between N Harbor Boulevard and N Lemon Street	15,526	15,996	15,566	16,038

Source: Appendix D.

Transit, Roadway, Bicycle, and Pedestrian Facilities

See Section 2.2.2, *Parking and Access*, and Section 2.3, *Parking and Access*, for a description of the existing and proposed parking and access on-campus, respectively. Existing project driveways provide sufficient sight distance. No significant horizontal curves are proposed along the roadways in the vicinity of the project driveways. The District would comply with the applicable sight distance guidelines when designing the new ingress-egress driveway for the northern parking lot.

The existing site access driveway lengths are designed to serve the school's typical peak AM and PM hour traffic volumes and turning movements. Since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, driveway congestion and queues would not be significantly impacted. The Traffic Circulation Memo determined that no modifications to existing driveway lengths are needed.

The proposed project would comply with City standards. For example, the new ingress-egress driveway designed for the northern parking lot would be appropriately distanced from adjacent intersections and from the existing driveway for the northern parking lot.

3. ENVIRONMENTAL EVALUATION

The existing site access driveways are designed to serve the school's typical peak AM and PM hour traffic volumes and turning movements. Since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, there is no need to change the configuration of right turn lanes at the study driveways. Design of the new ingress-egress driveway for the northern parking lot would comply with the City of Fullerton guidelines to ensure that the right turn lane can accommodate anticipated traffic volumes.

To accommodate a potential increase in pedestrian and bicycle circulation due to an increase in student enrollment, the proposed project would include 10 bike parking spaces on the south side of the new athletic building. The increase in student capacity may increase the use of public transportation; however, students would typically be transported by personal vehicles or non-motorized transportation. A negligible increase in the use of public transit (i.e., buses) is anticipated. The proposed project would also include the installation of walkways around the athletic building site that would connect to the existing public sidewalks along N Pomona Avenue and E Union Avenue and to the rest of the FUHS campus. Sidewalks would continue to provide pedestrian access to the parking lot entrances. However, during construction, sidewalks on the east side of N Pomona Avenue would be temporarily blocked, and pedestrian access would continue to be provided on the west side of N Pomona. Construction areas would be clearly marked with signage and fenced off to limit impacts to pedestrians. The Traffic Circulation Memo determined that no additional pedestrian or bicycle crossing locations are needed (Appendix D).

Conclusion

Although the proposed project would generate an increase in ADT, the number of peak hour trips would not exceed the City of Fullerton's threshold for conducting a Level of Service (LOS) intersection level analysis. In addition, since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, site circulation would not be significantly impacted, and no improvements to the existing site access driveways are recommended based on this analysis. In addition, the proposed project would not significantly impact the use, access, or circulation of transit, bicycle, and pedestrian facilities because the project proposes to improve pedestrian and bicycle use with new sidewalks and bicycle storage facilities. Therefore, impacts would be **less than significant**.

b) *Would the proposed project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?*

On September 27, 2013, SB 743 started a process that fundamentally changed transportation impact analyses as part of CEQA compliance. SB 743 eliminated auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as the sole basis for determining significant impacts under CEQA. As part of the current CEQA Guidelines, the criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal

3. ENVIRONMENTAL EVALUATION

transportation networks, and a diversity of land uses” is used (Public Resources Code Section 21099(b)(1)). Pursuant to SB 743, the California Natural Resources Agency adopted revisions to the CEQA Guidelines on December 28, 2018. CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed after SB 743. Metrics related to “vehicle miles traveled” (VMT) were required beginning July 1, 2020, to evaluate the significance of transportation impacts under CEQA for development projects, land use plans, and transportation infrastructure projects. State courts ruled that under the Public Resources Code Section 21099, subdivision (b)(2), “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment” under CEQA, except for roadway capacity projects.

The proposed project is evaluated for potential impacts related to VMT consistent with the requirements in the City of Fullerton Transportation Assessment Policies and Procedures. This document establishes that projects with one or more of the following attributes may be exempt from a full VMT Analysis:

- **Criteria 1:** Project is located in a Transit Priority Area (TPA). The project is within 0.5 miles of a TPA, which includes a major transit stop or an existing stop along a high-quality transit corridor.
- **Criteria 2:** Project is located in a Low VMT Area. A low VMT area is defined as an individual traffic analysis zone where total daily Origin/ Destination VMT per service population is 15 percent or more below the City average total daily Origin/Destination VMT per service population.
- **Criteria 3:** Project Type Screening. Projects for the following land uses can be presumed to have a less than significant impact:
 - Local-serving K-12 public schools
 - Local-serving parks, day care centers
 - Local-serving retail uses less than 50,000 square feet
 - Local-serving hotels (e.g., non-destination hotels)
 - Local-serving student housing projects
 - Local-serving assembly uses (places of worship, community organizations)
 - Community institutions (public libraries, fire stations, local government)
 - Affordable, supportive, or transitional housing
 - Assisted living facilities
 - Senior housing (as defined by HUD)
 - Projects generating less than 836 daily VMT

3. ENVIRONMENTAL EVALUATION

The proposed project would be eligible to be screened out from a full VMT analysis under Criteria 3 because the project is proposing development for a local-serving K-12 public school. No additional VMT analysis is required for the project (Appendix D). Therefore, a **less than significant** impact would occur.

c) *Would the proposed project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

See Section 2.2.2, *Parking and Access*, and Section 2.3, *Parking and Access*, for descriptions of the on-campus existing and proposed parking and access, respectively.

As discussed in XVII(a), no significant horizontal curves exist or are proposed along the roadways, and no modifications to the driveways length or sight distances are recommended to accommodate the proposed project (Appendix D). The proposed project's new ingress-egress driveway would be constructed and designed in accordance with City of Fullerton and other applicable guidelines. In addition, since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, configuration of right turn lanes would not be modified, and driveway congestion and queues would not be significantly impacted.

The proposed project would make the northern parking lot temporarily unavailable for vehicle parking to accommodate the construction of the athletic building and reconfiguration of the northern parking lot. Vehicles would be unable to access FUHS using the driveway access along N Pomona Avenue during construction. Vehicles would be able to park and access the campus from the central and eastern parking lots. Additionally, the proposed project would not introduce any incompatible uses on campus. Therefore, impacts would be **less than significant**.

d) *Would the proposed project result in inadequate emergency access?*

Existing emergency access to the main campus is provided via two internal drive aisles: (1) from the northern parking lot to the central parking lot, (2) and an internal drive isle traversing the southern portion of campus near the permanent campus buildings from N Lemon Street to N Pomona Avenue. Emergency access to the eastern portion of the campus (restroom building project area) is provided via two drive aisles: (1) the U-shaped circulation pattern of the eastern parking lot, and (2) Nutwood Place within Fullerton College.

During construction, the northern parking lot would be temporarily unavailable for pedestrian and emergency vehicles to accommodate the construction of the athletic building, ingress-egress driveway onto E Union Avenue/N Pomona Avenue, and reconfiguration of the northern parking lot. However, the proposed project would maintain the existing emergency access between the northern and central parking lots, no modification to the emergency lane is proposed. The new driveway along E Union Avenue/N Pomona Avenue would provide additional emergency access to the proposed athletic building.

3. ENVIRONMENTAL EVALUATION

Access to the eastern parking lot would not be unavailable for pedestrian and emergency vehicles during construction of the restroom building. Therefore, the eastern parking lot would primarily remain accessible to emergency services, and emergency vehicles would be able to use Nutwood Place during emergencies at the baseball field.

Construction of the proposed project would not impact emergency access elsewhere on campus. To ensure adequate emergency and fire access, project improvements would be designed in compliance with applicable DSA and CFC standards (e.g., minimum lane width and turning radius). The DSA would review plans, specifications, and construction to confirm compliance with fire and life safety standards, including roadway requirements for emergency vehicles. In addition, existing fire lanes and driveways to the campus have already been designed to meet applicable DSA and CFC standards and would continue to provide adequate access to all areas of the campus. Therefore, the project would not conflict with emergency access, and impacts would be **less than significant**.

XVIII. Tribal Cultural Resources

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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), or	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

DISCUSSION

- a) ***Would the proposed project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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)?**

As discussed under Section V(a), the Fullerton Auditorium (aka Louis E. Plummer Auditorium) is listed within the National Register of Historic Places and is approximately 0.2 mile southeast of the proposed athletic building location and approximately 0.25 mile southwest of the proposed restroom building location. The FUHS campus is presumed to qualify as a “historical resource” at a local level because of its 110-year history as the first high school in the Fullerton area (and the second in Orange County). However, no known or registered buildings or other historical resources related to tribal cultural resources, as defined by Section 21074 have been recorded at the project site have been recorded in the California Register of Historical Resources or in a local register (OHP 2026; Appendix B). Therefore, impacts would be **less than significant**.

- 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**

3. ENVIRONMENTAL EVALUATION

(c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

A Sacred Lands File (SLF) search conducted by the Native American Heritage Commission (NAHC) returned a positive result, indicating the potential presence of Native American cultural resources, including sacred sites, within the project area (Appendix E). The NAHC recommended outreach to tribes with potential cultural affiliation to obtain additional information regarding the project area. The proposed project has the potential to disturb subsurface deposits that may be of traditional or cultural significance. Accordingly, Assembly Bill 52 (AB 52) tribal consultation was conducted as part of the proposed project.

Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American tribes on potential impacts to TCRs, as defined in PRC Section 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible for or listed in the California Register of Historical Resources or local register of historical resources. As part of the AB 52 process, Native American tribes must submit a written request to the District (lead agency) to be notified of projects within their traditionally and culturally affiliated area. The District must then provide written, formal notification to those tribes, and the tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project. When these steps are completed, the District must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either 1): the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

Pursuant to AB 52, the Fullerton Joint Union High School District invited a total of 15 tribes to consult based on the District's AB 52 list, which includes the Agua Caliente Band of Cahuilla Indians, Gabrieleno Band of Mission Indians - Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino /Tongva Nation, Gabrielino-Tongva Tribe, Juaneno Band of Mission Indians Acjachemen Nation – Belardes, Juaneno Band of Mission Indians, La Jolla Band of Luiseno Indians, Pala Band of Mission Indians, Pauma Band of Luiseno Indians, Pechanga Band of Luiseno Indians, Pechanga Band of Mission Indians, Rincon Band of Luiseno Indians, San Fernando Band of Mission Indians, San Luis Rey Band of Mission Indians, and Soboba Band of Luiseno. The invitation letters were sent to tribes on December 11, 2025 via email and/or mail to the available addresses, prior to the NHAC SLF positive result. Tribal consultation pursuant to AB 52 concluded on January 10, 2026, for the proposed project.

3. ENVIRONMENTAL EVALUATION

On December 22, 2025, the District received a request for consultation from the Gabrieleno Band of Mission Indians - Kizh Nation regarding the proposed project. The Gabrieleno Band of Mission Indians - Kizh Nation provided mitigation measures to be incorporated into the IS/MND that address the inadvertent discovery of tribal cultural resources and to minimize the potential impacts to tribal cultural resources. The mitigation measures are incorporated as Mitigation Measure TCR-KIZH-1 through TCR-KIZH-3, below.

In addition, on January 28, 2026, the District received a request for consultation from the Juaneno Band of Mission Indians Acjachemen Nation 84A regarding the proposed project. The Juaneno Band of Mission Indians Acjachemen Nation 84A provided mitigation measures to be incorporated into the IS/MND that address the inadvertent discovery of tribal cultural resources and to minimize the potential impacts to tribal cultural resources. The mitigation measures are incorporated as Mitigation Measures TCR-ACH-1 through TCR-ACH-5, below.

Due to the potential of unearthing TCRs and the Gabrieleno Band of Mission Indians - Kizh Nation's and the Juaneno Band of Mission Indians Acjachemen Nation 84A's recommendations for worker training, a tribal monitor during ground disturbing activities, TCR discovery and treatment, Mitigation Measures TCR-KIZH-1 through TCR-KIZH-3 and Mitigation Measures TCR-ACH-1 through TCR-ACH-5 would be implemented to ensure that impacts related to TCRs are less than significant. With the incorporation of Mitigation Measures TCR-KIZH-1 through TCR-KIZH-3 and Mitigation Measures TCR-ACH-1 through TCR-ACH-5, and CUL-1, impacts to TCRs would be **less than significant**.

Mitigation Measure TCR-KIZH-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.

- a. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleno 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 lead agency 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.

3. ENVIRONMENTAL EVALUATION

- 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 project applicant/lead agency 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 project applicant/lead agency 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 project applicant/lead agency 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-KIZH-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-KIZH-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.

3. ENVIRONMENTAL EVALUATION

- 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.

Mitigation Measure TCR-ACH-1: Retention of Qualified Archaeologist and Worker Training. Prior to initiating any ground-disturbing activities for the proposed project, the District shall ensure that a qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Secretary of the Interior 2008) has been retained by the District to conduct any required training, evaluation, or treatment of archaeological resources that might be encountered during implementation of the project.

As part of this, prior to the start of grading, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel must be informed of the types of archaeological resources that may be encountered (both prehistoric and historical), and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The District must ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

Mitigation Measure TCR-ACH-2: Native American Monitoring. A Native American monitor from the tribe or tribes identified as a consulting party for the project under AB 52 shall be present during all earth-moving construction activities. The Native American monitor shall be given the opportunity to participate in the cultural resource sensitivity training described in the preceding condition of approval. At least 30 days prior to ground disturbing activities for the project site and any off-site improvements, a Native American Monitoring Agreement (Monitoring Agreement) shall be developed between the District and the consulting party. The Monitoring Agreement shall pertain to prehistoric archaeological resources and Tribal Cultural Resources, respectively, and shall identify any monitoring requirements and treatment of cultural resources to meet the requirements of the Tribal representative. The Monitoring Agreement shall also address communication protocols in the event of an unanticipated discovery of cultural materials, and the roles, responsibilities, and authorities of the Native American Monitor. The Monitoring Agreement shall also detail the protocols for treatment and final disposition of any Native American cultural resources, sacred sites, and human remains discovered on the site that the Native American Monitor shall implement in consultation and coordination with the Native American Most Likely Descendant, as

3. ENVIRONMENTAL EVALUATION

identified by the NAHC. In accordance with the condition of approval below, discovery and treatment of human remains shall comply with State Health and Safety Code Section 7050.5 and Public Resources Code (PRC) Section 5097.98.

Mitigation Measure TCR-ACH-3: Archaeological Resource and/or Tribal Cultural Resource Discovery and Treatment. In the event of the unanticipated discovery of archaeological or other cultural resources, whether discovered through Native American monitoring or not, all work activities in the area (within approximately 100 feet of the discovery) shall be halted or redirected until the discovery can be evaluated by a qualified archaeologist. Construction shall not resume until a qualified archaeologist has conferred with the District and, in the case of prehistoric archaeological resources and tribal cultural resources, the Native American monitor, on the significance of the resource. If it is determined that the discovered archaeological resource and/or tribal cultural resource is significant, avoidance and preservation in place shall be the preferred manner of mitigation, pursuant to PRC Section 21083.2(b) and Section 21084.3. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist, in consultation with the District, that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource or cultural information in the event of a tribal cultural resource. The District shall also consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered. Any evaluation and treatment shall be supervised by an individual or individuals that meet the Secretary of the Interior's Professional Qualification Standards.

Mitigation Measure TCR-ACH-4: Treatment of Human Remains. In accordance with California Health and Safety Code Section 7050.5, if human remains are found, the Orange County Sheriff's Coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains (100 feet or as determined by the project archaeologist) shall occur until the procedures set forth in this measure have been implemented. If the County Coroner determines that the remains are, or are believed to be, Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours. In accordance with California PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American

3. ENVIRONMENTAL EVALUATION

representative would then determine, in consultation with the property owner, the disposition of the human remains.

Mitigation Measure TCR-ACH-5: Native American Monitor. The District shall retain a Native American Monitor from or approved by the Juaneño Band of Mission Indians – Acjachemen Nation Tribal Council.

- a. 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 lead agency 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. Government to Government consultation shall be conducted prior to approval of ground disturbing activities and maintained throughout project implementation.
- d. Construction coordination meeting shall be conducted prior to start of ground disturbing work (grading, trenching, or excavation) with Qualified Archaeologist, Construction Contractor, Juaneño Band of Mission Indians Acjachemen Nation (JBMIAN) Tribal Representative.
- e. Tribal Cultural Resource Monitoring shall be conducted during all initial ground-disturbing activities until both the Archaeologist and Tribal Monitor determine monitoring is no longer needed. During construction, cultural materials or features are discovered. Construction contractor, Archaeologist, JBMIAN Tribal Monitor and Lead Agency shall submit a discovery report documenting find, treatment measures, and confirmation that work did not resume until treatment was completed in consultation with JBMIAN. If human remains are encountered during construction, the construction contractor, Orange County Sheriff’s Coroner, NAHC, MLD and JBMIAN shall follow the following: the coroner shall provide written documentation, the NAHC will be notified, and there shall be confirmation of respectful treatment/reburial as directed by the MLD and Tribe.
- f. Qualified Archaeologist and/or JBMIAN Tribal Representative shall submit documentation of recovered materials, correspondence confirming tribal

3. ENVIRONMENTAL EVALUATION

disposition decision (e.g., reburial, return, or other treatment) during and following construction, if artifacts are recovered.

- g. Qualified Archaeologist, JBMIAN Tribal Monitor, and/or Lead Agency shall submit a Final Monitoring and Mitigation Summary Report; written confirmation of JBMIAN review and acceptance; copies of confidentiality compliance upon completion of ground-disturbing activities.
- h. Lead Agency, Construction Contractor and or JBMIAN Representative shall submit records of coordination and confirmation that tribal ceremonies or blessings were accommodated safely and respectfully prior to and/or during construction, as requested by the Tribe.

XIX. Utilities and Service Systems

Would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

3. ENVIRONMENTAL EVALUATION

Issues	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

DISCUSSION

- a) ***Would the proposed project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***

The proposed project would construct a new athletic building, restroom building, and athletic field lighting improvements at the varsity and junior varsity softball fields and the baseball field. FUHS's enrollment capacity would increase by approximately 54 students as result of the proposed project. In addition, with the installation of field lights, the proposed project would add evening practices between the hours of 3:30 pm and 8:00 pm. However, there are no other changes to operations (practices, games, or events), employees, participants, time of year (season), or number of spectators.

Water

The proposed project is not expected to increase water demand from evening practices, but the increase in FUHS's enrollment capacity is expected to result in a negligible increase in water demand on-site. The approximately 2.47 percent increase in the campus's enrollment capacity is a negligible increase when compared to the campus's existing enrollment capacity of 2,187 and enrollment of 1,851 students. The new athletic building and restroom building would serve existing students. The increase in the campus's enrollment capacity would not constitute a significant increase in demand for water services on-site.

Water is currently provided to the campus and project site by the City water utility (Fullerton 2021). Potable water would be provided to the new buildings through connections to the existing water mains. The proposed water system improvements would be designed and constructed in accordance with the CBC and CALGreen requirements, such as Division 5.3, Water Efficiency and Conservation, and Sections 5.303, Indoor Water Use, and 5.304, Outdoor Water Use. As further discussed under Section XIX(b), the City has sufficient water supply to serve the proposed project. The proposed project would not require the construction of new or

3. ENVIRONMENTAL EVALUATION

expanded water facilities that could cause significant effects. Impacts would be **less than significant**.

Wastewater

The proposed project is not expected to increase wastewater generation from evening practices, but the increase in FUHS's enrollment capacity is expected to result in a negligible increase in wastewater generated. The approximately 2.47 percent increase in the campus's enrollment capacity is a negligible increase compared to existing enrollment capacity of 2,187 and enrollment of 1,851 students. The new athletic building and restroom building would serve existing students. The increase in the campus's enrollment capacity would not constitute a significant increase in generation of wastewater on-site.

Wastewater in the City and project site is conveyed to the Orange County Sanitation District (OC SAN) for treatment and disposal (Fullerton 2021). OC SAN has a system of gravity flow sewers, pump stations, and pressurized sewers to convey wastewater to two treatment plants: Fountain Valley (Plant No. 1) and Huntington Beach (Plant No. 2). Plant No. 1 has a primary and secondary capacity of 208 and 182 million gallons per day (MGD), respectively; Plant No. 2 has a primary and secondary capacity of 168 and 150 MGD, respectively (OC SAN 2022). OC SAN had a total 2023-24 average daily flow of 192 MGD of wastewater (OC SAN 2026). As further discussed in Section XIX(c), the proposed project would not substantially increase wastewater. Wastewater generated by the proposed project would be conveyed to the existing sewer lines in the public right-of-way. Therefore, the proposed project would not require the construction of new or expanded wastewater facilities that could cause significant environmental effects. Impacts would be **less than significant**.

Stormwater Drainage

As substantiated in Section X(c), impacts would be **less than significant**, and no mitigation measures are necessary.

Electrical Power

Electricity is provided by Southern California Edison (SCE 2025). The proposed project would require utility trenching and connect to existing electric power infrastructure for operation. The proposed project would result in an increase in electricity consumption that would be adequately served by the existing infrastructure. The proposed project would be required to comply with energy efficiency standards in the CBC and CALGreen. Implementation of the proposed project would not result in the relocation or construction of new or expanded electricity facilities that could cause significant environmental impacts. Therefore, impacts would be **less than significant**.

3. ENVIRONMENTAL EVALUATION

Natural Gas

Natural gas service is provided by the Southern California Gas Company. The proposed project would not require the use of natural gas during construction or operation, and therefore **no impact** would occur.

Telecommunications

The proposed project would not require additional telecommunications facilities demand. The proposed project would not require off-site construction or relocation of utilities, and therefore **no impact** would occur.

b) *Would the proposed project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

The City of Fullerton Urban Water Management Plan (UWMP) determined that there is adequate water supply to service the City through 2045 during normal years, single-dry years, and multiple-dry years (Fullerton 2021). The water supply till 2045 is projected to consist of approximately 85 percent groundwater, and the remaining water supplies are 15 percent imported water. In addition, the City has a purchase agreement with MET that allows the City to purchase significantly more imported water, should the need arise.

As discussed in Section XIX(a), the proposed project is not expected to substantially increase in water demand; any increases would be negligible. The proposed water system improvements would be designed and constructed in accordance with the CBC and CALGreen requirements, such as CALGreen Division 5.3, Water Efficiency and Conservation, and Sections 5.303, Indoor Water Use, and 5.304, Outdoor Water Use. Since the project would not create an increase in water demand, the City contains adequate water supplies to meet the water demands of the proposed project and the City during normal, dry, and multiple dry years, and impacts would be **less than significant**.

c) *Would the proposed project result in a determination by the waste water treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Wastewater generated at the campus is conveyed to OC SAN treatment plants No. 1 in Fountain Valley and No. 2 in Huntington Beach. Plant No. 1 has a primary and secondary capacity of 208 and 182 MGD, respectively, and Plant No. 2 has a primary and secondary capacity of 168 and 150 MGD, respectively (OC SAN 2022). The OC SAN had a total 2023-24 average daily flow of 192 MGD of wastewater, with a total of 376 MGD primary treatment capacity at Plant No. 1 and Plant No. 2 (OC SAN 2026). Thus, there is approximately 184 MGD excess capacity at OC SAN.

3. ENVIRONMENTAL EVALUATION

As discussed in Section XIX(a), increases in wastewater would result from the increase in enrollment capacity but would be negligible, and OC SAN has adequate capacity to serve the proposed project in addition to the existing commitments. Therefore, impacts would be **less than significant**.

d) *Would the proposed project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Construction solid waste generation would be minimal, since it would not include building demolition. However, paved areas (parking lots or walkways) would be demolished to accommodate the proposed athletic building and restroom building. In accordance with CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, at least 65 percent of the nonhazardous construction and demolition waste would be recycled and/or salvaged for reuse.

The proposed project is not expected to increase solid waste generation from evening practices, but the increase in FUHS's enrollment capacity is expected to result in a negligible increase in solid waste on-site. The approximately 2.47 percent increase in the campus's enrollment capacity is a negligible increase compared to existing enrollment capacity of 2,187 and enrollment of 1,851 students. The new athletic building and restroom building would serve existing students. The increase in the campus's enrollment capacity would not constitute a significant increase in the generation of solid waste on-site.

Solid waste generated by the project site would be disposed of in landfills in Orange County. These include the Frank R. Bowerman Landfill and Olinda Alpha Landfill, which have remaining capacities of 160,896,082 cubic yards and 17,500,000 cubic yards, respectively (CalRecycle 2026). In addition, the proposed project's negligible increase in solid waste production would be within the remaining capacity of the area landfills. The proposed project would not adversely impact landfill capacity or impair attainment of solid waste reduction goals, and impacts would be **less than significant**.

e) *Would the proposed project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

The District would continue to comply with federal, state, and local statutes and regulations related to solid waste, such as the California Integrated Waste Management Act and local recycling and waste programs. As discussed in Section XIX(d), the proposed project would generate minimal solid waste during construction because the proposed project would only demolish paved surfaces (i.e., a parking lot, and walkway), not buildings, and solid waste from operational uses would be a negligible increase. The District and its construction contractor would continue to comply with all applicable laws and regulations and make every effort to reuse and/or recycle the construction debris that would otherwise be taken to a landfill.

3. ENVIRONMENTAL EVALUATION

CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling, requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. Therefore, impacts would be **less than significant**.

XX. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Issues	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

DISCUSSION

a) *Would the proposed project substantially impair an adopted emergency response plan or emergency evacuation plan?*

The project site is on an existing high school campus in an urbanized residential area of the city of Fullerton and is developed with a parking lot, paved walkways, and athletic fields. According

3. ENVIRONMENTAL EVALUATION

to the Fullerton General Plan, Safety Element Supplement, the project site and the surrounding area are not within a very high fire hazard severity zone (FHSZ), and there are no areas of the city in a wildland-urban interface or within a historic fire perimeter (Fullerton 2025b). The closest very high FHSZ is approximately 1.8 miles northwest of the project site.

The Emergency Operations Plan (EOP) describes the City's emergency management strategies. The EOP provides for hazard identification, mitigation, preparedness, response, and recovery for emergency events such as fires, earthquakes, floods, pandemics, and terrorist activities. City preparedness activities focus on ensuring the City's Emergency Operations Center (EOC) is adequately supplied and staffed by trained personnel in the event of an emergency (Fullerton 2025b). The Fullerton Office of Emergency Management helps the City and community prepare for and respond to natural and human-caused disasters by maintaining emergency plans and facilities, providing training and education, supporting disaster response and recovery, and coordinating with regional partners (Fullerton 2026e). The Office of Emergency Management oversaw the preparation of the City's Local Hazard Mitigation Plan (LHMP), which identifies hazards and strategies to reduce risk and improve resilience, and it supports coordinated response and recovery (Fullerton 2026f). Although the City's EOP and LHMP are not publicly accessible online, the Fullerton Safety Element Supplement, Exhibit 1, identifies potential evacuation routes in Fullerton. The project site is not bounded by a potential evacuation route. However, Chapman Avenue, S Harbor Boulevard, and N Brea Boulevard are three major arterial roadways identified as potential evacuation routes that are approximately 0.2, 0.23, and 0.5 mile from the project site, respectively. The proposed project would not physically impede the identified potential evacuation routes. Project activities would be limited to the project site. The project site would maintain access routes as feasible with reconfiguration of the northern parking lot, but would not impair any established evacuation routes.

The proposed project would be designed in accordance with the CBC and CFC, and the project design plans would be reviewed by the DSA. Fire suppression equipment specific to construction would be maintained on-site, in accordance with DSA, CBC, and CFC requirements. Additionally, project construction would comply with applicable existing regulations, safety standards, and, where applicable, manufacturer's specifications for the proper maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**.

- b) *Would the proposed project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

The project site is primarily flat with a slight slope from north to south. The Fullerton Safety Element Supplement states that periodic episodes of Santa Ana winds can influence the spread

3. ENVIRONMENTAL EVALUATION

and intensity of wildfires (Fullerton 2025b). However, the project site and surrounding area are not in a very high FHSZ, and there are no areas of the City within a wildland-urban interface or historic fire perimeter (Fullerton 2026e). In addition, the proposed project would be designed in accordance with the CBC and CFC. Project design plans would also be reviewed by the DSA and Fullerton Fire Department. Fire suppression equipment specific to construction would be maintained on-site. Additionally, project construction would comply with applicable existing regulations, safety standards, and, where applicable, manufacturer's specifications for the proper maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the proposed project would not expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds, and other factors. Impacts would be **less than significant**.

- c) ***Would the proposed project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?***

The project site is in an urban area and is served by existing utility infrastructure, including water and power. Development of the proposed project would require new utility hook-ups to the existing utilities in the project site area. All utility lines would be underground. The proposed project would be designed and constructed in accordance with the CBC and the CFC. These project features would not exacerbate fire risk. Development of the proposed project would not require the installation of roads, fuel breaks, or emergency water sources. Therefore, the proposed project does not include the installation or maintenance of infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. Impacts would be **less than significant**.

- d) ***Would the proposed project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?***

The project site and surrounding area are not in a very high FHSZ (Fullerton 2025b). As discussed in Section X, *Hydrology and Water Quality*, the project site is not in a FEMA-designated 100-year flood zone (FEMA 2025a). Although the project site is within the Brea Dam inundation zone or potential inundation zone, the project would be constructed in accordance with the CBC and other Title 24 building requirements. The project site is within the FUHS campus boundaries and would not expose people or structures to significant risk.

As discussed in Section VII, *Geology and Soils*, a portion of the northwestern corner of the project site is in an area with low potential for landslides, but the project site is not in an official landslide zone (USGS 2025a; DOC 2025d). The proposed project would be designed and

3. ENVIRONMENTAL EVALUATION

constructed consistent with CBC, which would ensure that impacts related to landslides are **less than significant**.

XXI. Mandatory Findings of Significance

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

DISCUSSION

- a) ***Does the proposed project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or***

3. ENVIRONMENTAL EVALUATION

endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Sections IV, *Biological Resources*; V, *Cultural Resources*; VII, *Geology and Soils*; and XVIII, *Tribal Cultural Resources*, with the incorporation of mitigation measures the proposed project would result in less than significant impacts to biological resources (including nesting birds), paleontological resources, and cultural and tribal cultural resources. As discussed in Section IV, *Biological Resources*, although the project site is developed and contains limited vegetation for migratory species, nesting birds have the potential to occur on the project site, and construction activities may impact species if they are present. Impacts to nesting birds (avian species) would be less than significant with the implementation of Mitigation Measure BIO-1.

As discussed under Sections V, VII, and XVIII, the project site has been previously disturbed by the existing campus and is in an urbanized area of the city of Fullerton. Although the project site received a positive SLF result, since the project site has been previously disturbed, it is unlikely that buried tribal cultural, archaeological and paleontological resources would be encountered. Nevertheless, Mitigation Measures CUL-1, GEO-1, and TCR-KIZH-1 through TCR-KIZH-3 and TCR-ACH-1 through TCR-ACH-5 include processes to follow in the unlikely event that tribal cultural, archaeological, or paleontological resources are encountered. With incorporation of Mitigation Measures CUL-1, GEO-1, and TCR-KIZH-1 through TCR-KIZH-3 and TCR-ACH-1 through TCR-ACH-5 impacts to TCR, paleontological and archaeological resources would be less than significant.

With identified mitigation measures, the proposed project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal nor eliminate important examples of the major periods of California history or prehistory. **A less than significant impact would occur with the incorporation of mitigation measures.**

- b) *Does the proposed project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)***

The potential for cumulative impacts occurs when the independent impacts of a given project are combined with the impacts of related projects in proximity to the project site that would create impacts that are greater than those of the project alone. The proposed project is part of the District’s implementation of its 2024 Facilities Master Plan with the approval of the District’s bond in November 2024. The FMP assesses existing facility conditions and community needs, and recommends improvements across the District’s campuses. As a top priority, the District proposes to install sports field lighting at the six high schools (Buena Park High School [HS],

3. ENVIRONMENTAL EVALUATION

FUHS, La Habra HS, Sonora HS, Sunny Hill HS, and Troy HS) and install bleachers and PA systems at Sonora HS, Sunny Hill HS, and Troy HS. The need for the field lighting is prompted by the passage of SB 328, which requires high schools to start no earlier than 8:30 am. The later start affects sports activities unless the athletic fields and courts are lit for evening use. Further, the bleachers at the three campuses are needed for schoolwide assemblies, and additional campus improvements at Troy High School, Sonora, and Sunny Hills High School. Troy High School is the closest District project 1.65 miles east.

The projects at Fullerton Union, Sonora, and Sunny Hills would occur in one or multiple phases and may overlap. However, construction of each project will be executed individually and on different construction schedules. All construction equipment and activities will occur within the boundaries of each campus and will not extend to the other campuses. The proposed project and the other projects within the district do not include subterranean levels and do not include extensive earthwork. Given the distance between the campuses and construction timeline, the construction of the proposed project will not combine with the other projects to create a cumulative impact during construction. Similar to the proposed project, the other proposed District projects will serve their local community and not introduce new events/sports.

As discussed previously in this IS/MND, the proposed project would have no impact, a less than significant impact, or a less than significant impact with mitigation measures to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. Similar to the proposed project, each District project would be required to conduct project-specific analysis. Therefore, the proposed project will not combine with the other projects to create a cumulative impact during operation, and all impacts are individually limited and would not result in any cumulatively significant impact. Impacts would be **less than significant**, and no mitigation measures are required

c) *Does the proposed project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The proposed project would comply with applicable local, state, and federal laws governing general welfare and environmental protection. The implementation of required mitigation measures specified in this IS/MND would reduce impacts to less than significant. The proposed project would not directly or indirectly result in environmental effects that could cause substantial adverse effects on human beings. A **less than significant** impact would occur.

3. ENVIRONMENTAL EVALUATION

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APPENDIX A

AIR QUALITY, ENERGY, AND GREENHOUSE GASES

APPENDIX

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1. AIR QUALITY AND GREENHOUSE GAS BACKGROUND AND MODELING DATA

1.1 AIR QUALITY

1.1.1 Air Quality Regulatory Setting

The proposed project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (South Coast AQMD). However, South Coast AQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

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 Clean Air Act 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 and 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 (CCAA), 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, based on even greater health and welfare concerns.

These National AAQS 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. As shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants include ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (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 1 **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.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 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}) ^{4,6}	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	

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
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) ⁵	24 hours	25 µg/m ³	*	Industrial processes.
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 ₂ S) 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.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
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 2024a.

Notes: ppm: parts per million; $\mu\text{g}/\text{m}^3$: micrograms per cubic meter

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

- California standards for O_3 , CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2 , and particulate matter (PM_{10} , $\text{PM}_{2.5}$, 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.
- National standards (other than O_3 , PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 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 PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, 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.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- On June 2, 2010, a new 1-hour SO_2 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.
- On February 7, 2024, the national annual $\text{PM}_{2.5}$ standard was lowered from $12 \mu\text{g}/\text{m}^3$ to $9 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary), secondary annual $\text{PM}_{2.5}$ standard, and PM_{10} standards (primary and secondary) were retained

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources and include CO, VOC, NO₂, SO_x, PM₁₀, PM_{2.5}, and Pb. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and NO₂ are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented 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 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; US EPA 2025a). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2025a).

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 O₃, 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 O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). 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 NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO₂ is only potentially irritating. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO₂ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ 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 NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005; USEPA 2025a). The SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2025a).¹

Sulfur Dioxide (SO₂) 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 SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, 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, SO₂ 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; USEPA 2025a). The SoCAB is designated as attainment under the California and National AAQS (CARB 2025a).

Suspended Particulate Matter (PM₁₀ 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 PM₁₀, 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

¹ The CA-60 near-road portion of San Bernardino, Riverside and Los Angeles Counties has recently been redesignated as an attainment area based on data collected between 2018 and 2020 (South Coast AQMD 2022).

aerodynamic diameter of 2.5 microns or less (i.e., $\leq 0.002.5$ 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 EPA's 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). 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 2013). However, the 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 2025b). Particulate matter can also cause environmental effects such as visibility impairment,² environmental damage,³ and aesthetic damage⁴ (South Coast AQMD 2005; USEPA 2025a). 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 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

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 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.

AQMD 2005; USEPA 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; USEPA 2018). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the 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 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 2012). CARB's State Implementation Plan (SIP) revision was submitted to the EPA for approval. 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 2, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

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).

Table 2 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	<ul style="list-style-type: none"> ▪ 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)	<ul style="list-style-type: none"> ▪ 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)	<ul style="list-style-type: none"> ▪ Increased response to allergens ▪ Aggravation of respiratory illness 	Same as carbon monoxide sources
Particulate Matter (PM ₁₀ and PM _{2.5})	<ul style="list-style-type: none"> ▪ 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)	<ul style="list-style-type: none"> ▪ 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)	<ul style="list-style-type: none"> ▪ Behavioral and learning disabilities in children ▪ Nervous system impairment 	Contaminated soil

Source: CARB 2025c.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (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 to reduce exposure to these contaminants to protect the public health. 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." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth 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 designated TACs. 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, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant 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 in the form of notices and public meetings.

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. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important 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 particle mass is 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

Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

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). Since 1979, a number of AQMPs have been prepared.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, which serves as an update to the 2017 AQMP. On October 1, 2015, the 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 in 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 absent 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).

Lead State Implementation Plan

In 2008, EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new 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 EPA for approval.

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 micrograms per cubic meter (µg/m³). In 2006, this standard was lowered to a more health-protective level of 35 µg/m³. The SoCAB is designated nonattainment for both the 65 and 35 µg/m³ 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 has developed the 2021 Redesignation Request and Maintenance Plan for the 1997 and 2006 24-hour PM_{2.5} Standards 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).

AB 617, Community Air Protection Program

Assembly Bill (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 has 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 would be installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan (Community Air Protection Blueprint), that evaluates the availability and effectiveness of air monitoring technologies and

existing community air monitoring networks. 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.

1.1.2 Existing Conditions

CLIMATE/METEOROLOGY

South Coast Air Basin

The project site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert 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).

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 45°F in December, and the highest average temperature is 86°F in August. Rainfall averages 12.3 inches per year in the vicinity of the area (Weatherspark 2026).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. 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 (South Coast AQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by 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, both 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 affect the transport and diffusion of pollutants by inhibiting their eastward transport. 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, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. 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).

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet 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 CAAQS 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 a state 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, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

Table 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 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 US EPA to redesignate the SoCAB to attainment for the 65 µg/m³ and 35 µg/m³ 24-hour PM_{2.5} standards. CARB submitted the 2021 PM_{2.5} 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.

EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The project site is located within Source Receptor Area (SRA) 16: North Orange County. The air quality monitoring station closest to the proposed project is the Anaheim-Pampas Lane Monitoring Station, which is one of the monitoring stations South Coast AQMD operates and maintains within the SoCAB.⁷ Data from this station includes O₃, PM₁₀, PM_{2.5}, and NO₂. Table 4, *Ambient Air Quality Monitoring Summary*, shows rare violations of the state and federal O₃ standards, state PM₁₀ standards, and federal PM_{2.5} standards in the last three years.

Table 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 (O₃)			
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	1	0	3
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	1	2	3
Max. 1-Hour Conc. (ppm)	0.102	0.089	0.104
Max. 8-Hour Conc. (ppm)	0.076	0.076	0.079
Nitrogen Dioxide (NO₂)			
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0
Max. 1-Hour Conc. (ppb)	0.0530	0.0509	0.0531
Coarse Particulates (PM₁₀)			
State 24-Hour > 50 µg/m ³ (days exceed threshold)	1	1	0
Federal 24-Hour > 150 µg/m ³ (days exceed threshold)	0	0	0
Max. 24-Hour Conc. (µg/m ³)	67.0	97.8	118.9
Fine Particulates (PM_{2.5})			
Federal 24-Hour > 35 µg/m ³ (days exceed threshold)	0	1	5
Max. 24-Hour Conc. (µg/m ³)	33.1	45.6	49.7

Source: CARB 2026d.

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

1 Data for O₃, PM_{2.5}, PM₁₀, and NO₂ from Anaheim-Pampas Lane Monitoring Station.

2 Most recent data available as of January 2026.

⁷ 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>.

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 re-examined 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. Diesel particulate matter 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).

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution 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 cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. 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 and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The nearest sensitive receptors to the project site are the residences to the south and west of the project site, in addition to onsite receptors of Troy High School.

1.1.3 Thresholds of Significance

The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 1993). CEQA allows the significance criteria established by the applicable air quality management 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 regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 5, *South Coast AQMD Significance Thresholds*, lists South Coast AQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the US EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

Table 5 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO _x)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO _x)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Particulates (PM _{2.5})	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2023.

Projects that exceed the 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. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Linked 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 responsible for 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 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. These 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 4 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions levels presented in Table 4, 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. 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 4, 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 City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.⁸ 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 hot spots. 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 ambient air quality standards is

⁸ 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 the proposed project 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.

typically demonstrated through an analysis of localized CO concentrations. Hot spots 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, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in 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 the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.⁹ As identified in the South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Since South Coast AQMD does not currently 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—in order to generate a significant CO impact (Bay Area Air District 2023).

LOCALIZED SIGNIFICANCE THRESHOLDS

The South Coast AQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 6, *South Coast AQMD Localized Significance Thresholds*.

⁹ 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.

Table 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

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 PM_{2.5}, 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 (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

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 and SRA. The screening-level construction LSTs for the project site in SRA 16 are shown in Table 7, *South Coast AQMD Screening-Level Localized Significance Thresholds*, for sensitive receptors within minimum reference distance of 82 feet (25 meters) for NO_x, CO, PM₁₀ and PM_{2.5}.

Table 7 South Coast AQMD Screening-Level Localized Significance Thresholds

Acreage Disturbed	Threshold (lbs/day) ¹			
	Nitrogen Oxides (NO _x)	Carbon Monoxide (CO)	Coarse Particulates (PM ₁₀)	Fine Particulates (PM _{2.5})
≤1.00 Acre Disturbed Per Day	103	522	4.00	3.00
1.31 Acre Disturbed Per Day	117	597	4.63	3.31
2.19 Acre Disturbed Per Day	152	796	6.31	4.13
2.5 Acre Disturbed Per Day	159	854	6.83	4.33
3.5 Acre Disturbed Per Day	184	1,037	8.50	5.00

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

1 LSTs are based on sensitive receptors within 82 feet (25 meters) for NO_x, CO, PM₁₀ and PM_{2.5}.

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 8, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for 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). As beach uses do not use substantial quantities of TACs, these thresholds are typically applied to new industrial projects only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)).

Table 8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

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

Source: South Coast AQMD 2023.

Draft Operational Cumulative Health Risk Thresholds

South Coast AQMD initiated a Working Group to identify 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 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, then the initial cumulative threshold should be adjusted as shown in Table 9, *MATES V Adjusted Cumulative Significant Cancer Risk Thresholds*.

Table 9 **MATES V Adjusted Cumulative Significant Cancer Risk Thresholds**

Project's Background MATES V Cancer Risk¹	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 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 route¹⁰ 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 SB 535 or AB 617 community, then 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).

¹⁰ 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.

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.

1.2 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,¹¹ carbon (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).¹² The major GHG are briefly described below.

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.
- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting

¹¹ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

¹² Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

- **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.
- **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.
- **Sulfur Hexafluoride (SF_6)** is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.
- **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.
- **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; US EPA 2025b).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 10, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2* . The GWP is used to convert GHGs to CO_2 -equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5) GWP values for CH_4 , a project that generates 10 MT of CH_4 would be equivalent to 280 MT of CO_2 .¹³

¹³ The global warming potential of a GHG is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

Table 10 **GHG Emissions and Their Relative Global Warming Potential Compared to CO₂**

GHGs	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO ₂ ¹	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO ₂ ¹	Sixth Assessment Report (AR6) Global Warming Potential Relative to CO ₂ ¹
Carbon Dioxide (CO ₂)	1	1	1
Methane ² (CH ₄)	25	28	30
Nitrous Oxide (N ₂ O)	298	265	273

Source: IPCC 2007, 2013, and 2023.

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect latest information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂. However, GWP values identified in AR5 are used by the 2022 Scoping Plan for long-term emissions forecasting.

1 Based on 100-year time horizon of the GWP of the air pollutant compared to CO₂.

2 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

1.2.1 GHG Regulatory Setting

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (US EPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO₂ per year are required to submit an annual report.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has developed regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule, which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence EO. It officially rescinded the Clean Power Plan rule issued during the Obama Administration and set emissions guidelines for states in developing plans to limit CO₂ emissions from coal-fired power plants. The Affordable Clean Energy rule was vacated by the United States Court of Appeals for the District of Columbia Circuit on January 19, 2021. The Biden Administration is assessing options on potential future regulations.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05 and EO B-30-15, EO B-55-18, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375.

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, “Safeguarding California”, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, set a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO₂e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279, signed by Governor Newsom in September 2022, codified the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. SB 1279 also requires CARB to update the Scoping Plan to address these new targets.

2022 Climate Change Scoping Plan

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State’s anthropogenic GHG emissions (CARB 2022). The Scoping Plan provides updates to the previously adopted 2017 Scoping Plan and addresses the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial,

energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. The 2022 Scoping Plan updates the target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB’s 2022 Scoping Plan identifies strategies as shown in Table 11, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State’s carbon neutrality goals.

Table 11 **Priority Strategies for Local Government Climate Action Plans**

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert “greenfield” land to urban uses (e.g., green belts, strategic conservation easements)
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).

Priority Area	Priority Strategies
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing).
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: CARB 2022.

Based on Appendix D of the 2022 CARB Climate Change Scoping Plan, for residential and mixed-use development projects, CARB recommends first demonstrating that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- **Transportation Electrification**
 - Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- **VMT Reduction**
 - Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
 - Does not result in the loss or conversion of the State’s natural and working lands;
 - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region’s Sustainable Communities Strategy (SCS);
 - Reduces parking requirements by:
 - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
 - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
 - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.

- At least 20 percent of the units are affordable to lower-income residents;
 - Result in no net loss of existing affordable units.
- **Building Decarbonization**
- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking (CARB 2022).

If the first approach to demonstrating consistency is not applicable (such as in the case of this school modernization project), the second approach to project-level alignment with state climate goals is to achieve net zero GHG emissions. The third approach to demonstrating project-level alignment with state climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022).

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). The SCAG is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 is defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 MMTCO₂e of reductions by 2020 and 15 MMTCO₂e of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets became effective in October 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of "percent per capita" reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan (RTP/SCS). 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, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

Transportation Sector Specific Regulations

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the discussion on the update to the Corporate Average Fuel Economy standards at the beginning of this Section 5.5.2 under “Federal.”) In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO₂e gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California’s transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and uses market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle” using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California’s state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The Executive Order's goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Energy Efficiency Regulations

California Building Energy Code: Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2024 (California Code of Regulations [CCR] Title 24, Part 6). Title 24 Part 6 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

In 2024, the CEC adopted the 2025 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission. The 2025 standards become effective and replace the existing 2022 standards on January 1, 2026. The 2025 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.¹⁴ The Building Energy and Efficiency Standards and CALGreen undergo a triennial update with a goal to achieve zero net energy for new buildings by 2030.

California Building Code: Green Building Standards (CALGreen)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.¹⁵ The mandatory provisions of CALGreen became effective January 1, 2011, and were most recently updated in 2024 (2025 CALGreen update). The 2025 CALGreen update becomes effective on January 1, 2026, and provides updates to the residential and non-residential voluntary measures.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC 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–

¹⁴ California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

¹⁵ The green building standards became mandatory in the 2010 edition of the code.

federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

California’s Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH₄. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state’s approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control

technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

CALIFORNIA'S GHG SOURCES AND RELATIVE CONTRIBUTION

In 2024, the statewide GHG emissions inventory was updated for 2000 to 2022 emissions using the GWPs in IPCC's AR4 and reported that California produced 371.1 MMTCO₂e GHG emissions in 2022 (2.4 percent lower than 2021 levels). The 2022 emissions data shows that California is continuing its established long-term trend of GHG emissions declines, despite the anomalous emissions trends from 2019 through 2021, due in large part to the impacts of the COVID-19 pandemic. In 2014, statewide GHG emissions dropped below the 2020 GHG Limit (AB 32 target for year 2020) and have remained below the Limit since that time. Additionally, the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross state product (GSP)) is declining (CARB 2024b).

California's transportation sector was the single-largest generator of GHG emissions, producing 37.7 percent of the state's total emissions. Industrial sector emissions made up 19.6 percent, and electric power generation made up 16.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include residential and commercial (10.6 percent), agriculture and forestry (8.0 percent), high GWP (5.7 percent), and recycling and waste (2.2 percent).

Emissions from transportation sector decreased compared to 2021, primarily due to a greater share of fuels used for on-road transportation being produced from non-fossil resources. Industrial sector decreases from 2021 to 2022, most notably in the oil and gas production sector. Electricity emissions also decreased compared to 2021 from the continued growth of in-state solar generation and increases to in-state hydropower and imported wind power. High-GWP gases continue to replace ozone-depleting substances (ODS) being phased out under the 1987 Montreal Protocol and emissions from this sector have been stable from 2020 to 2022 (CARB 2024b).

1.2.2 Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.¹⁶

SOUTH COAST AQMD WORKING GROUP

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). The South Coast AQMD Working Group (Meeting No. 15) identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010):

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. The South Coast AQMD Working Group identified a screening-level threshold of 3,000 MTCO₂e annually for all land use types or the following land-use-specific thresholds: 1,400 MTCO₂e for commercial projects, 3,500 MTCO₂e for residential projects, or 3,000 MTCO₂e for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 MTCO₂e per year per service population (MTCO₂e/year/SP) for project-level analyses and 6.6 MTCO₂e/year/SP for plan level projects

¹⁶ The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

(e.g., program-level projects such as general plans) for the year 2020.¹⁷ The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.

The bright-line screening-level criterion of 3,000 MTCO₂e/yr is used as the significance threshold for this project. Therefore, if the project operation-phase emissions exceed the 3,000 MTCO₂e/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

¹⁷ It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

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CalEEMod Inputs- Fullerton Union High School Field Improvements Project, Construction

Name: Fullerton Union High School Field Improvements Project
Project Number: FHS-08, 02
Project Location: 201 E Chapman Ave, Fullerton, CA 92832
County: Orange
Climate Zone: 7
Land Use Setting: Urban
Gas Utility Company: Southern California Gas
Electric Utility Company: Southern California Edison
Air Basin: South Coast Air Basin
Air District: South Coast AQMD
SRA: 16 - North Orange County

Project Site Acreage 23.16
Disturbed Site Acreage for Field Improvements 2.12

Demolition	Footprint SQFT	Acres	Stories	Tons of Debris
<i>Buildings</i>				
Locker Room Building	34,346	0.79	2	1,580
<i>Hardscape</i>				
Asphalt Pavement	24,230	0.56	NA	359
Tennis Courts	30,151	0.69	NA	447
Other Concrete Hardscape	3,730	0.09	NA	55
Total	92,457	2.12		2,441

Field Improvements	Gross SQFT	Footprint SQFT	Acres	Stories
<i>Buildings</i>				
Athletic Building	33,270	18,115	0.42	2
Field House Building	1,330	975	0.02	1
<i>Landscaping</i>				
Synthetic Turf	2,817	2,817	0.06	NA
Landscaping	9,740	9,740	0.22	NA
<i>Hardscape</i>				
Non-Parking Asphalt Pavement	6,881	6,881	0.16	NA
Concrete Hardscape	16,840	16,840	0.39	NA
New Parking	9,763	9,763	0.22	NA
Total	79,311	64,156	1.47	

Field Lighting	Size Metric	Acres
Number of Light Poles ¹	16	NA
Area disturbed per light pole (SF) ²	144	0.00
Total Disturbance	2,304	0.05

Notes:

¹ Accounts for eight lights at the varsity baseball field, three lights at the varsity softball field, two lights at the soccer field, and six lights at the track field.

² Based on applicant-provided information.

aIEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet	Landscaped SQFT	Special Landscaped SQFT ¹
Educational	High School	34.600	1000 SQFT	0.73	34,600	9,740	2,817
Parking ²	Other Non-Asphalt Surface	2.304	1000 SQFT	0.05	2,304		
Parking	Other Non-Asphalt Surface	16.840	1000 SQFT	0.39	16,840		
Parking	Other Asphalt Surfaces	6.881	1000 SQFT	0.16	6,881		
Parking	Parking Lot Asphalt	9.763	1000 SQFT	0.22	9,763		
				1.55			

Notes:

¹ Accounts for synthetic turf surfaces.

² Accounts for field lighting installation.

Demolition

Component	Amount to be Demolished	Haul Truck Capacity (Tons) ¹	Haul Distance (miles) ¹	Total Trip Ends	Duration (days)	Trip Ends Per Day
Demolition (Tons)	2,441	20	20	245	35	7

Soil Haul

Construction Activities	Volume (CY) ²	Haul Truck Capacity (CY) ¹	Haul Distance (miles) ¹	Total Trip Ends	Duration (days)	Trip Ends per Day
Soil Export (Site Preparation)	1,200	16	20	150	5	30

Notes:

¹ CalEEMod default used.

³ Based on quantities provided by applicant.

Architectural Coating

Percent Painted

Interior Painted:	100%
Exterior Painted:	100%

South Coast AQMD Rule 1113

Interior Paint VOC content:	50	grams per liter
Exterior Paint VOC content:	50	grams per liter
Parking Paint VOC content:	100	grams per liter

Field Improvements	Land Use Square Feet	CalEEMod Factor ²	Total Paintable Surface Area ³	Paintable Interior Area ¹	Paintable Exterior Area ¹
Non-Residential Structures					
Athletic Building	33,270	2.0	66,540	49,905	16,635
Field House Building	1,330	2.0	2,660	1,995	665
				51,900	17,300
Parking					
Other Non-Asphalt Surface	19,144	6%	1,149	-	1,149
Other Asphalt Surfaces	6,881	6%	413		413
Parking Lot Asphalt	9,763	6%	586		586
					2,147

Notes:

¹ CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

² CalEEMod assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by user.

³ Assumes that all parking and non-parking asphalt will be striped. CalEEMod methodology assumes 6% of surface area is striped.

Fugitive Dust Rule Compliance

SCAQMD Rule 403

Water Unpaved Roads	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction

Water Exposed Area	Frequency:	2	per day
	PM10:	61	% Reduction
	PM25:	61	% Reduction

Unpaved Roads	Vehicle Speed:	25	mph
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SCAQMD Rule 1186

Clean Paved Road	9	% PM Reduction
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Pavement Volume to Weight Conversion

Component	Total SF of Area ¹	Assumed Thickness (foot) ²	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf) ³	AC Mass (lbs)	AC Mass (tons)
Asphalt Pavement	24,230	0.333	8,077	89	717,926	358.96
Tennis Courts	30,151	0.333	10,050	89	893,363	446.68
Other Concrete Hardscape	3,730	0.333	1,243	89	110,519	55.26
Total	58,111					861

¹ Based on information provided by the District

² Gibbons, Jim. 1999. Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System. https://www.uni-groupusa.org/PDF/NEMO_tech_8.pdf

³ CalRecycle. 2019. Solid Waste Cleanup Program Weights and Volumes for Project Estimates. <https://www.delmar.ca.us/DocumentCenter/View/5668/CalRecycle-Conversion-Table>

Building Demolition Haul Trip Calculation

Source: CalEEMod User's Guide Version 2022, Appendix C

Conversion factors

0.046 ton/SF	Building Debris
2.0 CY/ton	Building Debris
1.2641662 tons/cy	Soil
20 tons	Truck Capacity in tons
16 CY	Truck Capacity in CY
0.8 CY/ton	Soil

Building	BSF Demo ¹	Tons/SF	Tons	CY of Building Materials	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
Building Demolition	34,346	0.046	1,580	3,160	16	20	198	396

Notes

¹ Based on information provided by the District.

Construction Activities and Schedule Assumptions

* based on schedule provided by District

6/1/2026-1/1/2028

CalEEMod Default Construction Schedule				
Construction Activities	Phase Type	Start Date	End Date	CalEEMod Duration (Workday)
Demolition	Demolition	6/1/2026	6/29/2026	21
Site Preparation	Site Preparation	6/30/2026	7/2/2026	3
Grading	Grading	7/3/2026	7/8/2026	4
Building Construction	Building Construction	7/9/2026	4/15/2027	201
Paving	Paving	4/16/2027	4/30/2027	11
Architectural Coating	Architectural Coating	5/1/2027	5/15/2027	10
Total Days				348

Normalization Calculations			
CalEEMod Defaults Construction Duration		Assumed Construction Duration	
348	days of construction	6/1/2026	1/1/2028
0.95	years of construction	579	days
11.44	months of construction	19.04	months
		Norm Factor:	1.66

Revised Construction Schedule				
Construction Activities	Phase Type	Start Date	End Date	CalEEMod Duration (Workday)
Demolition	Demolition	6/1/2026	7/17/2026	35
Site Preparation	Site Preparation	7/18/2026	7/24/2026	5
Grading	Grading	7/25/2026	8/4/2026	7
Field Improvements Construction	Building Construction	8/5/2026	11/15/2027	334
Paving	Paving	11/16/2027	12/9/2027	18
Architectural Coating	Architectural Coating	12/10/2027	1/3/2028	17
Total Days				416

CalEEMod Construction Off-Road Equipment Inputs

Source: CalEEMod defaults (except where noted).

Construction Equipment Details			
Default Equipment	# of Equipment	hr/day	total trips per day
Building and Asphalt Demolition			
Concrete/Industrial Saws	1	8	
Tractors/Loaders/Backhoes	3	8	
Rubber Tired Dozers	1	8	
Worker Trips			13
Vendor Trips			2
Hauling Trips			7
Water Trucks	Acres Disturbed:	2	10
	Onsite Travel (mi/day)	1.65	
Modified Vendor Trips			12
Site Preparation			
Graders	1	8	
Tractors/Loaders/Backhoes	1	8	
Rubber Tired Dozers	1	7	
Worker Trips			8
Vendor Trips			1
Hauling Trips			30
Water Trucks (added to Vendor Trips)	Acres Disturbed:	1.44	8
	Onsite Travel (mi/day)	1.19	
Modified Vendor Trips			9
Grading			
Graders	1	8	
Tractors/Loaders/Backhoes	1	8	
Rubber Tired Dozers	2	7	
Worker Trips			10
Vendor Trips			3
Hauling Trips			0
Water Trucks (added to Vendor Trips)	Acres Disturbed:	1.875	10
	Onsite Travel (mi/day)	1.55	
Modified Vendor Trips			13

Building Construction			
Cranes	1	6	
Forklifts	1	6	
Generator Sets	1	8	
Tractors/Loaders/Backhoes	1	6	
Welders	3	8	
Worker Trips			12
Vendor Trips			5
Hauling Trips			0
Paving			
Cement and Mortar Mixers	1	6	
Pavers	1	6	
Paving Equipment	1	8	
Rollers	1	7	
Tractors/Loaders/Backhoes	1	8	
Worker Trips			13
Vendor Trips			2
Hauling Trips			0
Architectural Coating			
Air Compressors	1	6	
Worker Trips			3
Vendor Trips			0
Hauling Trips			0

Water Truck Vendor Trip Calculation

Amount of Water (gal/acre/day)¹	Water Truck Capacity (gallons)²
10,000	4,000

Notes:

¹ Based on data provided in Guidance for Application for Dust Control Permit
Maricopa County Air Quality Department. 2005, June. Guidance for Application of Dust Control Permit.
https://www.epa.gov/sites/default/files/2019-04/documents/mr_guidanceforapplicationfordustcontrolpermit.pdf)

² Based on standard water truck capacity:
McLellan Industries. 2025, January (access). Water Trucks. <https://www.mclellanindustries.com/trucks/water-trucks/>

³ Assumes that dozers, tractors/loaders/backhoes, and graders can disturb 0.50 acres per day and scrapers can disturb 1 acre per day.

CalEEMod Inputs- Fullerton Union High School Field Improvements Project, Operation

Name:	Fullerton Union High School Field Improvements Project
Project Number:	FHS-08, 02
Project Location:	201 E Chapman Ave, Fullerton, CA 92832
County:	Orange
Climate Zone:	7
Land Use Setting:	Urban
Gas Utility Company:	Southern California Gas
Electric Utility Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	South Coast AQMD
SRA:	16 - North Orange County

Project Site Acreage	23.16
Acreage for Field Improvements	0.00

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet	Landscaped SQFT	Special Landscaped SQFT1
Educational	High School	34.600	1000 SQFT	0.73	34,600	9,740	2,817
Parking	Other Non-Asphalt Surf	2.304	1000 SQFT	0.05	2,304		
Parking	Other Non-Asphalt Surf	16.840	1000 SQFT	0.39	16,840		
Parking	Other Asphalt Surfaces	6.881	1000 SQFT	0.16	6,881		
Parking	Parking Lot	9.763	1000 SQFT	0.22	9,763		
				1.55			

Weekday Trips for AQ¹

Land Use Type	Average Daily Trips	CalEEMod Max Daily Trip Rate	Weekend Daily Trips ²	CalEEMod Max Daily Trip Rate
High School	105	3.0347	0	0.00

Source: DJ&A, 2025. Fullerton Union High School - Field Improvements and New Athletic Building Project Transportation Analysis.

Notes

¹ Project trips are based on the proposed project's increase in enrollment of 54 students.

² No trips would occur on weekends.

Water Use (CalEEMod default)¹

	Indoor (gals/year)	Outdoor (gals/year)	Total
High School	980,599	170,857	1,151,456

Notes

¹ Assumes 100% aerobic treatment.

Solid Waste (CalEEMod default)

Land Use	Total Solid Waste (tons/year)
High School	38.39

Electricity (Buildings)

Default CalEEMod Energy Use

Land Use Subtype	Total Annual Electricity Consumption (kWh/year)	Total Annual Natural Gas Consumption (kBtu/year)	Title-24 Electricity Energy Intensity (kWhr/size/year)*	Title-24 Natural Gas Energy Intensity (kBtu/size/year)*	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Nontitle-24 Natural Gas Energy Intensity (kBtu/size/year)
High School	184,703.34	619,578.14	159,674.25	315,151.45	25,029.09	304,426.68
Parking Lot	8,552.39		8,552.39			

Converting Natural Gas Consumption to Electricity Consumption for All-Electric Buildings

Land Use Subtype	Title-24 Natural Gas Energy Intensity (kBtu/size/year)	Converted Title-24 Energy Intensity (kWh/size/year)*	Gas Energy Intensity (kBtu/size/year)	Converted Nontitle-24 Energy Intensity (kWh/size/year)*
High School	315,151.45	92.37	304,426.68	89.22

*Assumes 3,412 BTU per kWh.

Source: EIA. 2024 (last updated). Units and calculators explained British thermal units (Btu). <https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php>.

Adjusted CalEEMod Energy Use

Land Use Subtype	Total Annual Electricity Consumption (kWh/year)	Total Annual Natural Gas Consumption (kBtu/year)	Title-24 Electricity Energy Intensity (kWhr/size/year)*	Title-24 Natural Gas Energy Intensity (kBtu/size/year)*	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Nontitle-24 Natural Gas Energy Intensity
High School	184,884.93	0.00	159,766.62	0.00	25,118.31	0.00
Parking Lot	8,552.39		8,552.39			
	193,437.32		168,319.01		25,118.31	

Lighting (Electricity Use)

	Total kW ¹	Events/Year ²	Hours ³	Kwh (Annual)
Practices/Games	91.31	218	5.50	109,481
Total Annual kWh				109,481

Calculation of GHGs from Field Lighting

CO ₂ ⁴	CH ₄ ⁴	N ₂ O ⁴	CO ₂ e	CO ₂ e
lbs/Mwh	lbs/Mwh	lbs/Mwh	lbs/Mwh	MT/Kwh
346.20	0.033	0.004	348.21	0.0002

CO ₂ e from Lighting (MT/Year)	17.29
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Notes

- ¹ Based on the total light load for the proposed lighting as provided by the District in the Musco Lighting Plan.
² Based on the number of events that would change to a different time under proposed conditions.
³ Assumes lighting will be used from 4:30 PM to 8:00 PM

Architectural Coating (see Construction Inputs page)

Southern California Edison Carbon Intensity Factors¹

Forecasted Year	2026	
CO ₂ :	346.20	pounds per megawatt hour
CH ₄ :	0.033	pound per megawatt hour
N ₂ O:	0.004	pound per megawatt hour

Notes:

- ¹ CalEEMod default values.

Changes to the CalEEMod Defaults - Fleet Mix 2028

Trips #####

Default	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	
FleetMix (Model Default)	0.58709%	49.23863%	3.93264%	23.79876%	2.80752%	0.74360%	2.23541%	14.55227%	0.35112%	1.56129%	0.05978%	0.09651%	0.03540%	100%
Trips	1	52	4	25	3	1	2	15	0	2	0	0	0	105
Percent		79.2%			6.2%			14.6%						100%
without buses/MH	0.58709%	49.23863%	3.93264%	23.79876%	2.80752%	0.74360%	2.23541%	14.55227%	0.35112%	1.56129%	0.00000%	0.09651%	0.00000%	100%
Percent		79.20543%			6.14712%			14.55227%						100%
Adjusted without buses/MH	0.59618%	49.23863%	3.93264%	23.79876%	2.85099%	0.75512%	2.27002%	14.55227%	0.35655%	1.58547%	0.00000%	0.09800%	0.00000%	100%
Percent adjusted		79.24004%			6.24230%			14.55227%						100%
Assumed Mix		97.0%			1.0%			2.0%						100%
adjusted with Assumed		60.27441%	4.81405%	29.13274%	0.45672%	0.12097%	2.77880%	2.00000%	0.05712%	0.25399%	0.00000%	0.01570%	0.00000%	100%
Percent Check:	0.09551%	97.0%			1.0%			2.0%						
Trips	0	63	5	31	0	0	3	2	0	0	0	0	0	105
		102			6			2						

to reflect a higher proportion of
passenger vehicles that the regional

Activity/Use ¹	Number of New Events	Start Time	End Time	Lighting in use (hrs) ²	Total Light Use per Year
FC Premier Soccer Practice	1	15:30	20:00	5.5	6
Flag Football Practice	24	15:30	20:00	5.5	132
Fullerton Football Practice	7	15:30	20:00	5.5	39
Girls Soccer practice	9	15:30	20:00	5.5	50
Fullerton Football Practice	1	15:30	20:00	5.5	6
Quick Track & Field Club Practice	5	15:30	20:00	5.5	28
Graduation Practice	1	15:30	20:00	5.5	6
Marching Band Practice/Rehersal	26	15:30	20:00	5.5	143
Troy Football OC Elite Practice	2	15:30	20:00	5.5	11
Soccer Practice	2	15:30	20:00	5.5	11
Softball Practice	94	15:30	20:00	5.5	517
Track & Field PracticeTrack Practice	42	15:30	20:00	5.5	231
Winter Sports Practice	4	15:30	20:00	5.5	22
Total	218			Hrs/Event	1,199
				5.5	

Based on Appendix B of the Fullerton Union High School Athletic Fields Design Due Diligence and CEQA Scoping Study. This

¹ accounts for events that would change their time of use of the sports facilities under proposed conditions.

² Assume lighting in use past 4:30pm and all new proposed events would occur with use of lights.

Fullerton Union High School Field Improvements Project Custom Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
 - 3.1. Demolition (2026) - Unmitigated
 - 3.3. Site Preparation (2026) - Unmitigated
 - 3.5. Grading (2026) - Unmitigated
 - 3.7. Building Construction (2026) - Unmitigated
 - 3.9. Building Construction (2027) - Unmitigated

3.11. Paving (2027) - Unmitigated

3.13. Architectural Coating (2027) - Unmitigated

3.15. Architectural Coating (2028) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.1. Construction Phases

8.4.6. Trips and VMT

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

8.5.1.2. Fleet Mix

8.5.3. Energy Usage

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Fullerton Union High School Field Improvements Project
Construction Start Date	6/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80000
Precipitation (days)	18.8000
Location	201 E Chapman Ave, Fullerton, CA 92832, USA
County	Orange
City	Fullerton
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5763
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.37

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
High School	34.6000	1000sqft	0.73000	34,600.0	9,740.00	2,817.00	—	—

Other Non-Asphalt Surfaces	2.30400	1000sqft	0.05289	0.00000	0.00000	—	—	—
Other Non-Asphalt Surfaces	16.8400	1000sqft	0.38659	0.00000	0.00000	—	—	—
Other Asphalt Surfaces	6.88100	1000sqft	0.15797	0.00000	0.00000	—	—	—
Parking Lot	9.76300	1000sqft	0.22413	0.00000	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.78105	1.46790	13.9549	15.7327	0.03502	0.58193	3.60565	4.16133	0.53562	1.45452	1.99013	—	4,506.26	4,506.26	0.25615	0.38645	5.23845	4,633.06
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.6051	19.5798	8.80796	10.7092	0.02070	0.29400	0.23847	0.53246	0.27058	0.05793	0.32851	—	2,159.00	2,159.00	0.08449	0.04660	0.02896	2,175.03
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.64308	1.50420	5.55110	7.04440	0.01348	0.17309	0.36919	0.52301	0.15931	0.09278	0.23443	—	1,412.14	1,412.14	0.05495	0.03547	0.28868	1,422.60
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.29986	0.27452	1.01308	1.28560	0.00246	0.03159	0.06738	0.09545	0.02907	0.01693	0.04278	—	233.796	233.796	0.00910	0.00587	0.04779	235.527

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.78105	1.46790	13.9549	15.7327	0.03502	0.58193	3.60565	4.16133	0.53562	1.45452	1.99013	—	4,506.26	4,506.26	0.25615	0.38645	5.23845	4,633.06
2027	1.22925	1.01619	8.47103	10.7122	0.02070	0.26259	0.23847	0.50106	0.24169	0.05793	0.29962	—	2,161.53	2,161.53	0.08385	0.04533	1.00750	2,178.15
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.28339	1.06729	8.80796	10.7092	0.02070	0.29400	0.23847	0.53246	0.27058	0.05793	0.32851	—	2,159.00	2,159.00	0.08449	0.04660	0.02896	2,175.03
2027	19.6051	19.5798	8.47934	10.6136	0.02070	0.26259	0.23847	0.50106	0.24169	0.05793	0.29962	—	2,152.64	2,152.64	0.08405	0.04533	0.02615	2,168.28
2028	19.5974	19.5735	0.81692	1.23479	0.00173	0.01536	0.03799	0.05335	0.01413	0.00890	0.02303	—	168.300	168.300	0.00586	0.00246	0.00273	169.182
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.60233	0.49595	4.35879	5.09733	0.00988	0.15382	0.36919	0.52301	0.14165	0.09278	0.23443	—	1,086.36	1,086.36	0.04582	0.03547	0.28868	1,098.36
2027	1.64308	1.50420	5.55110	7.04440	0.01348	0.17309	0.15754	0.33063	0.15931	0.03820	0.19751	—	1,412.14	1,412.14	0.05495	0.02951	0.28777	1,422.60
2028	0.11505	0.11491	0.00480	0.00728	0.00001	0.00009	0.00022	0.00031	0.00008	0.00005	0.00013	—	0.99085	0.99085	0.00003	0.00001	0.00027	0.99629
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.10993	0.09051	0.79548	0.93026	0.00180	0.02807	0.06738	0.09545	0.02585	0.01693	0.04278	—	179.859	179.859	0.00759	0.00587	0.04779	181.846
2027	0.29986	0.27452	1.01308	1.28560	0.00246	0.03159	0.02875	0.06034	0.02907	0.00697	0.03605	—	233.796	233.796	0.00910	0.00489	0.04764	235.527
2028	0.02100	0.02097	0.00088	0.00133	< 0.000005	0.00002	0.00004	0.00006	0.00002	0.00001	0.00002	—	0.16405	0.16405	0.00001	< 0.000005	0.00004	0.16495

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45508	1.41241	0.14361	3.78171	0.00490	0.00518	0.53255	0.53773	0.00433	0.13466	0.13899	26.4430	787.868	814.311	2.69209	0.02352	1.46461	890.085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18677	1.16421	0.14482	2.16917	0.00459	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	26.4430	759.419	785.862	2.69332	0.02455	0.16816	860.679
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.26701	1.23681	0.11277	2.60828	0.00338	0.00362	0.37576	0.37938	0.00304	0.09502	0.09806	26.4430	635.164	661.607	2.68576	0.01976	0.54415	735.182
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23123	0.22572	0.02058	0.47601	0.00062	0.00066	0.06858	0.06924	0.00055	0.01734	0.01790	4.37794	105.159	109.537	0.44466	0.00327	0.09009	121.718

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.35337	0.33135	0.13094	2.27689	0.00481	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	487.027	487.027	0.02496	0.01588	1.33095	493.715
Area	1.10172	1.08107	0.01266	1.50482	0.00009	0.00267	—	0.00267	0.00202	—	0.00202	—	6.18809	6.18809	0.00026	0.00005	—	6.21041
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	281.933	281.933	0.01749	0.00212	—	283.001
Water	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Waste	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Total	1.45508	1.41241	0.14361	3.78171	0.00490	0.00518	0.53255	0.53773	0.00433	0.13466	0.13899	26.4430	787.868	814.311	2.69209	0.02352	1.46461	890.085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.35289	0.33033	0.14482	2.16917	0.00459	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	464.766	464.766	0.02646	0.01697	0.03450	470.519
Area	0.83388	0.83388	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	281.933	281.933	0.01749	0.00212	—	283.001
Water	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Waste	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Total	1.18677	1.16421	0.14482	2.16917	0.00459	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	26.4430	759.419	785.862	2.69332	0.02455	0.16816	860.679
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.24968	0.23362	0.10410	1.57758	0.00332	0.00179	0.37576	0.37755	0.00165	0.09502	0.09668	—	336.273	336.273	0.01872	0.01214	0.41049	340.769
Area	1.01733	1.00319	0.00867	1.03070	0.00006	0.00183	—	0.00183	0.00138	—	0.00138	—	4.23842	4.23842	0.00018	0.00004	—	4.25370
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	281.933	281.933	0.01749	0.00212	—	283.001
Water	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Waste	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Total	1.26701	1.23681	0.11277	2.60828	0.00338	0.00362	0.37576	0.37938	0.00304	0.09502	0.09806	26.4430	635.164	661.607	2.68576	0.01976	0.54415	735.182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04557	0.04264	0.01900	0.28791	0.00061	0.00033	0.06858	0.06890	0.00030	0.01734	0.01764	—	55.6738	55.6738	0.00310	0.00201	0.06796	56.4181
Area	0.18566	0.18308	0.00158	0.18810	0.00001	0.00033	—	0.00033	0.00025	—	0.00025	—	0.70172	0.70172	0.00003	0.00001	—	0.70425
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	46.6771	46.6771	0.00290	0.00035	—	46.8541
Water	—	—	—	—	—	—	—	—	—	—	—	0.36449	2.10598	2.47047	0.03750	0.00090	—	3.67742
Waste	—	—	—	—	—	—	—	—	—	—	—	4.01345	0.00000	4.01345	0.40113	0.00000	—	14.0417
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02213	0.02213
Total	0.23123	0.22572	0.02058	0.47601	0.00062	0.00066	0.06858	0.06924	0.00055	0.01734	0.01790	4.37794	105.159	109.537	0.44466	0.00327	0.09009	121.718

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.65937	1.39140	12.9413	14.6164	0.02393	0.50831	—	0.50831	0.46764	—	0.46764	—	2,493.95	2,493.95	0.10117	0.02023	—	2,502.51
Demoliti on	—	—	—	—	—	—	0.94383	0.94383	—	0.14292	0.14292	—	—	—	—	—	—	—
Onsite truck	0.00187	0.00063	0.01917	0.01233	0.00006	0.00007	0.61236	0.61244	0.00007	0.06121	0.06128	—	7.11555	7.11555	0.00116	0.00114	0.01144	7.49493
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.15912	0.13342	1.24095	1.40157	0.00229	0.04874	—	0.04874	0.04484	—	0.04484	—	239.146	239.146	0.00970	0.00194	—	239.966
Demoliti on	—	—	—	—	—	—	0.09050	0.09050	—	0.01370	0.01370	—	—	—	—	—	—	—
Onsite truck	0.00018	0.00006	0.00189	0.00120	0.00001	0.00001	0.05570	0.05570	0.00001	0.00557	0.00557	—	0.68329	0.68329	0.00011	0.00011	0.00047	0.71905
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.02904	0.02435	0.22647	0.25579	0.00042	0.00890	—	0.00890	0.00818	—	0.00818	—	39.5933	39.5933	0.00161	0.00032	—	39.7292
Demoliti on	—	—	—	—	—	—	0.01652	0.01652	—	0.00250	0.00250	—	—	—	—	—	—	—
Onsite truck	0.00003	0.00001	0.00035	0.00022	< 0.000005	< 0.000005	0.01016	0.01017	< 0.000005	0.00102	0.00102	—	0.11313	0.11313	0.00002	0.00002	0.00008	0.11905

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04327	0.04216	0.03803	0.65877	0.00000	0.00000	0.16339	0.16339	0.00000	0.03830	0.03830	—	162.770	162.770	0.00193	0.00592	0.56574	165.149
Vendor	0.02947	0.00799	0.38318	0.19180	0.00270	0.00270	0.10267	0.10537	0.00270	0.02837	0.03106	—	376.372	376.372	0.01878	0.05312	0.97242	393.644
Hauling	0.04707	0.00725	0.57316	0.25340	0.00324	0.00617	0.12669	0.13287	0.00617	0.03553	0.04170	—	479.690	479.690	0.03642	0.07593	0.97100	504.198
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00412	0.00402	0.00419	0.05664	0.00000	0.00000	0.01548	0.01548	0.00000	0.00363	0.00363	—	15.0575	15.0575	0.00021	0.00057	0.02342	15.2556
Vendor	0.00280	0.00074	0.03850	0.01859	0.00026	0.00026	0.00975	0.01000	0.00026	0.00270	0.00295	—	36.0980	36.0980	0.00180	0.00509	0.04033	37.7013
Hauling	0.00448	0.00067	0.05751	0.02439	0.00031	0.00059	0.01203	0.01263	0.00059	0.00338	0.00397	—	46.0046	46.0046	0.00349	0.00728	0.04016	48.3017
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00075	0.00073	0.00076	0.01034	0.00000	0.00000	0.00282	0.00282	0.00000	0.00066	0.00066	—	2.49295	2.49295	0.00004	0.00009	0.00388	2.52573
Vendor	0.00051	0.00014	0.00703	0.00339	0.00005	0.00005	0.00178	0.00183	0.00005	0.00049	0.00054	—	5.97643	5.97643	0.00030	0.00084	0.00668	6.24189
Hauling	0.00082	0.00012	0.01049	0.00445	0.00006	0.00011	0.00220	0.00230	0.00011	0.00062	0.00072	—	7.61658	7.61658	0.00058	0.00121	0.00665	7.99689

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.46980	1.23504	11.0389	11.7202	0.01906	0.50687	—	0.50687	0.46633	—	0.46633	—	2,064.92	2,064.92	0.08376	0.01675	—	2,072.01

Dust From Material Movement	—	—	—	—	—	—	2.44600	2.44600	—	1.17197	1.17197	—	—	—	—	—	—	—
Onsite truck	0.00175	0.00062	0.01760	0.01173	0.00005	0.00005	0.44164	0.44170	0.00005	0.04415	0.04420	—	5.57608	5.57608	0.00106	0.00089	0.00825	5.87720
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02013	0.01692	0.15122	0.16055	0.00026	0.00694	—	0.00694	0.00639	—	0.00639	—	28.2866	28.2866	0.00115	0.00023	—	28.3837
Dust From Material Movement	—	—	—	—	—	—	0.03351	0.03351	—	0.01605	0.01605	—	—	—	—	—	—	—
Onsite truck	0.00002	0.00001	0.00025	0.00016	< 0.000005	< 0.000005	0.00574	0.00574	< 0.000005	0.00057	0.00057	—	0.07652	0.07652	0.00001	0.00001	0.00005	0.08059
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00367	0.00309	0.02760	0.02930	0.00005	0.00127	—	0.00127	0.00117	—	0.00117	—	4.68317	4.68317	0.00019	0.00004	—	4.69924
Dust From Material Movement	—	—	—	—	—	—	0.00612	0.00612	—	0.00293	0.00293	—	—	—	—	—	—	—
Onsite truck	< 0.000005	< 0.000005	0.00005	0.00003	< 0.000005	< 0.000005	0.00105	0.00105	< 0.000005	0.00010	0.00010	—	0.01267	0.01267	< 0.000005	< 0.000005	0.00001	0.01334
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02596	0.02530	0.02282	0.39526	0.00000	0.00000	0.09803	0.09803	0.00000	0.02298	0.02298	—	97.6619	97.6619	0.00116	0.00355	0.33944	99.0897

Vendor	0.02210	0.00599	0.28739	0.14385	0.00202	0.00202	0.07700	0.07903	0.00202	0.02127	0.02330	—	282.279	282.279	0.01409	0.03984	0.72931	295.233
Hauling	0.20172	0.03109	2.45639	1.08600	0.01389	0.02646	0.54297	0.56943	0.02646	0.15228	0.17873	—	2,055.82	2,055.82	0.15609	0.32540	4.16145	2,160.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00035	0.00034	0.00036	0.00486	0.00000	0.00000	0.00133	0.00133	0.00000	0.00031	0.00031	—	1.29065	1.29065	0.00002	0.00005	0.00201	1.30762
Vendor	0.00030	0.00008	0.00412	0.00199	0.00003	0.00003	0.00104	0.00107	0.00003	0.00029	0.00032	—	3.86764	3.86764	0.00019	0.00055	0.00432	4.03943
Hauling	0.00275	0.00041	0.03521	0.01493	0.00019	0.00036	0.00737	0.00773	0.00036	0.00207	0.00243	—	28.1661	28.1661	0.00214	0.00446	0.02459	29.5725
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00006	0.00006	0.00007	0.00089	0.00000	0.00000	0.00024	0.00024	0.00000	0.00006	0.00006	—	0.21368	0.21368	< 0.000005	0.00001	0.00033	0.21649
Vendor	0.00005	0.00001	0.00075	0.00036	0.00001	0.00001	0.00019	0.00020	0.00001	0.00005	0.00006	—	0.64033	0.64033	0.00003	0.00009	0.00072	0.66877
Hauling	0.00050	0.00007	0.00643	0.00272	0.00003	0.00007	0.00134	0.00141	0.00007	0.00038	0.00044	—	4.66321	4.66321	0.00035	0.00074	0.00407	4.89606

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.69573	1.42488	12.8567	14.0337	0.02266	0.57894	—	0.57894	0.53263	—	0.53263	—	2,455.05	2,455.05	0.09959	0.01992	—	2,463.47
Dust From Material Movement	—	—	—	—	—	—	2.76221	2.76221	—	1.33565	1.33565	—	—	—	—	—	—	—
Onsite truck	0.00184	0.00063	0.01883	0.01220	0.00006	0.00007	0.57525	0.57532	0.00007	0.05750	0.05757	—	6.78088	6.78088	0.00114	0.00108	0.01075	7.14325

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.03252	0.02733	0.24657	0.26914	0.00043	0.01110	—	0.01110	0.01021	—	0.01021	—	47.0831	47.0831	0.00191	0.00038	—	47.2447
Dust From Material Movement	—	—	—	—	—	—	0.05297	0.05297	—	0.02562	0.02562	—	—	—	—	—	—	—
Onsite truck	0.00003	0.00001	0.00037	0.00024	< 0.000005	< 0.000005	0.01046	0.01047	< 0.000005	0.00105	0.00105	—	0.13024	0.13024	0.00002	0.00002	0.00009	0.13707
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00594	0.00499	0.04500	0.04912	0.00008	0.00203	—	0.00203	0.00186	—	0.00186	—	7.79515	7.79515	0.00032	0.00006	—	7.82190
Dust From Material Movement	—	—	—	—	—	—	0.00967	0.00967	—	0.00467	0.00467	—	—	—	—	—	—	—
Onsite truck	0.00001	< 0.000005	0.00007	0.00004	< 0.000005	< 0.000005	0.00191	0.00191	< 0.000005	0.00019	0.00019	—	0.02156	0.02156	< 0.000005	< 0.000005	0.00001	0.02269
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03461	0.03373	0.03042	0.52702	0.00000	0.00000	0.13071	0.13071	0.00000	0.03064	0.03064	—	130.216	130.216	0.00154	0.00474	0.45259	132.120
Vendor	0.03193	0.00866	0.41511	0.20779	0.00292	0.00292	0.11123	0.11415	0.00292	0.03073	0.03365	—	407.736	407.736	0.02035	0.05755	1.05345	426.448
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00066	0.00064	0.00067	0.00906	0.00000	0.00000	0.00248	0.00248	0.00000	0.00058	0.00058	—	2.40921	2.40921	0.00003	0.00009	0.00375	2.44089
Vendor	0.00061	0.00016	0.00834	0.00403	0.00006	0.00006	0.00211	0.00217	0.00006	0.00058	0.00064	—	7.82123	7.82123	0.00039	0.00110	0.00874	8.16863
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00012	0.00012	0.00165	0.00000	0.00000	0.00045	0.00045	0.00000	0.00011	0.00011	—	0.39887	0.39887	0.00001	0.00002	0.00062	0.40412
Vendor	0.00011	0.00003	0.00152	0.00074	0.00001	0.00001	0.00039	0.00040	0.00001	0.00011	0.00012	—	1.29489	1.29489	0.00006	0.00018	0.00145	1.35241
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.21973	1.01475	8.56875	9.95599	0.01942	0.29272	—	0.29272	0.26930	—	0.26930	—	1,800.96	1,800.96	0.07305	0.01461	—	1,807.14
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.21973	1.01475	8.56875	9.95599	0.01942	0.29272	—	0.29272	0.26930	—	0.26930	—	1,800.96	1,800.96	0.07305	0.01461	—	1,807.14
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Fullerton Union High School Field Improvements Project Custom Report, 2/3/2026

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35566	0.29589	2.49852	2.90302	0.00566	0.08535	—	0.08535	0.07852	—	0.07852	—	525.133	525.133	0.02130	0.00426	—	526.935
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06491	0.05400	0.45598	0.52980	0.00103	0.01558	—	0.01558	0.01433	—	0.01433	—	86.9418	86.9418	0.00353	0.00071	—	87.2401
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05030	0.04902	0.04421	0.76586	0.00000	0.00000	0.18995	0.18995	0.00000	0.04452	0.04452	—	189.230	189.230	0.00224	0.00689	0.65770	191.996
Vendor	0.01393	0.00378	0.18108	0.09064	0.00128	0.00128	0.04852	0.04980	0.00128	0.01341	0.01468	—	177.865	177.865	0.00888	0.02510	0.45954	186.028
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04998	0.04902	0.05078	0.66061	0.00000	0.00000	0.18995	0.18995	0.00000	0.04452	0.04452	—	180.090	180.090	0.00256	0.00689	0.01704	182.224
Vendor	0.01368	0.00353	0.18843	0.09264	0.00128	0.00128	0.04852	0.04980	0.00128	0.01341	0.01468	—	177.953	177.953	0.00888	0.02510	0.01193	185.668
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01457	0.01420	0.01481	0.20024	0.00000	0.00000	0.05472	0.05472	0.00000	0.01282	0.01282	—	53.2304	53.2304	0.00075	0.00201	0.08279	53.9304
Vendor	0.00402	0.00106	0.05532	0.02672	0.00037	0.00037	0.01400	0.01438	0.00037	0.00387	0.00424	—	51.8737	51.8737	0.00259	0.00732	0.05796	54.1777
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00266	0.00259	0.00270	0.03654	0.00000	0.00000	0.00999	0.00999	0.00000	0.00234	0.00234	—	8.81290	8.81290	0.00012	0.00033	0.01371	8.92879
Vendor	0.00073	0.00019	0.01010	0.00488	0.00007	0.00007	0.00256	0.00262	0.00007	0.00071	0.00077	—	8.58828	8.58828	0.00043	0.00121	0.00960	8.96974
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16707	0.97105	8.25338	9.90715	0.01942	0.26132	—	0.26132	0.24041	—	0.24041	—	1,800.91	1,800.91	0.07305	0.01461	—	1,807.09
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16707	0.97105	8.25338	9.90715	0.01942	0.26132	—	0.26132	0.24041	—	0.24041	—	1,800.91	1,800.91	0.07305	0.01461	—	1,807.09
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72856	0.60619	5.15230	6.18470	0.01212	0.16313	—	0.16313	0.15008	—	0.15008	—	1,124.25	1,124.25	0.04560	0.00912	—	1,128.11
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.13296	0.11063	0.94030	1.12871	0.00221	0.02977	—	0.02977	0.02739	—	0.02739	—	186.132	186.132	0.00755	0.00151	—	186.771
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04838	0.04149	0.04357	0.71860	0.00000	0.00000	0.18995	0.18995	0.00000	0.04452	0.04452	—	186.044	186.044	0.00192	0.00689	0.58990	188.735
Vendor	0.01380	0.00365	0.17408	0.08644	0.00128	0.00128	0.04852	0.04980	0.00128	0.01341	0.01468	—	174.578	174.578	0.00888	0.02383	0.41760	182.319
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04838	0.04117	0.04453	0.61800	0.00000	0.00000	0.18995	0.18995	0.00000	0.04452	0.04452	—	177.062	177.062	0.00224	0.00689	0.01534	179.186
Vendor	0.01368	0.00353	0.18143	0.08844	0.00128	0.00128	0.04852	0.04980	0.00128	0.01341	0.01468	—	174.670	174.670	0.00875	0.02383	0.01081	182.001
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03000	0.02570	0.03130	0.40230	0.00000	0.00000	0.11715	0.11715	0.00000	0.02744	0.02744	—	112.043	112.043	0.00140	0.00430	0.15926	113.519
Vendor	0.00862	0.00228	0.11400	0.05451	0.00080	0.00080	0.02998	0.03078	0.00080	0.00829	0.00909	—	109.008	109.008	0.00546	0.01488	0.11236	113.689
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00547	0.00469	0.00571	0.07342	0.00000	0.00000	0.02138	0.02138	0.00000	0.00501	0.00501	—	18.5501	18.5501	0.00023	0.00071	0.02637	18.7944
Vendor	0.00157	0.00042	0.02080	0.00995	0.00015	0.00015	0.00547	0.00562	0.00015	0.00151	0.00166	—	18.0474	18.0474	0.00090	0.00246	0.01860	18.8226
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54404	0.45646	4.29849	6.48965	0.00940	0.16865	—	0.16865	0.15516	—	0.15516	—	991.534	991.534	0.04022	0.00804	—	994.937
Paving	0.05562	0.05562	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02683	0.02251	0.21198	0.32004	0.00046	0.00832	—	0.00832	0.00765	—	0.00765	—	48.8976	48.8976	0.00198	0.00040	—	49.0654
Paving	0.00274	0.00274	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00490	0.00411	0.03869	0.05841	0.00008	0.00152	—	0.00152	0.00140	—	0.00140	—	8.09555	8.09555	0.00033	0.00007	—	8.12333
Paving	0.00050	0.00050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04161	0.03541	0.03831	0.53159	0.00000	0.00000	0.16339	0.16339	0.00000	0.03830	0.03830	—	152.304	152.304	0.00193	0.00592	0.01320	154.131
Vendor	0.00482	0.00124	0.06399	0.03119	0.00045	0.00045	0.01711	0.01756	0.00045	0.00473	0.00518	—	61.6018	61.6018	0.00309	0.00840	0.00381	64.1871
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00204	0.00175	0.00213	0.02734	0.00000	0.00000	0.00796	0.00796	0.00000	0.00186	0.00186	—	7.61344	7.61344	0.00010	0.00029	0.01082	7.71371
Vendor	0.00024	0.00006	0.00318	0.00152	0.00002	0.00002	0.00084	0.00086	0.00002	0.00023	0.00025	—	3.03697	3.03697	0.00015	0.00041	0.00313	3.16741
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00037	0.00032	0.00039	0.00499	0.00000	0.00000	0.00145	0.00145	0.00000	0.00034	0.00034	—	1.26049	1.26049	0.00002	0.00005	0.00179	1.27709
Vendor	0.00004	0.00001	0.00058	0.00028	< 0.000005	< 0.000005	0.00015	0.00016	< 0.000005	0.00004	0.00005	—	0.50281	0.50281	0.00003	0.00007	0.00052	0.52440
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.13715	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	19.4582	19.4582	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00590	0.00488	0.03578	0.04845	0.00007	0.00082	—	0.00082	0.00075	—	0.00075	—	5.74810	5.74810	0.00023	0.00005	—	5.76783
Architectural Coatings	0.83773	0.83773	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00108	0.00089	0.00653	0.00884	0.00001	0.00015	—	0.00015	0.00014	—	0.00014	—	0.95166	0.95166	0.00004	0.00001	—	0.95493
Architectural Coatings	0.15289	0.15289	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00968	0.00823	0.00891	0.12360	0.00000	0.00000	0.03799	0.03799	0.00000	0.00890	0.00890	—	35.4124	35.4124	0.00045	0.00138	0.00307	35.8373
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00041	0.00035	0.00043	0.00555	0.00000	0.00000	0.00162	0.00162	0.00000	0.00038	0.00038	—	1.54543	1.54543	0.00002	0.00006	0.00220	1.56578
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00008	0.00006	0.00008	0.00101	0.00000	0.00000	0.00029	0.00029	0.00000	0.00007	0.00007	—	0.25586	0.25586	< 0.000005	0.00001	0.00036	0.25923
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.15. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12985	0.10731	0.80814	1.11833	0.00173	0.01536	—	0.01536	0.01413	—	0.01413	—	133.517	133.517	0.00542	0.00108	—	133.975

Architect ural	19.4582	19.4582	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00076	0.00063	0.00474	0.00657	0.00001	0.00009	—	0.00009	0.00008	—	0.00008	—	0.78386	0.78386	0.00003	0.00001	—	0.78655
Architect ural Coating s	0.11424	0.11424	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00014	0.00011	0.00087	0.00120	< 0.000005	0.00002	—	0.00002	0.00002	—	0.00002	—	0.12978	0.12978	0.00001	< 0.000005	—	0.13022
Architect ural Coating s	0.02085	0.02085	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00935	0.00798	0.00878	0.11646	0.00000	0.00000	0.03799	0.03799	0.00000	0.00890	0.00890	—	34.7827	34.7827	0.00045	0.00138	0.00273	35.2072
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00006	0.00005	0.00005	0.00071	0.00000	0.00000	0.00022	0.00022	0.00000	0.00005	0.00005	—	0.20699	0.20699	< 0.000005	0.00001	0.00027	0.20974
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	0.00001	0.00001	0.00013	0.00000	0.00000	0.00004	0.00004	0.00000	0.00001	0.00001	—	0.03427	0.03427	< 0.000005	< 0.000005	0.00004	0.03472
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.35337	0.33135	0.13094	2.27689	0.00481	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	487.027	487.027	0.02496	0.01588	1.33095	493.715
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.35337	0.33135	0.13094	2.27689	0.00481	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	487.027	487.027	0.02496	0.01588	1.33095	493.715
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.35289	0.33033	0.14482	2.16917	0.00459	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	464.766	464.766	0.02646	0.01697	0.03450	470.519
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.35289	0.33033	0.14482	2.16917	0.00459	0.00251	0.53255	0.53506	0.00231	0.13466	0.13697	—	464.766	464.766	0.02646	0.01697	0.03450	470.519
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.04557	0.04264	0.01900	0.28791	0.00061	0.00033	0.06858	0.06890	0.00030	0.01734	0.01764	—	55.6738	55.6738	0.00310	0.00201	0.06796	56.4181
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.04557	0.04264	0.01900	0.28791	0.00061	0.00033	0.06858	0.06890	0.00030	0.01734	0.01764	—	55.6738	55.6738	0.00310	0.00201	0.06796	56.4181

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	269.468	269.468	0.01672	0.00203	—	270.489
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.4650	12.4650	0.00077	0.00009	—	12.5123
Total	—	—	—	—	—	—	—	—	—	—	—	—	281.933	281.933	0.01749	0.00212	—	283.001
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	269.468	269.468	0.01672	0.00203	—	270.489
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.4650	12.4650	0.00077	0.00009	—	12.5123
Total	—	—	—	—	—	—	—	—	—	—	—	—	281.933	281.933	0.01749	0.00212	—	283.001
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	44.6134	44.6134	0.00277	0.00034	—	44.7826
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.06372	2.06372	0.00013	0.00002	—	2.07155
Total	—	—	—	—	—	—	—	—	—	—	—	—	46.6771	46.6771	0.00290	0.00035	—	46.8541

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.74325	0.74325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.09063	0.09063	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	0.26784	0.24718	0.01266	1.50482	0.00009	0.00267	—	0.00267	0.00202	—	0.00202	—	6.18809	6.18809	0.00026	0.00005	—	6.21041
Total	1.10172	1.08107	0.01266	1.50482	0.00009	0.00267	—	0.00267	0.00202	—	0.00202	—	6.18809	6.18809	0.00026	0.00005	—	6.21041
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.74325	0.74325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.09063	0.09063	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.83388	0.83388	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.13564	0.13564	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01654	0.01654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03348	0.03090	0.00158	0.18810	0.00001	0.00033	—	0.00033	0.00025	—	0.00025	—	0.70172	0.70172	0.00003	0.00001	—	0.70425
Total	0.18566	0.18308	0.00158	0.18810	0.00001	0.00033	—	0.00033	0.00025	—	0.00025	—	0.70172	0.70172	0.00003	0.00001	—	0.70425

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	2.20153	12.7202	14.9218	0.22653	0.00546	—	22.2118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.36449	2.10598	2.47047	0.03750	0.00090	—	3.67742
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.36449	2.10598	2.47047	0.03750	0.00090	—	3.67742

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	24.2415	0.00000	24.2415	2.42285	0.00000	—	84.8127
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	4.01345	0.00000	4.01345	0.40113	0.00000	—	14.0417
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	4.01345	0.00000	4.01345	0.40113	0.00000	—	14.0417

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13365	0.13365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02213	0.02213
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02213	0.02213

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2026	7/17/2026	5.00000	35.0000	—
Site Preparation	Site Preparation	7/18/2026	7/24/2026	5.00000	5.00000	—
Grading	Grading	7/25/2026	8/4/2026	5.00000	7.00000	—
Building Construction	Building Construction	8/5/2026	11/15/2027	5.00000	334.000	—
Paving	Paving	11/16/2027	12/9/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	12/10/2027	1/3/2028	5.00000	17.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.000000	8.00000	33.0000	0.73000
Demolition	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Demolition	Tractors/Loaders/Back hoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Site Preparation	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.000000	7.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00000	7.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	6.00000	367.000	0.29000

Building Construction	Forklifts	Diesel	Average	1.000000	6.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	1.000000	6.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	3.00000	8.00000	46.0000	0.45000
Paving	Cement and Mortar Mixers	Diesel	Average	1.000000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	6.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	1.000000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	1.000000	7.00000	36.0000	0.38000
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	12.5000	18.5000	LDA,LDT1,LDT2
Demolition	Vendor	12.0000	10.2000	HHDT,MHDT
Demolition	Hauling	7.00000	20.0000	HHDT
Demolition	Onsite truck	1.000000	1.65000	HHDT
Site Preparation	Worker	7.50000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	9.00000	10.2000	HHDT,MHDT
Site Preparation	Hauling	30.0000	20.0000	HHDT
Site Preparation	Onsite truck	1.000000	1.19000	HHDT
Grading	Worker	10.00000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	13.0000	10.2000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT

Grading	Onsite truck	1.000000	1.55000	HHDT
Building Construction	Worker	14.5320	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	5.67094	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	12.5000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	2.00000	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	2.90640	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00000	0.00000	51,900.0	17,300.0	2,147.28

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00000	0.00000	0.00000	2,441.00	0.00000
Site Preparation	—	1,200.00	4.68750	0.00000	0.00000
Grading	—	—	7.00000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	0.82158

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	High School	0.00000	0%
Paving	Other Non-Asphalt Surfaces	0.05289	0%
Paving	Other Non-Asphalt Surfaces	0.38659	0%
Paving	Other Asphalt Surfaces	0.15797	100%
Paving	Parking Lot	0.22413	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	531.983	0.03300	0.00400
2027	0.00000	531.983	0.03300	0.00400
2028	0.00000	531.983	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VTM/Weekday	VTM/Saturday	VTM/Sunday	VTM/Year
High School	123.003	0.00000	0.00000	32,068.6	760.922	0.00000	0.00000	198,383
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
High School	Wood Fireplaces	0	0
High School	Gas Fireplaces	0	0
High School	Propane Fireplaces	0	0
High School	Electric Fireplaces	0	0
High School	No Fireplaces	0	0
High School	Conventional Wood Stoves	0	0
High School	Catalytic Wood Stoves	0	0
High School	Non-Catalytic Wood Stoves	0	0
High School	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0

Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0
Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0

Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	51,900.0	17,300.0	2,147.28

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBtu/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
High School	184,885	531.983	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	531.983	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	531.983	0.0330	0.0040	0.00000
Other Asphalt Surfaces	0.00000	531.983	0.0330	0.0040	0.00000
Parking Lot	8,552.39	531.983	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High School	1,148,881	170,857
Other Non-Asphalt Surfaces	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000
Parking Lot	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High School	44.9800	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
Other Asphalt Surfaces	0.00000	0.00000
Parking Lot	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High School	Household refrigerators and/or freezers	R-134a	1,430.00	0.01679	0.60000	0.00000	1.000000
High School	Other commercial A/C and heat pumps	R-410A	2,088.00	0.00180	4.00000	4.00000	18.0000

High School	Stand-alone retail refrigerators and freezers	R-134a	1,430.00	0.00004	1.000000	0.00000	1.000000
High School	Walk-in refrigerators and freezers	R-404A	3,922.00	0.00040	7.50000	7.50000	20.0000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Educational, High School land use incorporates the acreage of the landscaping improvements
Construction: Construction Phases	Construction schedule adjusted to account for District-provided construction timeframe (6/1/2026-1/1/2028)
Construction: Trips and VMT	Water truck trips added
Operations: Vehicle Data	Trip rate adjusted to be consistent with project trip generation report.
Operations: Fleet Mix	Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles that the regional VMT. Assumes a mix of approximately 97% passenger vehicles, 2% medium duty trucks, and 1% heavy duty trucks and buses.
Operations: Energy Use	Adjusted to account of all-electric design

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	0.79431	0.73000
Landscape Area	sq. ft	—	9,740.00
Special Landscape Area	sq. ft	9,740.00	2,817.00

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Demolition	Demolition	End Date	6/29/2026	7/17/2026
Demolition	Demolition	Work Days per Phase	20.0000	35.0000
Site Preparation	Site Preparation	Start Date	6/30/2026	7/18/2026
Site Preparation	Site Preparation	End Date	7/2/2026	7/24/2026
Site Preparation	Site Preparation	Work Days per Phase	2.00000	5.00000
Grading	Grading	Start Date	7/3/2026	7/25/2026
Grading	Grading	End Date	7/8/2026	8/4/2026
Grading	Grading	Work Days per Phase	4.00000	7.00000
Building Construction	Building Construction	Start Date	7/9/2026	8/5/2026
Building Construction	Building Construction	End Date	4/15/2027	11/15/2027
Building Construction	Building Construction	Work Days per Phase	200.000	334.000
Paving	Paving	Start Date	4/16/2027	11/16/2027
Paving	Paving	End Date	4/30/2027	12/9/2027
Paving	Paving	Work Days per Phase	10.00000	18.0000
Architectural Coating	Architectural Coating	Start Date	5/1/2027	12/10/2027
Architectural Coating	Architectural Coating	End Date	5/15/2027	1/3/2028
Architectural Coating	Architectural Coating	Work Days per Phase	10.00000	17.0000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Demolition	Hauling	One-Way Trips per Day	17.4571	7.00000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
High School	Weekday Trip Rate	size/day	14.0700	3.55500
High School	Saturday Trip Rate	size/day	3.98000	0.00000
High School	Sunday Trip Rate	size/day	1.71000	0.00000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
High School	A	Heavy-Heavy-Duty Trucks	%	1%	< 0.5%
High School	A	Passenger Cars	%	49%	60%
High School	A	Light-Duty Trucks 1	%	4%	5%
High School	A	Light-Duty Trucks 2	%	24%	29%
High School	A	Light Heavy-Duty Trucks 1	%	3%	< 0.5%
High School	A	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
High School	A	Motorcycles	%	2%	3%
High School	A	Medium-Duty Trucks	%	15%	2%
High School	A	Motor Homes	%	< 0.5%	< 0.5%
High School	A	Medium-Heavy-Duty Trucks	%	2%	< 0.5%
High School	A	Other Buses	%	< 0.5%	0%
High School	A	School Buses	%	< 0.5%	< 0.5%

Fullerton Union High School Field Improvements Project Custom Report, 2/3/2026

High School	A	Urban Buses	%	< 0.5%	0%
High School	S	Heavy-Heavy-Duty Trucks	%	1%	< 0.5%
High School	S	Passenger Cars	%	49%	60%
High School	S	Light-Duty Trucks 1	%	4%	5%
High School	S	Light-Duty Trucks 2	%	24%	29%
High School	S	Light Heavy-Duty Trucks 1	%	3%	< 0.5%
High School	S	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
High School	S	Motorcycles	%	2%	3%
High School	S	Medium-Duty Trucks	%	15%	2%
High School	S	Motor Homes	%	< 0.5%	< 0.5%
High School	S	Medium-Heavy-Duty Trucks	%	2%	< 0.5%
High School	S	Other Buses	%	< 0.5%	0%
High School	S	School Buses	%	< 0.5%	< 0.5%
High School	S	Urban Buses	%	< 0.5%	0%
High School	W	Heavy-Heavy-Duty Trucks	%	1%	< 0.5%
High School	W	Passenger Cars	%	49%	60%
High School	W	Light-Duty Trucks 1	%	4%	5%
High School	W	Light-Duty Trucks 2	%	24%	29%
High School	W	Light Heavy-Duty Trucks 1	%	3%	< 0.5%
High School	W	Light Heavy-Duty Trucks 2	%	1%	< 0.5%
High School	W	Motorcycles	%	2%	3%
High School	W	Medium-Duty Trucks	%	15%	2%
High School	W	Motor Homes	%	< 0.5%	< 0.5%
High School	W	Medium-Heavy-Duty Trucks	%	2%	< 0.5%
High School	W	Other Buses	%	< 0.5%	0%
High School	W	School Buses	%	< 0.5%	< 0.5%
High School	W	Urban Buses	%	< 0.5%	0%

8.5.3. Energy Usage

Land Use	Model Parameter	Units	Default Value	New Value
High School	Electricity	kWh/yr	216,400	184,885
High School	Electricity (Subject to Title 24)	kWh/yr	187,076	159,767
High School	Electricity (Not Subject to Title 24)	kWh/yr	29,324.3	25,118.3
High School	Natural Gas	kBTU/yr	725,904	0.00000
High School	Natural Gas (Subject to Title 24)	kBTU/yr	369,235	0.00000
High School	Natural Gas (Not Subject to Title 24)	kBTU/yr	356,669	0.00000

Fullerton Union HS Improvements Regional Construction Emissions Worksheet:

3.1. Demolition (2026) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Summer						
	Off-Road Equipment	1.39	12.94	14.62	0.02	0.51	0.47
	Dust From Material Movement	0.00	0.00	0.00	0.00	0.94	0.14
	Onsite truck	0.00	0.02	0.01	0.00	0.61	0.06
	Total	1.39	12.96	14.63	0.02	2.06	0.67
Offsite							
	Worker	0.04	0.04	0.66	0.00	0.16	0.04
	Vendor	0.01	0.38	0.19	0.00	0.11	0.03
	Hauling	0.01	0.57	0.25	0.00	0.13	0.04
	Total	0.06	0.99	1.10	0.01	0.40	0.11
TOTAL		1.45	13.95	15.73	0.03	2.47	0.78

3.3. Site Preparation (2026) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Summer						
	Off-Road Equipment	1.24	11.04	11.72	0.02	0.51	0.47
	Dust From Material Movement	0.00	0.00	0.00	0.00	2.45	1.17
	Onsite truck	0.00	0.02	0.01	0.00	0.44	0.04
	Total	1.24	11.06	11.73	0.02	3.39	1.68
Offsite							
	Worker	0.03	0.02	0.40	0.00	0.10	0.02
	Vendor	0.01	0.29	0.14	0.00	0.08	0.02
	Hauling	0.03	2.46	1.09	0.01	0.57	0.18
	Total	0.06	2.77	1.63	0.02	0.75	0.23
TOTAL		1.30	13.82	13.36	0.04	4.14	1.91

3.5. Grading (2026) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Summer						
	Off-Road Equipment	1.42	12.86	14.03	0.02	0.58	0.53
	Dust From Material Movement	0.00	0.00	0.00	0.00	2.76	1.34
	Onsite truck	0.00	0.02	0.01	0.00	0.58	0.06
	Total	1.43	12.88	14.05	0.02	3.92	1.93
Offsite	Worker	0.03	0.03	0.53	0.00	0.13	0.03
	Vendor	0.01	0.42	0.21	0.00	0.11	0.03
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.04	0.45	0.73	0.00	0.24	0.06
TOTAL		1.47	13.32	14.78	0.03	4.16	1.99

3.7. Building Construction (2026) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Summer						
	Off-Road Equipment	1.01	8.57	9.96	0.02	0.29	0.27
	Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
	Total	1.01	8.57	9.96	0.02	0.29	0.27
Offsite	Worker	0.04	0.04	0.65	0.00	0.16	0.04
	Vendor	0.00	0.15	0.08	0.00	0.04	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.05	0.19	0.73	0.00	0.20	0.05
TOTAL		1.06	8.76	10.69	0.02	0.50	0.32

3.9. Building Construction (2027) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Summer						
	Off-Road Equipment	0.97	8.25	9.91	0.02	0.26	0.24
	Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.97	8.25	9.91	0.02	0.26	0.24
Offsite	Worker	0.04	0.04	0.61	0.00	0.16	0.04
	Vendor	0.00	0.15	0.07	0.00	0.04	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.04	0.19	0.69	0.00	0.20	0.05
TOTAL		1.01	8.44	10.59	0.02	0.47	0.29

3.11. Paving (2027) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Winter						
	Off-Road Equipment	0.46	4.30	6.49	0.01	0.17	0.16
	Paving	0.06	0.00	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.51	4.30	6.49	0.01	0.17	0.16
Offsite	Worker	0.04	0.04	0.53	0.00	0.16	0.04
	Vendor	0.00	0.06	0.03	0.00	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.04	0.10	0.56	0.00	0.18	0.04
TOTAL		0.55	4.40	7.05	0.01	0.35	0.20

3.13. Architectural Coating (2027) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite	Winter						
	Off-Road Equipment	0.11	0.83	1.13	0.00	0.02	0.02
	Architectural Coatings	16.69	0.00	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
	Total	16.81	0.83	1.13	0.00	0.02	0.02
Offsite	Worker	0.01	0.01	0.11	0.00	0.03	0.01
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.01	0.01	0.11	0.00	0.03	0.01
TOTAL		16.81	0.84	1.23	0.00	0.05	0.03

3.15. Architectural Coating (2028) - Unmitigated

		ROG	NOx	CO	SO ₂	PM10 Total	PM2.5Total
Onsite		Winter					
	Off-Road Equipment	0.11	0.81	1.12	0.00	0.02	0.01
	Architectural Coatings	16.69	0.00	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
	Total	16.80	0.81	1.12	0.00	0.02	0.01
Offsite							
	Worker	0.01	0.01	0.10	0.00	0.03	0.01
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.01	0.01	0.10	0.00	0.03	0.01
TOTAL		16.81	0.82	1.22	0.00	0.05	0.02

Field Improvements

<i>Demolition (2026)</i>	1	14	16	0	2	1
<i>Site Preparation (2026)</i>	1	14	13	0	4	2
<i>Grading (2026)</i>	1	13	15	0	4	2
<i>Building Construction (2026)</i>	1	9	11	0	0	0
<i>Building Construction (2027)</i>	1	8	11	0	0	0
<i>Paving (2027)</i>	1	4	7	0	0	0
<i>Architectural Coating (2027)</i>	17	1	1	0	0	0
<i>Architectural Coating (2028)</i>	17	1	1	0	0	0
MAX DAILY	17	14	16	0	4	2
Regional Thresholds	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

Fullerton Union HS Improvements Construction LST Worksheet:

3.1. Demolition (2026) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	12.94	14.62	0.51	0.47
	Demolition	0.00	0.00	0.94	0.14
	Onsite truck	0.02	0.01	0.61	0.06
	Total	12.94	14.62	1.45	0.61

3.3. Site Preparation (2026) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	11.04	11.72	0.51	0.47
	Dust From Material Movement	0.00	0.00	2.45	1.17
	Onsite truck	0.02	0.01	0.44	0.04
	Total	11.06	11.73	3.39	1.68

3.5. Grading (2026) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	12.86	14.03	0.58	0.53
	Dust From Material Movement	0.00	0.00	2.76	1.34
	Onsite truck	0.02	0.01	0.58	0.06
	Total	12.88	14.05	3.92	1.93

3.7. Building Construction (2026) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	8.57	9.96	0.29	0.27
	Onsite truck	0.00	0.00	0.00	0.00
	Total	8.57	9.96	0.29	0.27

3.9. Building Construction (2027) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	8.25	9.91	0.26	0.24
	Onsite truck	0.00	0.00	0.00	0.00
	Total	8.25	9.91	0.26	0.24

3.11. Paving (2027) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	4.30	6.49	0.17	0.16
	Paving	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00
	Total	4.30	6.49	0.17	0.16

3.13. Architectural Coating (2027) - Unmitigated

		NOx	CO	PM10 Total	PM2.5Total
Onsite					
	Off-Road Equipment	0.83	1.13	0.02	0.02
	Architectural Coatings	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00
	Total	0.83	1.13	0.02	0.02

3.15. Architectural Coating (2028) - Unmitigated

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	0.81	1.12	0.02	0.01
	Architectural Coatings	0.00	0.00	0.00	0.00
	Onsite truck	0.00	0.00	0.00	0.00
	Total	0.81	1.12	0.02	0.01
		NOx	CO	PM10 Total	PM2.5 Total
Demolition (2026)		13	15	1	1
	2.0 Acre LST	147	762	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Site Preparation (2026)		11	12	3	2
	1.44 Acre LST	122	627	5	3
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Grading (2026)		13	14	4	2
	1.88 Acre LST	142	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Building Construction (2026)		9	10	0	0
	< 1.0 Acre LST	103	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Building Construction (2027)		8	10	0	0
	< 1.0 Acre LST	103	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Paving (2027)		4	6	0	0
	< 1.0 Acre LST	103	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Architectural Coating (2027)		1	1	0	0
	< 1.0 Acre LST	103	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Architectural Coating (2028)		1	1	0	0
	< 1.0 Acre LST	103	732	6	4
	<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>

Regional Operation Emissions Worksheet

¹ CalEEMod, Version 2022.1.

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	0.28	0.11	1.94	0.00	0.46	0.12
Area	0.92	0.01	1.28	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.21	0.12	3.23	0.00	0.46	0.12

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	0.28	0.12	1.85	0.00	0.46	0.12
Area	0.71	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.99	0.12	1.85	0.00	0.46	0.12

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	0	0	2	0	0	0
Area	1	0	1	0	0	0
Energy	0	0	0	0	0	0
Total	1.21	0.12	3.23	0.00	0.46	0.12

Regional Thresholds (lb/day)	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

Troy HS Improvements Project: GHG Emissions Inventory

Construction¹

	MTCO ₂ e
2026	179
2027	230
2028	0
Total Construction	409
30-Year Amortization ²	14

¹ CalEEMod, Version 2022.1.

² Total construction emissions are amortized over 30 years per SCAQMD methodology; SCAQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2).

Operation¹

Field Improvements	MTCO ₂ e/Year ²	
	Operations	%
Mobile	48	34%
Area	1	0%
Energy	47	33%
Water	3	2%
Solid Waste	12	8%
Refrigerants	0	0%
School Field Lightings ³	17	12%
30-Year Construction Amortization	14	10%
	142	100%
South Coast AQMD Bright-Line Screening Threshold	3,000	
Exceed Threshold?	No	

¹ CalEEMod, Version 2022.1.;

² MTCO₂e=metric tons of carbon dioxide equivalent.

³ Includes GHG calculations from proposed field lighting.

Construction Localized Significance Thresholds: 1.88 Acre (Grading)

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	
16	1.88	25	82	25	82	1.88

Source Receptor	North Orange County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25						
NOx	142	Tractors	0.5	0.0625	8	1	0.5
CO	732	Graders	0.5	0.0625	8	1	0.5
PM10	5.75	Dozers	0.5	0.0625	7	2	0.875
PM2.5	3.87	Scrapers	1	0.125			0
						Acres	1.88

	Acres	25	50	100	200	500
NOx	1	103	104	121	159	252
	2	147	143	156	186	269
		142	138	152	183	267
CO	1	522	685	1014	1975	6531
	2	762	1010	1395	2444	7121
		732	969	1347	2385	7047
PM10	1	4	10	24	53	137
	2	6	17	31	60	145
		6	16	30	59	144
PM2.5	1	3	4	9	20	74
	2	4	6	11	24	79
		4	6	11	24	78
North Orange County						
	1.88 Acres					
	25	50	100	200	500	
NOx	142	138	152	183	267	
CO	732	969	1347	2385	7047	
PM10	6	16	30	59	144	
PM2.5	4	6	11	24	78	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
16	1	16	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: < 1.0 Acre (Building Construction, Architectural Coating, Paving)

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	
16	0.50	25	82	25	82	0.50

Source Receptor Distance (meters)	North Orange County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
	25						
NOx	103	Tractors	0.5	0.0625	8	1	0.5
CO	522	Graders	0.5	0.0625			0
PM10	4.00	Dozers	0.5	0.0625			0
PM2.5	3.00	Scrapers	1	0.125			0
						Acres	0.50

	Acres	25	50	100	200	500
NOx	1	103	104	121	159	252
	1	103	104	121	159	252
	1	103	104	121	159	252
CO	1	522	685	1014	1975	6531
	1	522	685	1014	1975	6531
	1	522	685	1014	1975	6531
PM10	1	4	10	24	53	137
	1	4	10	24	53	137
	1	4	10	24	53	137
PM2.5	1	3	4	9	20	74
	1	3	4	9	20	74
	1	3	4	9	20	74

North Orange County

0.50 Acres

	25	50	100	200	500
NOx	103	104	121	159	252
CO	522	685	1014	1975	6531
PM10	4	10	24	53	137
PM2.5	3	4	9	20	74

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
16	1	16	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: 2.00 acre (Demolition)

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
16	2.00	25	82	25	82	2.12	
Source Receptor Distance (meters)	North Orange County	Equipment	Acres/8-hr Day	Daily hours	Equipment Used	Acres	
	25						
NOx	147	Tractors	0.5	0.0625	8	3	1.5
CO	762	Graders	0.5	0.0625			0
PM10	6.00	Dozers	0.5	0.0625	8	1	0.5
PM2.5	4.00	Scrapers	1	0.125			0
					Acres		2.00
	Acres	25	50	100	200	500	
NOx	2	147	143	156	186	269	
	2	147	143	156	186	269	
		147	143	156	186	269	
CO	2	762	1010	1395	2444	7121	
	2	762	1010	1395	2444	7121	
		762	1010	1395	2444	7121	
PM10	2	6	17	31	60	145	
	2	6	17	31	60	145	
		6	17	31	60	145	
PM2.5	2	4	6	11	24	79	
	2	4	6	11	24	79	
		4	6	11	24	79	
North Orange County							
2.00 Acres							
	25	50	100	200	500		
NOx	147	143	156	186	269		
CO	762	1010	1395	2444	7121		
PM10	6	17	31	60	145		
PM2.5	4	6	11	24	79		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
16	2	16	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: 1.44 Acre (Site Preparation)

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)		
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)			
16	1.44	25	82	25	82	2.12		
Source Receptor Distance (meters)	North Orange County		Equipment	Acres/8-hr Day	Daily hours	Equipment Used	Acres	
	25							
NOx	122		Tractors	0.5	0.0625	8	1	0.5
CO	627		Graders	0.5	0.0625	8	1	0.5
PM10	4.88		Dozers	0.5	0.0625	7	1	0.4375
PM2.5	3.44		Scrapers	1	0.125			0
						Acres		1.44
	Acres	25	50		100		200	500
NOx	1	103	104		121		159	252
	2	147	143		156		186	269
CO		122	121		136		171	259
	1	522	685		1014		1975	6531
	2	762	1010		1395		2444	7121
		627	827		1181		2180	6789
PM10	1	4	10		24		53	137
	2	6	17		31		60	145
PM2.5		5	13		27		56	141
	1	3	4		9		20	74
	2	4	6		11		24	79
		3	5		10		22	76
North Orange County								
	1.44 Acres							
	25	50	100		200		500	
NOx	122	121	136		171		259	
CO	627	827	1181		2180		6789	
PM10	5	13	27		56		141	
PM2.5	3	5	10		22		76	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
16	1	16	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Updated: 10/21/2009 - Table C-1. 2006 – 2008

APPENDIX B

CULTURAL RESOURCE EVALUATION REPORT

APPENDIX

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CULTURAL RESOURCES COMPLIANCE REPORT

FULLERTON UNION HIGH SCHOOL

FIELD IMPROVEMENT AND ATHLETIC BUILDING PROJECT

City of Fullerton
Orange County, California

Prepared for:

HANA Resources, Inc.
20361 Hermana Circle
Lake Forest, CA 92630

For Submittal to:

Fullerton Joint Union High School District
1051 W. Bastanchury Rd.
Fullerton, CA 92833

Prepared by:

CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

Bai “Tom” Tang, Principal Investigator
Daniel Ballester, Principal Investigator

January 31, 2026
Updated February 2, 2026
CRM TECH Contract No. 4339

Title: Cultural Resources Compliance Report: Fullerton Union High School Field Improvement and Athletic Building Project, City of Fullerton, Orange County, California

Authors: Bai “Tom” Tang, Principal Investigator/Historian/Architectural Historian
Frank J. Raslich, Report Writer/Archaeologist
Hunter O’Donnell, Archaeologist/Historian

Consulting Firm: CRM TECH
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Date: January 31, 2026; updated February 2, 2026

Prepared for: Don Cully, General Manager
HANA Resources
20361 Hermana Circle
Lake Forest, CA 92630
(949) 680-4416

For Submittal to: Fullerton Joint Union High School District
1051 W. Bastanchury Road
Fullerton, CA 92833
(714) 870-2800

USGS Quadrangle: La Habra and Anaheim, Calif., 7.5’ quadrangle; Section 27, T3S R10W, San Bernardino Baseline and Meridian

Project Size: Approximately 6.7 acres

Keywords: Northern Orange County; project effect assessment; Site 30-0157211: Fullerton Union High School, 1910s-1930s; Site 30-0157212: Fullerton Junior College (now Fullerton College), 1930s; *No Impact* on “historical resources” under CEQA

EXECUTIVE SUMMARY

Between October 2025 and January 2026, CRM TECH performed a cultural resources study on approximately 6.7 acres of vacant land on the campus of the Fullerton Union High School (FUHS), in the central portion of the City of Fullerton, Orange County, California. The subject property of the study consists of approximately 4.2 acres of athletic fields and parking lot on the west side of Lemon Street and approximately 2.5 acres of athletic fields and parking lot on the east side. The entire project area lies within the southwest quarter of Section 27, Township 3 South, Range 10 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey La Habra, California, 7.5' quadrangle.

The study is a part of the environmental review process for proposed facility improvements outlined in the Fullerton Joint Union High School District (FJUHSD) Facilities Master Plan, including the installation of sports field lighting, the construction of a two-story athletic building and a restroom building, and associated parking and access enhancements, landscaping, and fencing. The FJUHSD, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA). The purpose of the study is to provide the FJUHSD with the necessary information and analysis to determine whether the project would cause substantial adverse changes to any “historical resources,” as defined by CEQA, that may exist within or adjacent to the project area.

To identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, and carried out an intensive-level field survey of the project area and a reconnaissance-level field inspection of historical buildings on the rest of the campuses. The results of these research procedures demonstrate that both portions of the project area are encompassed in the boundaries of previously recorded cultural resources. The western portion is included in Site 30-0157211, the historical campus of the FUHS, while the eastern portion has been delineated as a part of Site 30-0157212, the historical campuses of neighboring Fullerton College. Both properties were recorded into what is now the California Historical Resources Inventory in the 1970s, with the records focused primarily on the pre-WWII buildings of each campus.

Since then, the Fullerton College campus has been listed in the National Register of Historic Places as a district, as has a portion of the FUHS campus, specifically Fullerton Auditorium (formerly the Louis E. Plummer Auditorium) and the Pastoral California mural on its exterior wall. As any property listed in the National Register is automatically included in the California Register of Historical Resources, Fullerton College, Fullerton Auditorium, and the mural clearly meet CEQA definition of “historical resources.” Existing records provide no evidence that the FUHS campus as a whole has been formally evaluated under the California Register criteria. Since the proposed project would not have any direct impact on the existing buildings, a systematic analysis and evaluation of the entire campus is beyond the scope of this study. In light of its 110-year-long history as the home of the first high school in the Fullerton area (and the second in Orange County), however, the campus can be presumed to qualify as a “historical resource” for the purpose of this project with a local level of significance.

The proposed project involves a very small portion of the area occupied by the two campuses, which combine to measure approximately 120 acres in total (with 70 acres included in the site boundaries of 30-0157211 and 30-0157212), and has little potential to affect the characters and integrity of the

existing buildings. The athletic fields, parking lots, and other features currently extant in the project area mostly date to the post-1972 era, well after the established periods of significance for the FUHS and Fullerton College campuses, and all of them have undergone significant alterations in their configuration, appearance, and/or setting in the most recent decades. As secondary features of relatively late vintage and compromised historic integrity, they do not constitute major contributors to the historic significance of the campuses, nor do they demonstrate sufficient potential to be considered significant individually.

In addition, the new buildings to be constructed as a part of the project, located well behind Fullerton Auditorium and the other historical buildings of the FUHS, are relatively low in profile and by design will be architecturally compatible to the existing campus. As such, the new construction would not diminish the historic integrity of the FUHS campus or that of the historical buildings significantly. Based on these considerations, and pursuant to PRC §5020.1(q), CRM TECH recommends to the FJUHSd a conclusion that the proposed project will not cause a substantial adverse change in the significance of the FUHS and Fullerton College campuses. Therefore, CRM TECH further recommends that the project may be cleared to proceed in compliance with cultural resources provisions of CEQA.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
INTRODUCTION	1
HISTORIC CONTEXT	4
RESEARCH METHODS	5
Records Search.....	5
Historical Background Research.....	6
Consultation with Local Community.....	6
Field Inspection.....	6
RESULTS AND FINDINGS.....	6
Records Search.....	6
Historical Background Research.....	7
Consultation with Local Community.....	11
Field Inspection.....	11
MANAGEMENT CONSIDERATIONS	12
Applicable Statutory/Regulatory Framework	12
Discussion and Conclusion	13
REFERENCES	14
APPENDIX 1: Personnel Qualifications	16
APPENDIX 2: California Historical Resources Inventory Record Forms	21

LIST OF FIGURES

Figure 1. Project vicinity.....	1
Figure 2. Project location.....	2
Figure 3. Recent satellite image of the project area.....	3
Figure 4. Previous cultural resources studies in the vicinity	8
Figure 5. The project area and vicinity in 1894.....	9
Figure 6. The project area and vicinity in 1932	9
Figure 7. The project area and vicinity in 1939.....	9
Figure 8. The project area and vicinity in 1947-1950.....	10
Figure 9. The project area and vicinity in 1963-1964.....	10
Figure 10. Typical landscape in the project area	12

INTRODUCTION

Between October 2025 and January 2026, CRM TECH performed a cultural resources study on approximately 6.7 acres of vacant land on the campus of the Fullerton Union High School (FUHS), in the central portion of the City of Fullerton, Orange County, California (Fig. 1). The subject property of the study consists of approximately 4.2 acres of athletic fields and parking lot on the west side of Lemon Street and approximately 2.5 acres of athletic fields and parking lot on the east side (Figs. 2, 3). The entire project area lies within the southwest quarter of Section 27, Township 3 South, Range 10 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey (USGS) La Habra, California, 7.5' quadrangle (Fig. 2).

The study is a part of the environmental review process for proposed facility improvements outlined in the Fullerton Joint Union High School District (FJUHSD) Facilities Master Plan, including the installation of sports field lighting, the construction of a two-story athletic building and a restroom building, and associated parking and access enhancements, landscaping, and fencing. The FJUHSD, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000 et seq.). The purpose of the study is to provide the FJUHSD with the necessary information and analysis to determine whether the project would cause substantial adverse changes to any “historical resources,” as defined by CEQA, that may exist within or adjacent to the project area.

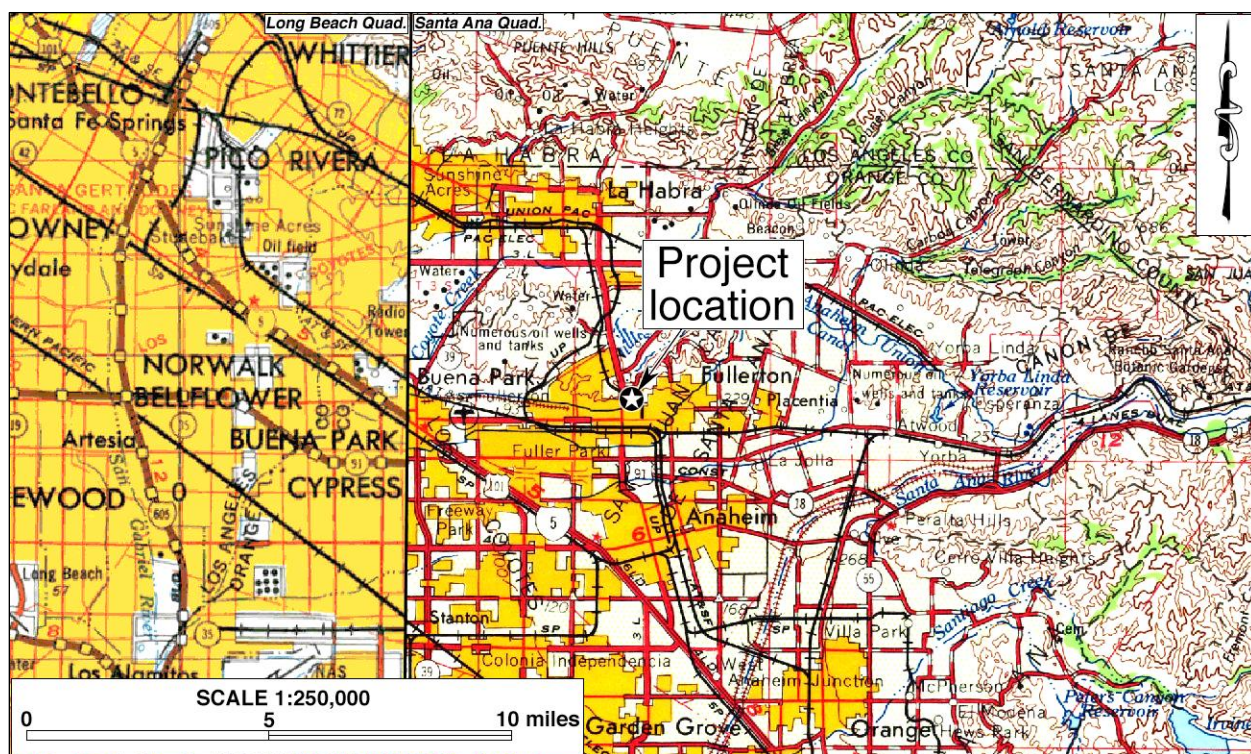


Figure 1. Project vicinity, based on USGS Long Beach and Santa Ana, Calif., 120'x60' quadrangles (USGS 1978; 1979).

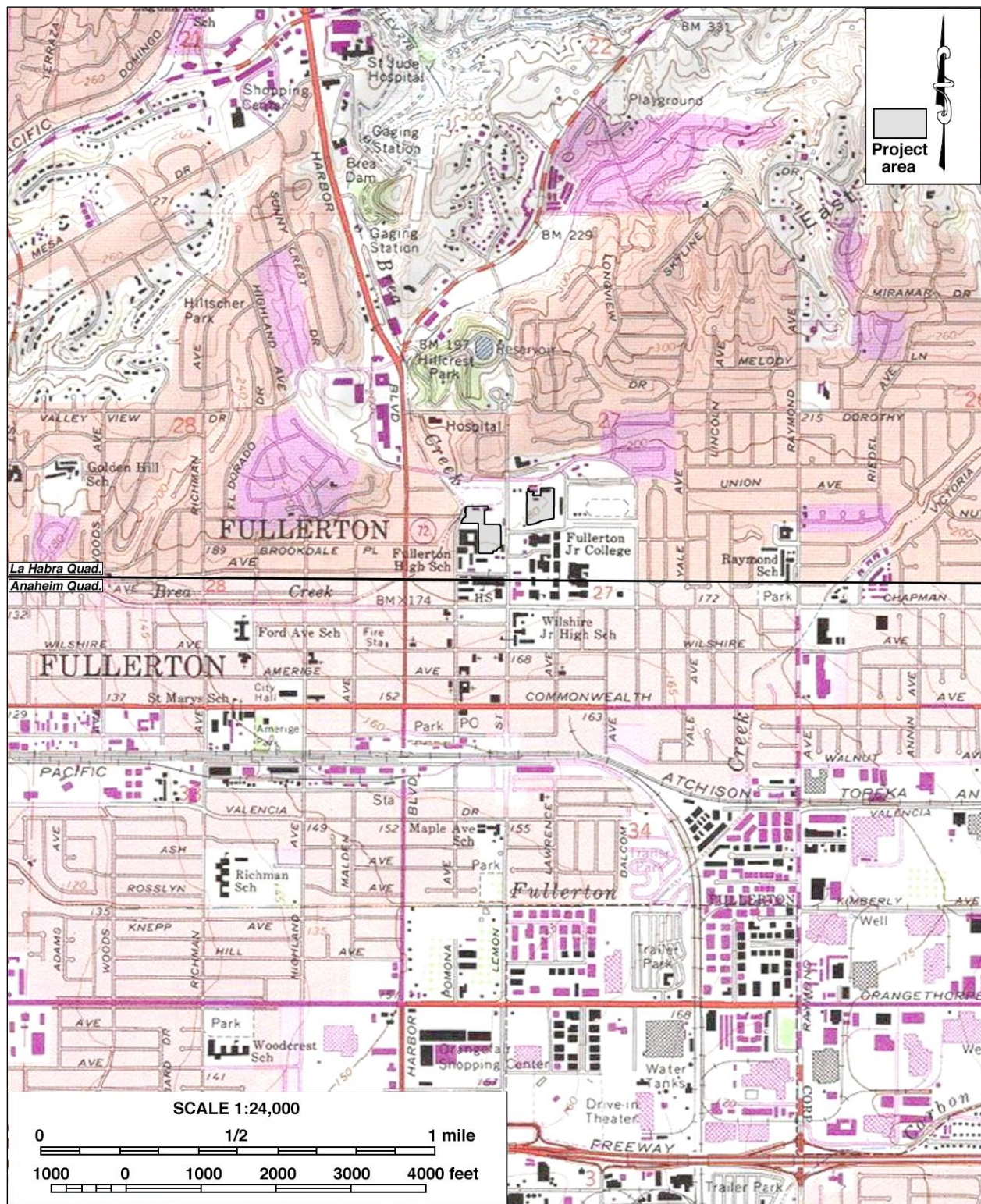


Figure 2. Project location, based on USGS La Habra and Anaheim, Calif., 7.5' quadrangles (USGS 1981a; 1981b).

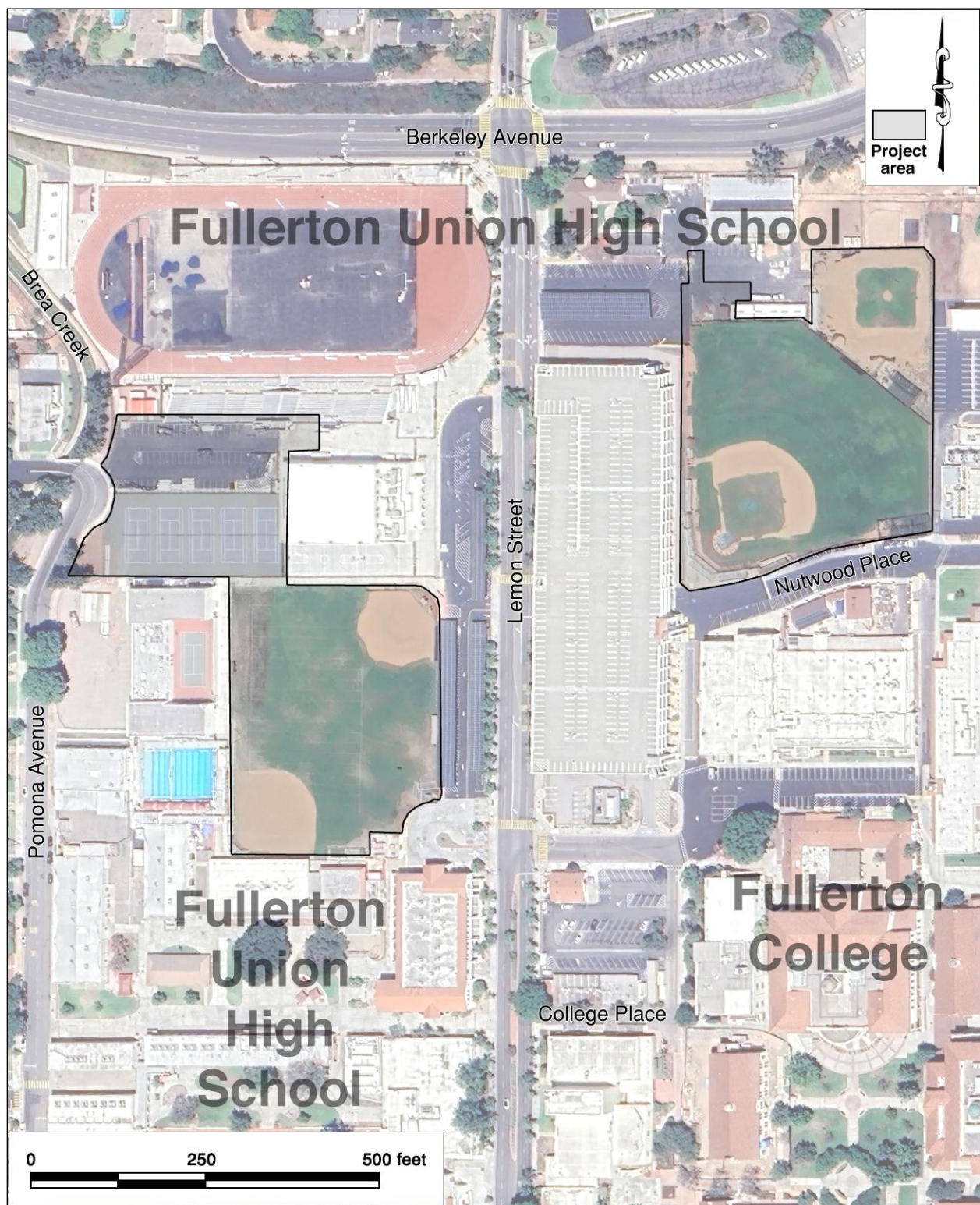


Figure 3. Recent satellite image of the project area, based on Google Earth imagery.

To identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, and carried out an intensive-level field survey of the project area and a reconnaissance-level field inspection of historical buildings on the rest of the campuses. The following report is a complete account of the methods, results, and conclusion of the study. Personnel who participated in these research procedures are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

HISTORIC CONTEXT

The Los Angeles Basin, including the Fullerton area, was originally part of the Tongva/Kizh (Gabrielino) people's traditional territory. In July 1769, a Spanish expedition led by Gaspar de Portolá passed through what is now the Fullerton area and noted "an Indian village of about fifty persons" (La Tour 2025). The region was claimed by Spain and eventually fell under the influence of the Missions San Gabriel Arcangel and San Juan Capistrano. After Mexico gained independence from Spain, what is now the City of Fullerton became part of a Mexican land grant known as Rancho San Juan Cajón de Santa Ana, which was awarded in 1837 to Juan Pacifico Ontiveros, the *mayordomo* of Mission San Juan Capistrano, and his wife Mario Ontiveros (La Tour 2025). Ultimately Oliveros began to sell off parcels of the rancho, with a portion becoming part of the vast land holdings of Abel Stearns, a prominent Yankee-turned *ranchero* (La Tour 2025).

Around 1860, Basque immigrant Domingo Bastanchury purchased Stearn's parcel to raise and graze sheep, with other early residents including Scottish immigrant Alex Gardiner and German immigrant Andrew Rorden arriving by wagon train in the 1870s to establish farms (La Tour 2025). In 1887, the California Central Railroad, a subsidiary of the Atchison, Topeka and Santa Fe Railway, sent George H. Fullerton, president of the Pacific Land and Improvement Company (also a Santa Fe subsidiary), to the area in order to purchase land for a railroad right-of-way.

The town of Fullerton was founded that year by brothers George and Edward Amerige, wealthy grain merchants from Boston who purchased the 430-acre townsite located north of Anaheim after hearing rumors of the upcoming rail line. The Amerige brothers negotiated with George Fullerton, offering free right-of-way in exchange for Fullerton's assurance that the area would be included on the railroad line (La Tour 2025; City of Fullerton n.d.). On July 5, 1887, Edward Amerige drove a stake into what is now the corner of Harbor Boulevard and Commonwealth Avenue, and the townsite of Fullerton was born, named in honor of its benefactor, George Fullerton.

Oil prospecting had begun in the canyons to the north of the new town by the 1880s and was booming by the turn of the 20th century. The Olinda-Fullerton oil field, among the most prolific and longest running, was described as one of the best in the state (RareMaps n.d.). By the 1920s, at least 376 oil wells were present in the northern portion of Fullerton, producing a monthly average of 325,000 barrels (La Tour 2024).

Parallel to the early expansion of the oil industry, in 1894 Charles Chapman, a retired Chicago publisher, purchased an orange orchard in eastern Fullerton, specializing in the Valencia variety of oranges, which he promoted from his Santa Ysabel Ranch (La Tour 2022a). Drawing upon his experience in publishing and marketing, Chapman created colorful orange crate labels for his Old Mission and Golden Eagle orange brands depicting idyllic scenes and elevating the labels to artistic

levels (La Tour 2022a; Fullerton College Centennial n.d.). The Valencia variety proved to be well suited to the local climate, and Fullerton became home to more orange groves than any other municipality in the United States (La Tour 2022a; Fullerton College Centennial n.d.). With the success of his citrus ranches, Chapman gained economic and political power, becoming Fullerton's first mayor when the city incorporated in 1904 (Fullerton College Centennial n.d.).

The FJUHS were formed, along with the FUHS, in the spring of 1893 through a special election to serve northern Orange County, specifically the elementary school districts of Buena Park, Fullerton, Orangethorpe, and Placentia (La Tour 2022b). The new high school opened for classes in the fall of 1893 with eight students in attendance, in a rented room on the second floor of the Fullerton Elementary School. Classes were taught by the school principal, W.R. Carpenter, and included Latin, physics, algebra, geometry, history, and English (La Tour 2022b).

By 1908, with enrollment increased to 62 students, the high school received a new principal, Delbert Brunton, and moved to a new building. That summer, Brunton canvassed the area on bicycle seeking out prospective students in an effort to boost enrollment. At the time, the need for education beyond eighth grade was not seen as universal, and the high school was seen as a tax burden by some in the community (La Tour 2022b). In 1910, fire destroyed the high school building, resulting in classes moving to tents and bungalows until Fullerton voters approved a bond to pay for new buildings in 1911. The high school board of trustees approved the formation of a junior college as an extension of the high school in 1913, with a class of 26 students. Delbert Brunton also served as the head of the new Fullerton Junior College (La Tour 2023). During the Great Depression, at least 20 federal projects were undertaken by the Civil Works Authority between 1933 and 1942 to improve the FUHS and Junior College campus.

In the post-WWII era, the FJUHS continued to expand with the establishment of La Habra High School in 1954 and Buena Park High School in 1956 (FJUHS n.d.). Currently there are six comprehensive high schools, an alternative school, and a continuation school in the district, which serves over 12,300 students as of the 2025-2026 school year (FJUHS n.d.). Meanwhile, the City of Fullerton, like other northern Orange County communities, has seen accelerated suburban residential development and increasingly taken on the characteristics of a "bedroom community" in support of the Greater Los Angeles area. As of 2025, the city's total population was estimated to be just over 140,000, spread over an area of 22 square miles (City of Fullerton n.d.).

RESEARCH METHODS

RECORDS SEARCH

The historical/archaeological resources records search for this study was completed on October 27, 2025, by CRM TECH archaeologist Eulices Lopez at the South Central Coastal Information Center at California State University, Fullerton. The purpose of the records search is to identify previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks or Points of Historical Interest as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

HISTORICAL BACKGROUND RESEARCH

Historical background research for this study was conducted by CRM TECH archaeologist/historian Hunter O'Donnell and archaeologist/report writer Frank Raslich on the basis of published literature in local and regional history, USGS topographic maps dated 1896-1981, and aerial/satellite photographs of the Fullerton area taken between 1952 and 2025, which are accessible through the Google Earth software and at the Nationwide Environmental Title Research (NETR) Online website. For information specific to the FUHS and the FJUHS, O'Donnell supplemented these sources with historical and contemporary news accounts and online genealogical and architectural databases.

CONSULTATION WITH LOCAL COMMUNITY

As a part of the research procedures, CRM TECH archaeologist Deirdre Encarnación contacted Fullerton Heritage, which is the leading local historical society, and the Community and Economic Development Department of the City of Fullerton, Planning Division, in writing for supplementary information on potential historical resources in the project vicinity, local historical interests in the FUHS and Fullerton College campuses, or any other cultural resources concerns regarding the proposed project. The consultation to both organizations was initiated via e-mail on December 8, 2025, and the response(s) are summarized in the sections below.

FIELD INSPECTION

On December 11, 2025, Hunter O'Donnell carried out the fieldwork on the project area and the two campuses. Both portions of the project area, encompassing three baseball/softball fields, two parking lots, and a set of five tennis courts, were surveyed at an intensive level by walking parallel east-west transects spaced 15 meters (approximately 50 feet) apart. In this way, the ground surface in the project area was systematically and closely examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years of age or older). Visibility of the natural ground surface was good to excellent at some locations in the project area but was mostly poor since much of the ground surface was covered by pavement or lawn grass. In light of the extent of past ground disturbance in the project area, the ground visibility was not considered a major hindrance to the survey efforts.

In conjunction to the intensive-level archaeological field survey, O'Donnell also conducted a reconnaissance-level field inspection of known historical buildings on both campuses. The purpose of this part of the fieldwork was to document of current conditions of the buildings and to assess the potential for the proposed project to result in any visual or atmospheric effect on their existing characters or to impact their historic integrity indirectly otherwise.

RESULTS AND FINDINGS

RECORDS SEARCH

According to SCCIC records, the western portion of the project area had not been the subject of any systematic cultural resources surveys prior to this study while the eastern portion was included in a 2003 survey of the Fullerton College campus and the former Wilshire Junior High

School campus across Chapman Avenue to the south (OR-03509 in Fig. 4). That survey did not identify any cultural resources within or adjacent to the current project area, but it was focused on buildings and structures of historical age and did not include a systematic inspection of the vacant fields (Secord 2003). In any event, the 2003 survey is now more than 20 years old and therefore outdated for statutory compliance considerations today.

SCCIC records further indicate that, during a citywide historical building survey in 1979, both the FUHS campus and the Fullerton College campus were recorded into what is now the California Historical Resources Inventory and subsequently designated Sites 30-0157211 and 30-0157212, respectively (see App. 2). The records are focused primarily on the pre-WWII buildings of each campus, covering 24 acres of 37-acre high school campus and 46 acres of the 83-acre college campus. The majority of the buildings noted in the records were constructed in the 1930s under the auspices of the Works Progress Administration. The eastern portion of the project area, while technically not a part of Fullerton College today, was included in the boundaries of Site 30-0157212 at the time.

Among the 1930s buildings, Fullerton Auditorium on the FUHS campus, known then as the Louis E. Plummer Auditorium, was officially listed in the National Register of Historic Places in 1993 (NRHP No. 93001019; Fullerton Heritage n.d.). In 2020, the Pastoral California mural on the exterior wall of the auditorium was added to the National Register on its own merits (Fullerton Heritage n.d.). Then in 2023, the Fullerton College campus was listed in the National Register as a historic district (NRHP No. 100008709; Fullerton Heritage n.d.). In addition to the National Register listing, Fullerton Auditorium has also been designated by the City of Fullerton as Landmark No. 10 (Fullerton Heritage 2022).

With the one-mile scope of the records search, SCCIC record identify a total of 35 additional studies completed between 1977 and 2014, most of them conducted on very small areas in the fully urbanized city center, such as the sites of telecommunications facilities and other infrastructure features (Fig. 4). In all, the previous studies covered approximately 20% of the area within the scope of the records search and resulted in the recordation of 46 additional cultural resources.

The vast majority of these 46 localities, numbering 45 in total, dated exclusively to the historic period. They represent predominantly residential, commercial, civic, educational, or religious buildings, including many of the best recognized local historic landmarks in Fullerton, with a few archaeological sites such as refuse scatters also among them. Two of the buildings, Fullerton Auditorium (30-157210) and the John Hetebrink House (30-157213), are located on the FUHS and Fullerton College campuses, respectively, but neither of them is in close proximity to the project area. The one site that had a prehistoric (i.e., Native American) component consisted of a few lithic artifacts mixed with historic-period refuse. None of these 46 localities was found in the immediate vicinity of the project area. Therefore, none of them requires further consideration during this study.

HISTORICAL BACKGROUND RESEARCH

Historical sources suggest that development activities in the project vicinity began with the establishment of the FUHS campus in 1912-1913 and the Fullerton College Campus in 1934-1935

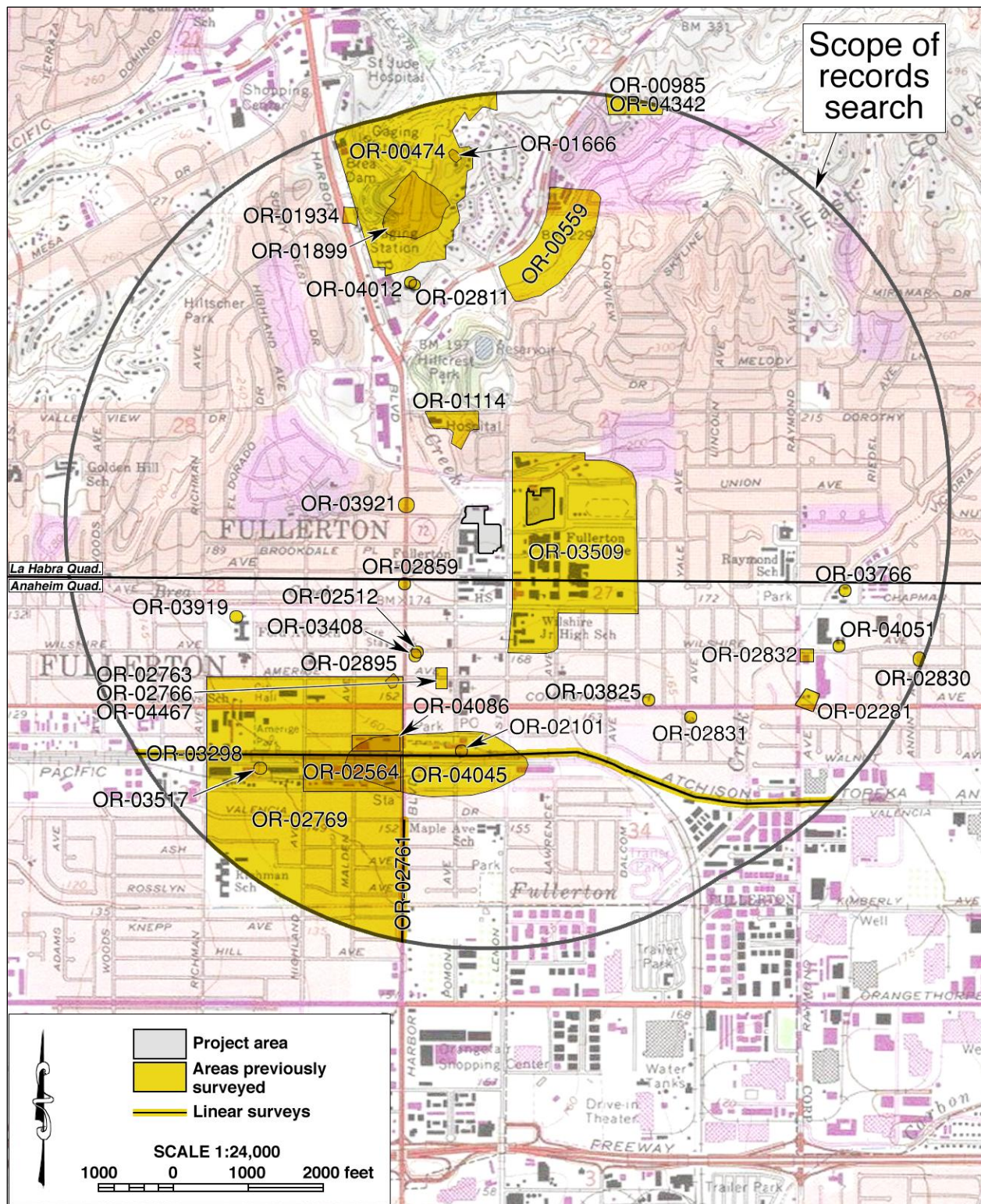


Figure 4. Previous cultural resources studies in the vicinity of the project area, listed by SCCIC file number. Locations of known historical/archaeological resources are not shown as a protective measure.

(Figs. 5-9). Prior to that, no human-made features were known to be present in or near either portion of the project area. In 1911, the FJUHS purchased 15 acres on Chapman Avenue for a new site of the FUHS for \$15,000, with a plan to spend \$100,000 on buildings designed by Los Angeles architect Norman E. Marsh, including an auditorium, assembly hall, scenic building, central heating plant, and polytechnic building (*Register* 1911). In March of 1913 the school opened to the public with a dedication ceremony with 900 people present to see the nearly completed \$253,000 school (*Anaheim Gazette* 1913). In the same year, the Fullerton Junior College opened for classes on the FUHS campus, thus becoming the oldest continuously operating community college in California (Fullerton Heritage n.d.)

Between 1920 and 1930, the City of Fullerton's population doubled from 4,415 to 10,860 (La Tour 2024). In the surrounding area, the citrus and petroleum industries were thriving. The

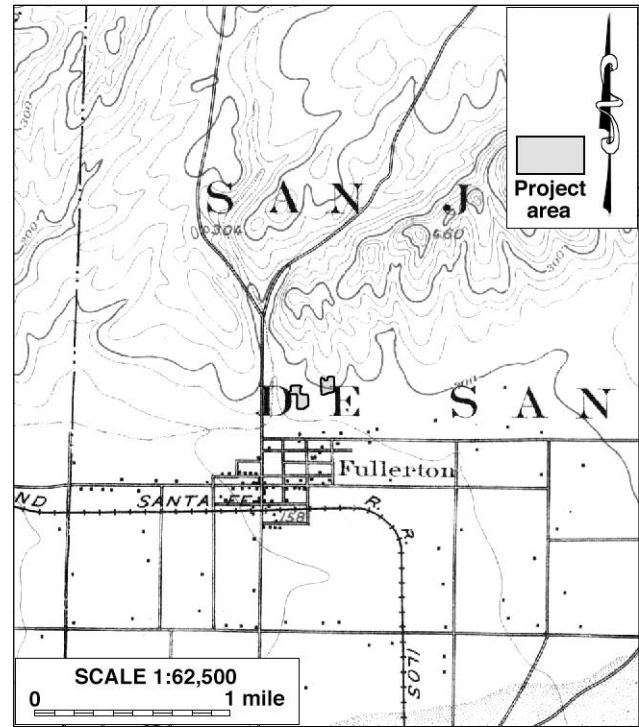


Figure 5. The project area and vicinity in 1894. (Source: USGS 1896)

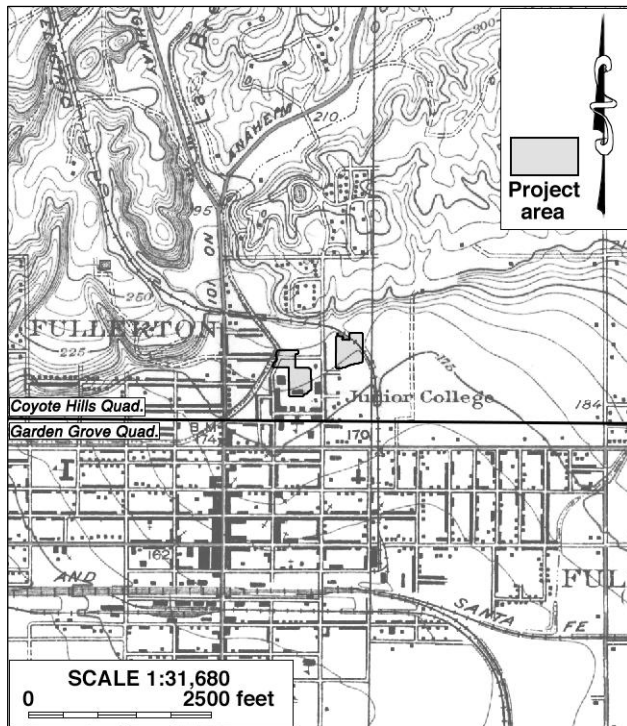


Figure 6. The project area and vicinity in 1932. (Source: USGS 1935a; 1935b)

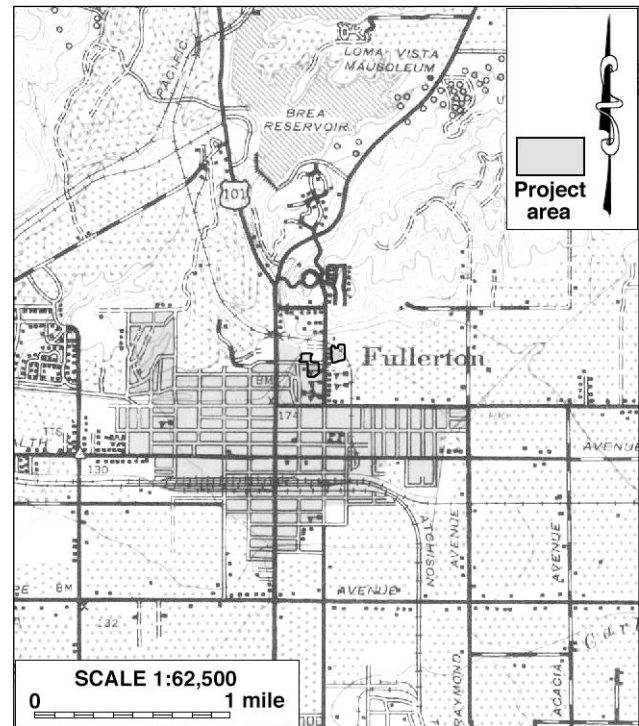


Figure 7. The project area and vicinity in 1939. (Source: USGS 1942)

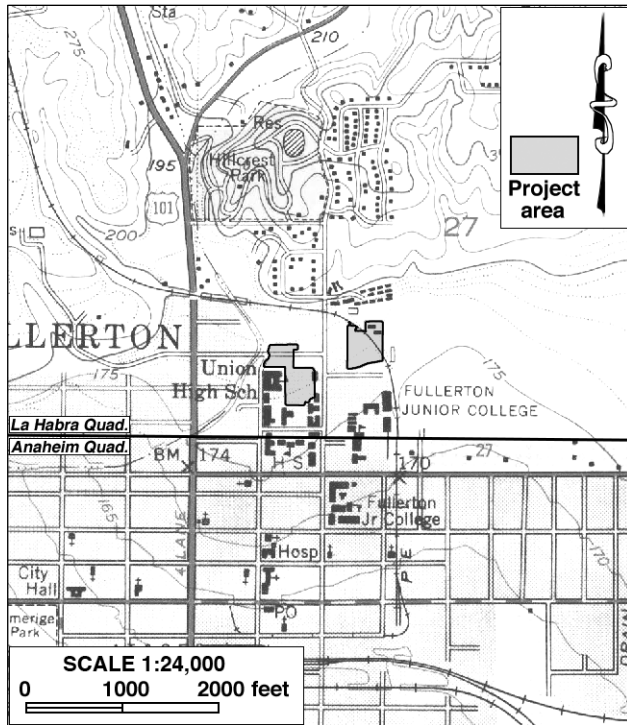


Figure 8. The project location and vicinity in 1947-1950
(Source: USGS 1950a; 1950b)

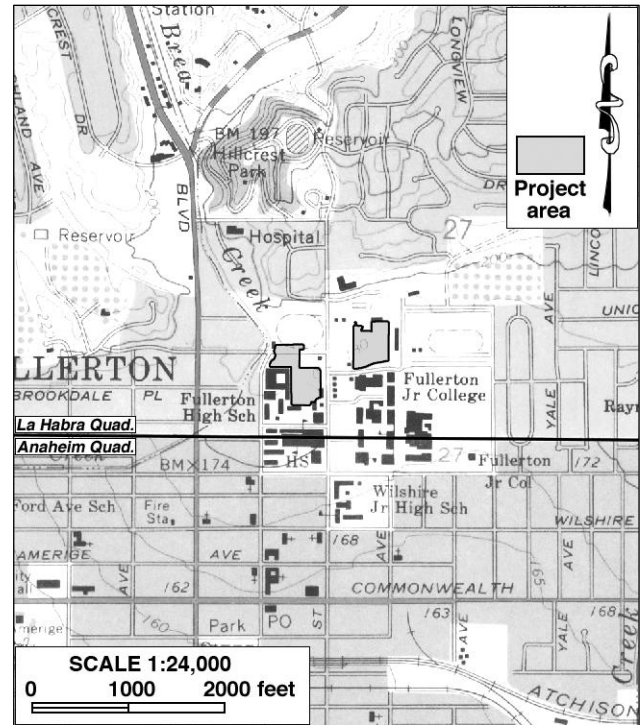


Figure 9. The project area and vicinity in 1963-1964.
(Source: USGS 1964; 1965)

Bastanchury ranch, in the present-day Sunny Hills area, was the largest orange grove in the world at 2,600 acres, and the Fullerton fields in the northern part of town produced a monthly average of 325,000 barrels of oil (La Tour 2024). These industries contributed to the rapid growth and through of the City of Fullerton and other communities nearby through the 1940s (Figs. 6, 7). During that period, the Fullerton Junior College established its own campus on 14.54 acres purchased for \$29,980 in 1934 (Fullerton Heritage n.d.). Construction of the first buildings on campus, designed by architect Harry K. Vaughn of Los Angeles and Fullerton, was carried out from 1935 to 1942, funded in part by the federal government through the various New Deal programs (Fullerton Heritage n.d.).

Citrus cultivation continued to be the dominant land use throughout the 1950s but began to wane as suburban residential and commercial development was evident by the early 1960s (Figs. 8, 9; NETR Online 1953; 1963). As the population increased, so did the need for public education. Fullerton places a strong emphasis on education, exemplified by the establishment of California State University, Fullerton, in 1957. This institution has since grown to become one of the largest universities in California, playing an essential role in the local economy and fostering a vibrant academic community that enriches the culture and demographics of the city. Like most of southern California and elsewhere, the period following World War II marked a significant surge in Fullerton's population, driven by an influx of returning veterans and their families. This demographic shift spurred the rapid expansion of residential neighborhoods, transforming Fullerton into a quintessential suburban community by the 1960s (City of Fullerton, n.d.; Fig. 9).

According to historical maps, at least one building of the FUHS was located in western portion of the project area during the early 1930s, and the eastern portion was partially occupied by the Pacific

Electric Railway (Fig. 7). By the 1950s, the FUHS building in the project area was no longer extant, while several buildings had appeared at the northern end of the eastern portion of the project area (Fig. 8; NETR Online 1953). Most of project area was by then a part of the FUHS-Fullerton College athletic complex (NETR Online 1953). The Pacific Electric Railway was dismantled sometime before 1963, and during the 1970s all of its remnants in and near the project boundaries were removed, as were the buildings in the eastern portion of the project area (Fig. 9; NETR Online 1953-1980).

Since the 1950s, the athletic complex has been modified significantly, along with its associated features such as parking lots (NETR Online 1953-2022; Google Earth 1995-2025). Historical aerial photographs demonstrate that the junior varsity and varsity softball fields in the western portion of the project area and the adjacent tennis courts, originally numbering ten in total, were built sometime between 1972 and 1980, while the parking lot further to the north was expanded and reconfigured during the same period (NETR Online 1972; 1980). The current configuration and appearance of the softball fields, however, dates only to the 1997-1998 era (NETR Online 1997; 1998). In 2020-2021, the easternmost tennis courts were removed to accommodate the construction of a new gymnasium, and the remaining courts were rebuilt and reconfigured, as was the parking lot (Google Earth 2022; 2021).

In the eastern portion of the project area, most of the baseball field has been in existence since at least 1953, but the northerly extension of the field was added in the 1970s (NETR Online 1972; 1980). The parking area to the north of the main baseball field also came into being in the 1970s (NETR Online 1972; 1980). Over the years, the areas adjacent to the project boundaries have undergone substantial changes as well, most notably the repeated reconstruction and reconfiguration of what are now the track and football field of the Fullerton Stadium at the northern end of the high school campus in the 1970s and in 2016-2017 and the construction of a four-level parking structure between the two portions of the project area in 2006-2006 (NETR Online 1972; 1980; Google Earth 2005-2017). As a result of these modifications, the visual and atmospheric character of the project area and its immediate vicinity has been constantly evolving over the past seven decades.

CONSULTATION WITH LOCAL COMMUNITY

As stated above, written inquiries were sent to Fullerton Heritage and the Community and Economic Development Department of the City of Fullerton, Planning Division, on December 8, 2025. In an e-mail reply on the same day, Andrew Kusch, Associate Planner with the City, requested that project details and plans be forwarded via e-mail. Mr. Kusch included several links regarding cultural resources on the city website, including the Local Register of Historical Resources and the procedure for review of proposals for a designated “Historical Landmark” and “Significant Properties,” as well as a table of properties listed on the National Register of Historic Places located near the campus. Information from these sources is incorporated into the historical background research results. To date, no response has been received from Fullerton Heritage.

FIELD INSPECTION

During the field survey, both portions of the project area were observed as having been extensively disturbed by past construction activities associated with the existing athletic fields and parking lots



Figure 10. Typical landscape in the project area.

(Fig. 10). On the west side of Lemon Street, the three FUHS buildings identified as predating WWII in age, namely Fullerton Auditorium at the corner of Chapman Avenue and Lemon Street and two classroom buildings at the corner of Chapman Avenue and Pomona Avenue, all of them from the 1930s (see App. 2), are located more than 400 feet from the western portion of the project area, with several multi-story buildings of much later vintages in between, including one built as recently as 2005 (Google Earth 2005).

To the east of Lemon Street, the four 1930s buildings identified in the National Register listing for Fullerton College are clustered around “the Quad” on Chapman Avenue, mixed with other buildings from the 2006-2011 era (Fullerton Heritage n.d.). The nearest among them is roughly 350 feet to the south of the eastern portion of the project area, again with other, multi-story buildings between them, most prominently the technology and engineering building from the 1953-1963 era (NETR Online 1953; 1963). At such distances, and with sufficient visual barrier in place, the proposed project would not present a substantial intrusion into the viewshed of the historic buildings of either campus.

MANAGEMENT CONSIDERATIONS

APPLICABLE STATUTORY/REGULATORY FRAMEWORK

CEQA establishes that “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC §21084.1). “Substantial adverse change,” according to PRC §5020.1(q), “means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be

impaired.” As defined by PRC §5020.1(j), “‘historical resource’ includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.”

More specifically, CEQA guidelines state that the term “historical resources” applies to any properties listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). In other words, buildings, structures, sites, or districts that belong to one or more of the following three categories are to be considered “historical resources” for the purposes of CEQA compliance (160 Cal. App. 4th 1051):

- Mandatory historical resources: properties that are listed in or formally determined to be eligible for listing in the California Register of Historical Resources;
- Presumptive historical resources: properties that are designated in an officially established local register, recognized by local ordinance, resolution, or general plan, or identified in a local survey prepared in accordance with PRC §5024.1(g), unless determined not to be historically or culturally significant by the lead agency upon a preponderance of the evidence;
- Discretionary historical resources: properties that are determined to be historically significant in the lead agency’s discretion, independent of any decision to list or designate them in a national, state, or local register of historical resources.

DISCUSSION AND CONCLUSION

In summary of the research results outlined above, both portions of the project area are encompassed in the boundaries of previously recorded cultural resources. The western portion is included in Site 30-0157211, the historical campus of the FUHS, while the eastern portion has been delineated as a part of Site 30-0157212, the historical campuses of neighboring Fullerton College. Both properties were recorded into what is now the California Historical Resources Inventory in the 1970s, with the records focused primarily on the pre-WWII buildings of each campus. Since then, the Fullerton College campus has been listed in the National Register of Historic Places as a district, as has a portion of the FUHS campus, specifically Fullerton Auditorium (formerly the Louis E. Plummer Auditorium) and the Pastoral California mural on its exterior wall.

As any property listed in the National Register is automatically included in the California Register of Historical Resources, Fullerton College, Fullerton Auditorium, and the mural clearly meet CEQA definition of “historical resources.” Existing records provide no evidence that the FUHS campus as a whole has been formally evaluated under the California Register criteria. Since the proposed project would not have any direct impact on the existing buildings, a systematic analysis and evaluation of the entire campus is beyond the scope of this study. In light of its 110-year-long history as the home of the first high school in the Fullerton area (and the second in Orange County), however, the campus can be presumed to qualify as a “historical resource” for the purpose of this project with a local level of significance.

The proposed project involves a very small portion of the two campuses, which combine to measure approximately 120 acres in total (with 70 acres included in the site boundaries of 30-0157211 and

30-0157212), and has little potential to affect the characters and integrity of the existing buildings. The athletic fields, parking lots, and other features currently extant in the project area mostly date to the post-1972 era, well after the established periods of significance for the FUHS and Fullerton College campuses, and all of them have undergone significant alterations in their configuration, appearance, and/or setting in the most recent decades. As secondary features of relatively late vintage and compromised historic integrity, they do not constitute major contributors to the historic significance of the campuses, nor do they demonstrate sufficient potential to be considered significant individually.

In addition, the new buildings to be constructed as a part of the project, located well behind Fullerton Auditorium and the other historical buildings of the FUHS, are relatively low in profile and by design will be architecturally compatible to the existing campus. As such, the new construction would not diminish the historic integrity of the FUHS campus or that of the historical buildings significantly. Based on these considerations, and pursuant to PRC §5020.1(q), CRM TECH recommends to the FJUHSd a conclusion that the proposed project will not cause a substantial adverse change in the significance of the FUHS and Fullerton College campuses. Therefore, CRM TECH further recommends that the project may be cleared to proceed in compliance with cultural resources provisions of CEQA.

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1965 Map: Anaheim, Calif. (7.5', 1:24,000); aerial photographs taken in 1963.
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1979 Map: Santa Ana, Calif. (120'x60', 1:250,000); 1959 edition revised.
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1981b Map: La Habra, Calif. (7.5', 1:24,000); 1964 edition, photorevised in 1981.

**APPENDIX 1:
PERSONNEL QUALIFICATIONS**

**PRINCIPAL INVESTIGATOR, HISTORY/ARCHITECTURAL HISTORY
Bai “Tom” Tang, M.A.**

Education

- | | |
|-----------|--|
| 1988-1993 | Graduate Program in Public History/Historic Preservation, University of California, Riverside. |
| 1987 | M.A., American History, Yale University, New Haven, Connecticut. |
| 1982 | B.A., History, Northwestern University, Xi'an, China. |
| 2000 | “Introduction to Section 106 Review,” presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno. |
| 1994 | “Assessing the Significance of Historic Archaeological Sites,” presented by the Historic Preservation Program, University of Nevada, Reno. |

Professional Experience

- | | |
|-----------|---|
| 2002- | Principal Investigator, CRM TECH, Riverside/Colton, California. |
| 1993-2002 | Project Historian/Architectural Historian, CRM TECH, Riverside, California. |
| 1993-1997 | Project Historian, Greenwood and Associates, Pacific Palisades, California. |
| 1991-1993 | Project Historian, Archaeological Research Unit, University of California, Riverside. |
| 1990 | Intern Researcher, California State Office of Historic Preservation, Sacramento. |
| 1990-1992 | Teaching Assistant, History of Modern World, University of California, Riverside. |
| 1988-1993 | Research Assistant, American Social History, University of California, Riverside. |
| 1985-1988 | Research Assistant, Modern Chinese History, Yale University. |
| 1985-1986 | Teaching Assistant, Modern Chinese History, Yale University. |
| 1982-1985 | Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China. |

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR, ARCHAEOLOGY
Daniel Ballester, M.S., RPA (Registered Professional Archaeologist)

Education

- | | |
|------|--|
| 2013 | M.S., Geographic Information System (GIS), University of Redlands, California. |
| 1998 | B.A., Anthropology, California State University, San Bernardino. |
| 1997 | Archaeological Field School, University of Las Vegas and University of California, Riverside. |
| 1994 | University of Puerto Rico, Rio Piedras, Puerto Rico. |
| 2021 | An Introduction to Geoarchaeology: How Understanding Basic Soils, Sediments, and Landforms Can Make You a Better Archaeologist; Society for American Archaeology online seminar. |
| 2007 | Certificate in Geographic Information Systems (GIS), California State University, San Bernardino. |
| 2002 | Historic Archaeology Workshop; presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base, at CRM TECH, Riverside, California. |

Professional Experience

- | | |
|-----------|---|
| 2025- | Principal Investigator, CRM TECH, Riverside/Colton, California. |
| 2002-2025 | Field Director/GIS Specialist, CRM TECH, Riverside/Colton, California. |
| 2011-2012 | GIS Specialist for Caltrans District 8 Project, Garcia and Associates, San Anselmo, California. |
| 2009-2010 | Field Crew Chief, Garcia and Associates, San Anselmo, California. |
| 2009-2010 | Field Crew, ECorp, Redlands. |
| 1999-2002 | Project Archaeologist, CRM TECH, Riverside, California. |
| 1998-1999 | Field Crew, K.E.A. Environmental, San Diego, California. |
| 1998 | Field Crew, A.S.M. Affiliates, Encinitas, California. |
| 1998 | Field Crew, Archaeological Research Unit, University of California, Riverside. |

Cultural Resources Management Reports

Field Director, co-author, and contributor to numerous cultural management reports since 2002.

Memberships

Society for American Archaeology; Society for California Archaeology.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Frank J. Raslich, M.A.

Education

- 2016-2010 Ph.D. candidate, Michigan State University, East Lansing.
2010 M.A., Anthropology, Michigan State University, East Lansing.
2005 B.A., Anthropology, University of Michigan, Flint.
- 2019 Grant and Research Proposal Writing for Archaeologists; Society for American Archaeology online seminar.
- 2014 Bruker Industries Tracer S1800 pXRF Training; presented by Dr. Bruce Kaiser, Bruker Scientific.

Professional Experience

- 2022-2022 Project Archaeologist/Report Writer, CRM TECH, Colton, California.
Archaeological Monitor, Agua Caliente Band of Cahuilla Indians, Palm Springs, California.
- 2014-2022 Board of Directors, Ziibiwing Center of Anishinabe Culture and Lifeways, Saginaw Chippewa Indian Tribe of Michigan.
- 2008-2021 Archaeological Consultant, Saginaw Chippewa Indian Tribe of Michigan.
2019 Archaeologist, Sault Tribe of Chippewa Indians and Little Traverse Bay Band of Odawa Indians.
- 2016-2018 Adjunct Lecturer, Michigan State University, East Lansing.
2017-2018 Adjunct Lecturer, University of Michigan, Flint.
- 2009-2017 Teaching Assistant, Michigan State University, East Lansing.
- 2008-2014 Research Assistant, Intellectual Property Issues in Cultural Heritage, Simon Fraser University, British Columbia, Canada.
- 2010-2013 Research Assistant, Michigan State University, East Lansing.
2009-2011 Archaeologist/Crew Chief, Saginaw Chippewa Indian Tribe of Michigan.

Publications

- 2017 Preliminary Results of a Handheld X-Ray Fluorescence (pXRF) Analysis on a Marble Head Sarcophagus Sculpture from the Collection of the Kresge Art Center, Michigan State University. Submitted to Jon M. Frey, Department of Art, Art History, and Design, Michigan State University, East Lansing.
- 2013 Geochemical Analysis of the Dickenson Group of the Upper Peninsula, Michigan: A Study of an Accreted Terrane of the Superior Province. *Geological Society of America Abstracts with Programs* 45:4(53).

Cultural Resources Management Reports

Primary author, co-author, and contributor to numerous cultural management reports since 2022.

PROJECT ARCHAEOLOGIST
Deirdre Encarnación, M.A.

Education

- 2003 M.A., Anthropology, San Diego State University, California.
- 2000 B.A., Anthropology, minor in Biology, with honors, San Diego State University, California.

- 2025 Certificate of Completion, “PredictionX: Lost without Longitude,” Harvard University online learning initiative.
- 2021 Certificate of Specialization, Kumeyaay Studies, Cuyamaca College, California.
- 2001 Archaeological Field School, San Diego State University.
- 2000 Archaeological Field School, San Diego State University.

Professional Experience

- 2016- Archaeological Consultant, Friends of Maha’ulepu, Koloa, Hawai’i.
- 2004- Project Archaeologist/Report Writer, CRM TECH, Riverside/Colton, California.
- 2001-2003 Part-time Lecturer, San Diego State University, California.
- 2001 Research Assistant for Dr. Lynn Gamble, San Diego State University.
- 2001 Archaeological Collection Catalog, San Diego State University Foundation.

Presentations

- 2023 “The Kumeyaay-Critical Awareness, Critical Activation,” Salaam, San Diego College of Continuing Education.
- 2023 “A Look at the Three Wise Men and Their Global Celebrations,” The Epiphany
- 2022 “The Original Beach Town: San Diego’s Coastal Heritage,” San Diego Archaeological Center Living Room Lecture.

Memberships

Society for California Archaeology; Society for Hawaiian Archaeology; California Native Plant Society.

PROJECT ARCHAEOLOGIST/HISTORIAN/FIELD DIRECTOR

Hunter C. O'Donnell, B.A.

Education

2016-2015 M.A. Program, Applied Archaeology, California State University, San Bernardino.
2015 B.A. (*cum laude*), Anthropology, California State University, San Bernardino.
2012 A.A., Social and Behavioral Sciences, Mt. San Antonio College, Walnut, California.
2011 A.A., Natural Sciences and Mathematics, Mt. San Antonio College, Walnut, California.

Professional Experience

2025- Field Director, CRM TECH, Colton, California.
2022-2025 Field Crew Chief, CRM TECH, Colton, California.
2017- Project Archaeologist/Historian, CRM TECH, Colton, California.
2016-2018 Graduate Research Assistant, Applied Archaeology, California State University, San Bernardino.
2016-2017 Cultural Intern, Cultural Department, Pechanga Band of Luiseño Indians, Temecula, California.
2015 Archaeological Intern, U.S. Bureau of Land Management, Barstow, California.
2015 Peer Research Consultant: African Archaeology, California State University, San Bernardino.

PROJECT ARCHAEOLOGIST

Eulices Lopez, B.S.

Education

2015 B.S., Anthropology, University of California, Riverside.
2013 A.A., Anthropology, East Los Angeles College, Monterey Park, California.

Professional Experience

2024- Project Archaeologist/Native American Liaison, CRM TECH, Colton, California.
2017-2024 Deputy Coordinator, Eastern Information Center, University of California, Riverside.
2017-2024 Director Assistant, Archaeological Research Unit, University of California, Riverside.
2017-2024 Curator Facilitator, Archaeological Curation Unit, University of California, Riverside.
2014-2015 Information Officer, Eastern Information Center, University of California, Riverside.
2013 Lithic Analyst Assistant, Anthropology Department, East Los Angeles College, Monterey Park, California.
2012 Hominid Cast Fossils Cataloger, Anthropology Department, East Los Angeles College, Monterey Park, California.

APPENDIX 2

**CALIFORNIA HISTORICAL RESOURCES INVENTORY
RECORD FORMS**

Sites 30-0157211 and 30-0157212

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

HISTORIC RESOURCES INVENTORY

IDENTIFICATION

(State use only) Ser _____ Site _____ Mo. _____ Yr. _____
UTM _____ Q _____ NR _____ SHL _____
Lat _____ Lon _____ Era _____ Sig _____
Adm _____ T2 _____ T3 _____ Cat _____ HABS _____ HAER _____ Fed _____
11/414720/3748920 11/414800/3748365
11/415000/3748900 11/415000/3748365

1. Common name: Fullerton Union High School
2. Historic name, if known: Fullerton High School
3. Street or rural address 201 East Chapman
City: Fullerton ZIP: 92634 County: Orange
4. Present owner, if known: Fullerton Union High School District Address: 201 East Chapman
City: Fullerton ZIP: 92634 Ownership is: Public ☒ Private ☐
5. Present Use: School Original Use: School
- Other past uses: _____

DESCRIPTION

6. Briefly describe the present physical appearance of the site or structure and describe any major alterations from its original condition:

The high school campus is bounded by Chapman Ave. on the south, Lemon St. on the east, Berkeley to the north and Pomona Ave. on the west with the primary focus of the school toward Chapman Ave. The campus is fronted by a broad deep expanse of grass dotted with a variety of trees. The buildings facing Chapman are all two-story Spanish Colonial revival structures. The class rooms at the southwest corner of the campus and Plummer Auditorium at the southeast are all that remain of the W.P.A. buildings built in the 1930's. These W.P.A. buildings were built of concrete and have red tile roofs. The two W.P.A. classrooms have centrally located cupolas with copper domes, decorative dentils, and covered arch walkways. Plummer Auditorium is an ornate Spanish colonial building with a 3-story clock tower. See continuation.

7. Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



8. Approximate property size:

Lot size (in feet) Frontage _____
Depth _____
or approx. acreage 24.

9. Condition: (check one)

a. Excellent ☐ b. Good ☒ c. Fair ☐
d. Deteriorated ☐ e. No longer in existence ☐

10. Is the feature a. Altered? ☒ b. Unaltered? ☐

11. Surroundings: (Check more than one if necessary)

a. Open land ☐ b. Scattered buildings ☐
c. Densely built-up ☐ d. Residential ☒
e. Commercial ☐ f. Industrial ☐

g. Other ☒ Jr. College & Jr. High Scho

12. Threats to site:

a. None known ☒ b. Private development ☐
c. Zoning ☐ d. Public Works project ☐ C-9
e. Vandalism ☐ f. Other ☐ 7

NOTE: The following (Items 14-19) are for structures only.

14. Primary exterior building material: a. Stone ☐ b. Brick ☐ c. Stucco ☒ d. Adobe ☐ e. Wood ☐
f. Other ☐
15. Is the structure: a. On its original site? ☒ b. Moved? ☐ c. Unknown? ☐
16. Year of initial construction 1912 This date is: a. Factual ☒ b. Estimated ☐
17. Architect, (if known): Norman Marsh, Carleton M. Winslow
18. Builder (if known): Unknown
19. Related features: a. Barn ☐ b. Carriage house ☐ c. Outhouse ☐ d. Shed(s) ☐ e. Formal garden(s) ☐
f. Windmill ☐ g. Watertower/tankhouse ☐ h. Other ☐ i. None ☐

SIGNIFICANCE

20. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site when known):
The Fullerton Union High School District was established in 1893 at which time all grades attended the same building for classes. The original brick school building was located at the present site of Amerige Park and was replaced shortly after 1910 by a series of small wooden bungalows, one of which is now located in the 400 block of East Amerige. A new central location for the high school on Chapman Ave. was chosen and purchased in early 1912 and in March of that year segregated contracts were let for the construction of a group of six classroom buildings, study hall, auditorium, gymnasium, boiler house, pump house and garage. Norman Marsh was the architect of this first series of buildings, Carleton M. Winslow was the architect for later additions, one of which was Plummer Auditorium, a W.P.A. project. Today only three of the original high school buildings remain, the auditorium and two classroom structures.

21. Main theme of the historic resource: (Check only one): a. Architecture ☐ b. Arts & Leisure ☐
c. Economic/Industrial ☐ d. Exploration/Settlement ☐ e. Government ☐ f. Military ☐
g. Religion ☐ h. Social/Education ☒

22. Sources: List books, documents, surveys, personal interviews, and their dates:

Interview with Darrel McGavran - November 1978
Fullerton News Tribune - June 17, 1976

23. Date form prepared: Mar. 1979 By (name): Emily Miller
Address: 303 W. Commonwealth City: Fullerton ZIP: 92632
Phone: 714/525-7171 Organization: Fullerton Historical Building Survey

(State Use Only)

Description (continued)

The newer structures further north are built primarily of concrete and are also done in the Spanish Colonial style. To the center of the campus is an open court area with grass and winding concrete sidewalks. Above this area the gymnasium, industrial arts buildings, and new tennis courts, with the new football stadium north of these. The student and faculty parking lot is located on the east side, facing the Junior College.

HISTORIC RESOURCES INVENTORY

30-157212

Serial _____ Site _____ Mo _____ Yr _____
UTM _____ G _____ NR _____ SH _____
Lat _____ Lon _____ Era _____ Sig _____
Adm _____ T2 _____ T3 _____ Cat _____ HAB5 _____ HAER _____ Fed _____
11/415000/3748900 11/415000/3748380
11/415530/3748380

IDENTIFICATION

- Common name: Fullerton Community College
- Historic name, if known: Fullerton Junior College
- Street or rural address: 321 East Chapman Avenue
City: Fullerton ZIP: 92634 County: Orange
- Present owner, if known: No. Org. County Community College District Address: 1000 North Lemon Street
City: Fullerton ZIP: 92634 Ownership is: Public ☒ Private ☐
- Present Use: School Original Use: School
- Other past uses: _____

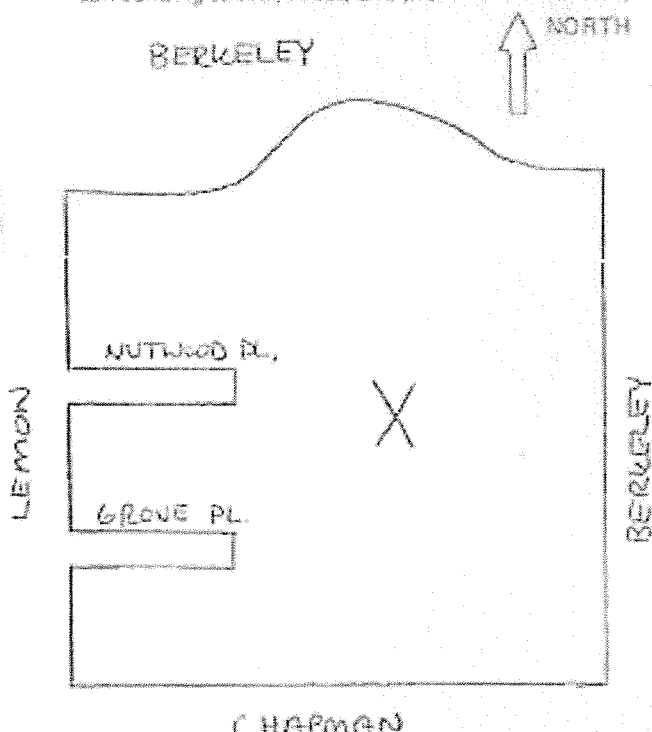
DESCRIPTION

- Briefly describe the present physical appearance of the site or structure and describe any major alterations from its original condition:

The campus is bounded by Chapman on the south, Berkeley Avenue on the east and north and Lemon on the west. The main portion of the campus is built around a center court yard with buildings radiating out from this point. The court yard is planted with grass and mature trees and divided by cement walks. The main classroom structures are situated in the southwest corner of the campus. To the east are the tennis courts, handball courts, and pool. North of these are the baseball field and then further north the football field. Student parking is confined to the perimeter of the campus. Of the buildings on campus, four are all that remain of the WPA structures which were designed by Harry Vaughan, a local architect. They are Administration Building, Business Education, Science, and Student Center. These were all done in the Spanish Colonial style. They were constructed of concrete and had red tile roofs. Small cupolas with copper domes

(Continued)

- Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



- Approximate property size:

Lot size (in feet) Frontage _____
Depth _____
or approx. acreage 46

- Condition: (check one)

a. Excellent ☐ b. Good ☒ c. Fair ☐
d. Deteriorated ☐ e. No longer in existence ☐

- Is the feature a. Altered? ☒ b. Unaltered? ☒

- Surroundings: (Check more than one if necessary)

a. Open land ☐ b. Scattered buildings ☐
c. Densely built-up ☒ d. Residential ☒
e. Commercial ☐ f. Industrial ☐
g. Other ☒ High School & Junior High School

- Threats to site:

a. None known ☒ b. Private development ☐
c. Zoning ☐ d. Public Works project ☐
e. Vandalism ☐ f. Other ☐

C-1

NOTE: The following (Items 14-19) are for structures only.

14. Primary exterior building material: a. Stone ☐ b. Brick ☒ c. Stucco ☐ d. Adobe ☐ e. Wood ☐
f. Other ☒ Concrete
15. Is the structure: a. On its original site? ☐ b. Moved? ☐ c. Unknown? ☐
16. Year of initial construction 1935 This date is: a. Factual ☒ b. Estimated ☐
17. Architect (if known): Harry Vaughan
18. Builder (if known): W.P.A.
19. Related features: a. Barn ☐ b. Carriage house ☐ c. Outhouse ☐ d. Shed(s) ☐ e. Formal garden(s) ☐
f. Windmill ☐ g. Watertower/tankhouse ☐ h. Other ☐ i. None ☒

SIGNIFICANCE

20. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site when known):

The Fullerton Junior College was established in 1913 and is the oldest continuously operating junior college in the United States. Enabling Legislation for the Junior College System had been passed in 1907 but it was only in 1913 that the Fullerton School System adopted a two-year post graduate program which became the Junior College. The College's only building for years was a two-story structure originally part of the high school. In 1934 the College District acquired the current site and started constructing a new campus. Harry Vaughan, originally working under Carleton Winslow on the High School, designed the Junior College in the same Spanish Colonial style. Most of the original structures were funded through the W.P.A.

21. Main theme of the historic resource: (Check only one): a. Architecture ☒ b. Arts & Leisure ☐
c. Economic/Industrial ☐ d. Exploration/Settlement ☐ e. Government ☐ f. Military ☐
g. Religion ☐ h. Social/Education ☒

22. Sources: List books, documents, surveys, personal interviews, and their dates:

Plummer, Louis B. Fullerton Union High School and Fullerton College. 1949
Orange County Review, 1922

23. Date form prepared: March, 1979 By (name): Emily Miller
Address: 303 West Commonwealth City: Fullerton ZIP: 92632
Phone: (714) 525-7171 Organization: Fullerton Historical Building Survey

(State Use Only)

Part 6 (Continued) Page One

top the administration and business buildings. Decorative relief work and tile mosaic enhance many of the entrances and elaborate copper rain gutters and downspouts add fine detail. The remainder of the buildings, built in the 1950's and 60's, are a mixture of modern and mission revival architecture and none are particularly outstanding. The campus is well planted with a variety of mature trees and shrubs, all neatly manicured.

APPENDIX C

NOISE

APPENDIX

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N O I S E F U N D A M E N T A L S

Fundamentals of Noise

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. 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.”

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **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, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second (1×10^{-6} in/sec).
- **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 which, 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 L_{10} 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.”

- **Maximum Sound Level ($L_{\max}$).** The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.
- **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. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} 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 rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **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.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 **Noise Perceptibility**

Change in dB	Noise Level
± 3 dB	Barely perceptible increase
± 5 dB	Readily perceptible increase
± 10 dB	Twice or half as loud
± 20 dB	Four times or one-quarter as loud

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are “felt” more as a vibration. Similarly, though 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.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people’s judgments of the “noisiness” of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

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, respectively. These “n” values are typically used to demonstrate compliance for stationary noise sources with many cities’ noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 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 (or “penalty”) of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00

PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

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 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. 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 dB for each doubling of distance over a reflective (“hard site”) surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

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 the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, though generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. 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. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

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 and RMS is typically more suitable for evaluating human response.

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 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	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: California Department of Transportation (Caltrans). 2020, April. *Transportation and Construction Vibration Guidance Manual*. Prepared by ICF International.

C O N S T R U C T I O N M O D E L I N G R E S U L T S

FHS-08.0 Fullteron Union HS - Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	RCNM Reference				
	Noise Level	Receptor to North	Receptor to East	Receptor to South	Receptor to West
<i>Distance in feet</i>	50	445	700	335	225
Demolition	84	65	61	67	71
Site Prep	83	64	60	66	70
Grading	84	65	61	67	71
<i>Distance in feet</i>	50	425	650	265	175
Building Construction	79	60	57	65	68
Architectural Coating	77	58	55	63	66
<i>Distance in feet</i>	50	400	600	200	95
Paving	80	62	58	68	74
<i>Distance in feet</i>	50	450	300	95	200
Light Pole Installation	76	57	60	70	64
Other					

Attenuation calculated through Inverse Square Law: $L_p(R2) = L_p(R1) - 20\log(R2/R1)$

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Demolition

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor at 50 feet	Residential	65.0	60.0	55.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
Calculated (dBA)			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Site Preparation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
-----	-----	-----	-----	-----		
Receptor at 50 feet	Residential	65.0	60.0	55.0		
Equipment						

Description	Impact Device	Usage (%)	Spec	Actual	Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Lmax (dBA)		
-----	-----	-----	-----	-----	-----	-----
Grader	No	40	85.0		50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Equipment		Noise Limits (dBA)								Noise Limit Exceedance (dBA)					
		Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
		Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		85.0	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor at 50 feet	Residential	65.0	60.0	55.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Dozer	No	40		81.7	50.0	0.0

Results

			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
Calculated (dBA)			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	83.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor at 50 feet	Residential	65.0	60.0	55.0

Description	Impact Device	Usage (%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	50.0	0.0
Generator	No	50		80.6	50.0	0.0
Welder / Torch	No	40		74.0	50.0	0.0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74.0	70.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	79.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
-----	-----	-----	-----	-----		
Receptor at 50 feet	Residential	65.0	60.0	55.0		
Equipment						

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
-----	-----	-----	-----	-----	-----	-----
Compressor (air)	No	40		77.7	50.0	0.0
Compressor (air)	No	40		77.7	50.0	0.0

Results

Equipment	Noise Limits (dBA)								Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor at 50 feet	Residential	65.0	60.0	55.0

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Equipment		
				Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	50.0	0.0
Paver	No	50		77.2	50.0	0.0
Drum Mixer	No	50		80.0	50.0	0.0

Results

Equipment		Noise Limits (dBA)								Noise Limit Exceedance (dBA)					
		Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
		Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller		80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver		77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drum Mixer		80.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		80.0	79.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/26/2026
Case Description: FHS-08.0 Fullerton Union HS Light Pole Installation

**** Receptor #1 ****

		Baselines (dBA)			
Description		Land Use	Daytime	Evening	Night
-----		-----	-----	-----	-----
Reference Distance	Receptor at 50 ft	Residential	65.0	55.0	50.0

		Equipment				

Description		Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
-----		-----	-----	-----	-----	-----
Crane		No	16		80.6	50.0
Backhoe		No	40		77.6	50.0

Results

		Noise Limits (dBA)								Noise Limit Exceedance (dBA)					
		Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Equipment		Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
-----		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		80.6	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

FHS-08.0 Fullteron Union HS - Vibration Damage Attenuation Calculations

Levels, PPV (in/sec)

<i>Distance in feet</i>	Vibration Reference Level	Receptor to North	Receptor to East	Receptor to South	Receptor to West
	at 25 feet	400	300	95	95
Vibratory Roller	0.21	0.003	0.005	0.028	0.028
Hoe Ram	0.089	0.001	0.002	0.012	0.012
Large Bulldozer	0.089	0.001	0.002	0.012	0.012
Caisson Drilling	0.089	0.001	0.002	0.012	0.012
Loaded Trucks	0.076	0.001	0.002	0.010	0.010
Jackhammer	0.035	0.001	0.001	0.005	0.005
Small Bulldozer	0.003	0.000	0.000	0.000	0.000

T R A F F I C M O D E L I N G R E S U L T S

Traffic Noise Calculator: FHWA 77-108																											Fullerton Union High School Field Improvements and New Athletic Building (FHS-08.0) Existing No Project Traffic Noise Traffic Conditions																
	Output						Inputs																	Auto Inputs																			
	dBA at 50 feet			Distance to CNEL Contour																																							
ID	L _{eq} 24hr	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance																			
1	65.4	68.2	68.9	42	91	195	E. Chapman Avenue		N. Harbor Blvd	N. Lemon Street	24,907	30	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44																			
2	64.3	67.1	67.7	35	76	164		N. Berkeley Avenue	E. Chapman Avenue	13,959	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44																				
3	53.9	56.7	57.4	7	16	34	N. Pomona Avenue		N. Union Avenue	E. Chapman Avenue	2,614	25	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	2	Soft	50	0.5	20																			
4	64.7	67.5	68.2	38	82	176	N. Berkeley Avenue		N. Harbor Blvd	N. Lemon Street	15,526	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44																			

Traffic Noise Calculator: FHWA 77-108																								Fullerton Union High School Field Improvements and New Athletic Building (FHS-08.0) Existing With Project Traffic Noise Traffic Conditions													
	Output						Inputs														Auto Inputs																
	dBA at 50 feet			Distance to CNEL Contour																																	
ID	L _{eq} 24hr	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance													
1	65.4	68.2	68.9	42	91	195	E. Chapman Avenue		N. Harbor Blvd	N. Lemon Street	24,972	30	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44													
2	64.3	67.1	67.8	36	77	165		N. Berkeley Avenue	E. Chapman Avenue	14,047	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														
3	54.0	56.8	57.4	7	16	34	N. Pomona Avenue		N. Union Avenue	E. Chapman Avenue	2,631	25	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	2	Soft	50	0.5	20													
4	64.7	67.5	68.2	38	82	177	N. Berkeley Avenue		N. Harbor Blvd	N. Lemon Street	15,566	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44													

Traffic Noise Calculator: FHWA 77-108																									Fullerton Union High School Field Improvements and New Athletic Building (FHS-08.0) Opening Year 2028 No Project Traffic Noise Traffic Conditions													
	Output						Inputs																Auto Inputs															
	dBA at 50 feet			Distance to CNEL Contour																																		
ID	L _{eq} 24hr	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance														
1	65.5	68.3	69.0	43	92	199	E. Chapman Avenue		N. Harbor Blvd	N. Lemon Street	25,662	30	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														
2	64.4	67.2	67.9	36	78	167		N. Berkeley Avenue	E. Chapman Avenue	14,382	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44															
3	54.1	56.9	57.5	7	16	34	N. Pomona Avenue		N. Union Avenue	E. Chapman Avenue	2,693	25	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	2	Soft	50	0.5	20														
4	64.9	67.7	68.3	39	83	180	N. Berkeley Avenue		N. Harbor Blvd	N. Lemon Street	15,996	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														

Traffic Noise Calculator: FHWA 77-108																									Fullerton Union High School Field Improvements and New Athletic Building (FHS-08.0) Opening Year 2028 with Project Traffic Noise Traffic Conditions													
	Output						Inputs															Auto Inputs																
	dBA at 50 feet			Distance to CNEL Contour																																		
ID	L _{eq} 24hr	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway			Segment From - To	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance														
1	65.5	68.3	69.0	43	92	199	E. Chapman Avenue		N. Harbor Blvd	N. Lemon Street	25,728	30	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														
2	64.4	67.2	67.9	36	78	168		N. Lemon Street	N. Berkeley Avenue	E. Chapman Avenue	14,473	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														
3	54.1	56.9	57.6	7	16	34	N. Pomona Avenue		N. Union Avenue	E. Chapman Avenue	2,710	25	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	2	Soft	50	0.5	20														
4	64.9	67.7	68.3	39	84	180	N. Berkeley Avenue		N. Harbor Blvd	N. Lemon Street	16,038	35	0.0%	96.0%	2.5%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	0.5	44														

APPENDIX D

TRAFFIC IMPACT STUDY

APPENDIX

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FULLERTON UNION HIGH SCHOOL

FIELD IMPROVEMENTS AND NEW ATHLETIC BUILDING PROJECT

TRAFFIC CIRCULATION MEMO

Prepared for:
PlaceWorks

Prepared by:
DJ&A, P.C.



January 13, 2026



Table of Contents

1. Project Description	1
2. Traffic Analysis: Approach and Methodology	3
2.1 Average Daily Traffic.....	3
2.1.1 Roadway descriptions	5
3. Traffic Analysis: Without Project.....	6
3.1 Existing Conditions.....	6
3.1.1 Average Daily Traffic	6
3.2 Opening Year (2028) Without Project.....	6
3.2.1 Average Daily Traffic	6
4. Traffic Analysis: With Project	7
4.1 Trip Generation and Distribution	7
4.2 Existing Year (2025) With Project	7
4.2.1 Average Daily Traffic	7
4.3 Opening Year (2028) With Project.....	8
4.3.1 Average Daily Traffic	8
5. Additional Analyses.....	8
5.1 VMT Screening	8
5.2 Pedestrian and Site Circulation	9
5.2.1 Existing conditions	9
5.2.2 Analysis.....	10
6. Conclusion.....	11
References.....	12

List of Tables

Table 1 Roadway ADT: Existing Conditions (2025).	6
Table 2 Estimated Roadway ADT Opening Year with No Project.	6
Table 3 Trip Generation and Distribution.	7
Table 4 Estimated Roadway ADT Existing Year (2025) With Project.	8
Table 5 Estimated Roadway ADT, by roadway and scenario.....	8

List of Figures

Figure 1 Project site diagram.....	2
Figure 2 Study roadway segments.....	4

Appendices

Appendix A – Roadway Segment Counts

Appendix B – ITE Trip Generation Reports

1. Project Description

Fullerton Union High School (FUHS) is located in Fullerton, California. The approximately 31.9-acre campus serves 9th through 12th graders and has an enrollment capacity of 2,187 students. The Fullerton Joint Union High School District is proposing improvements to FUHS's sports fields as part of the FUHS Field Improvements and New Athletic Building Project (proposed project). These improvements include the addition of a new two-story athletic building that features locker rooms, coaches offices, training areas, storage areas, classrooms, a golf simulator, and more. The athletic building addition is estimated to increase FUHS's enrollment capacity by approximately 54 students. The proposed project also includes the addition of eight lighting fixtures at the varsity and junior varsity softball fields, and another eight lighting fixtures at the varsity and junior varsity baseball field. The addition of field lighting fixtures would accommodate practices during late afternoon and evening hours for approximately 17 sports and activities, such as soccer, football, track and field, and band. These practices would not be new events, instead they would be existing events that could be shifted in time to occur later in the evening with the new field lighting.

The proposed project would encompass approximately 4.2 acres of the western portion of the FUHS campus, and approximately 2.5 acres of the eastern portion of the FUHS campus, east of N Lemon St, for total of approximately 6.7 acres. The proposed project locations and Fullerton Union High School are depicted in Figure 1. Construction of the proposed project would occur in a single phase and is anticipated to start in June 2026 and end in January 2028.

The primary purpose of this study is to assess the potential impacts of the proposed project on traffic and circulation conditions in the vicinity of FUHS.



LEGEND

- Fullerton Union High School Boundary
- Project Boundary

Figure 1: Fullerton Union High School Proposed Project Area

2. Traffic Analysis: Approach and Methodology

This traffic analysis reports average daily traffic conditions and trip distribution for a range of scenarios. Traffic conditions for study area roadway segments were evaluated for each of the following scenarios:

- Existing Conditions (2025) without Project
- Opening Year (2028) without Project
- Existing Conditions (2025) with Project
- Opening Year (2028) with Project

For the purpose of this analysis, the project opening year for traffic conditions is 2028. This is because the proposed project's construction period is scheduled to be completed during the 2028 calendar year. An ambient growth rate of 1% per year was used to forecast the future volumes.

The proposed project is not anticipated to significantly change the number of AM or PM peak hour trips. As such, a subsequent analysis of off-site peak hour intersection performance due to the lighting structures is not necessary per the City of Fullerton's requirements.

2.1 Average Daily Traffic

Average daily traffic (ADT) data was collected on four roadway segments surrounding the study area for a full 24-hour period on Wednesday, November 12, 2025. The roadway segment locations are depicted in Figure 2 and listed below:

- A. E Chapman Ave, between N Harbor Blvd and N Lemon St
- B. N Lemon St, between N Berkeley Ave and E Chapman Ave
- C. N Pomona Ave, between E Union Ave and E Chapman Ave
- D. N Berkeley Ave, between N Harbor Blvd and N Lemon St

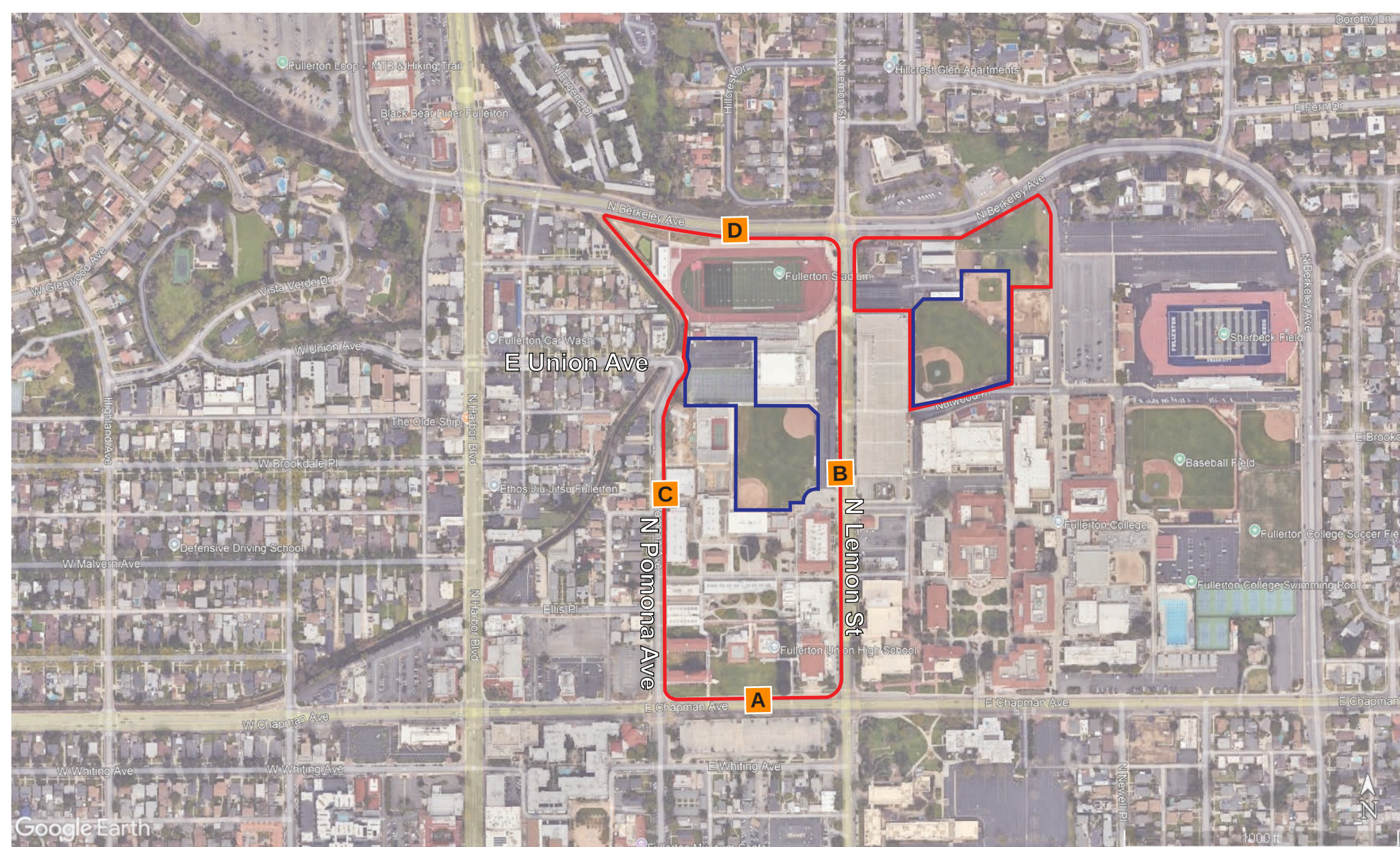


Figure 2: Roadway Segment Locations



2.1.1 Roadway descriptions

The study area roadways are described below with respect to existing geometry, pedestrian and bicycle facilities, speed limit, parking facilities, and adjacent land uses.

E Chapman Ave

E Chapman Ave is a four-lane roadway that runs east and west and is located south of the project site. The surrounding land use is made up of primarily institutional uses. The road's speed limit is 30 miles per hour. E Chapman Ave has sidewalks on both sides of the road, and there are no bike lanes. Roadside parking is not permitted on either side of the street.

N Lemon St

N Lemon St is a four-lane roadway that runs north and south and is located in the heart of the project site. The road is situated west of the high school's baseball field and east of the softball fields, and it provides access to the school's eastern parking lot. The surrounding land use is made up of primarily institutional uses. The road's speed limit is 35 miles per hour. N Lemon St has sidewalks on both sides of the road, and there are no bike lanes. Roadside parking is not permitted on either side of the street.

N Pomona Ave

N Pomona Ave is a two-lane roadway that runs north and south and is located west of the project site. The surrounding land use is made up of residential and institutional uses. The road's speed limit is 25 miles per hour. N Pomona Ave has sidewalks on both sides of the road, and there are no bike lanes. On the roadside adjacent to the high school, roadside parallel parking is not permitted between 7:00 a.m. and 8:00 a.m., and between 1:00 p.m. and 3:00 p.m. on weekdays. On the roadside across from the high school, parking is limited to one-hour between 8:00 a.m. and 4:00 p.m. and is not limited during the hours outside of this window. On both sides of the road, roadside parking is not permitted between noon and 4:00 p.m. on Wednesdays for street sweeping.

N Berkeley Ave

N Berkeley Ave is a two-lane roadway between N Lemon St and E Chapman Ave and a four lane street between Habor Boulevard and N Lemon St. The roadway runs north and south to the east of the project site and then curves north of the project site to become an east-west roadway. The surrounding land use is made up of institutional and residential uses. The road's speed limit is 35 miles per hour. N Berkeley Ave has sidewalks and dedicated bike lanes on both sides of the road. Both sides of the street have a designated lane for roadside parallel parking.

3. Traffic Analysis: Without Project

This section of the memo summarizes the traffic analysis results for scenarios with no project:

- Existing Conditions (2025) without Project
- Opening Year (2028) without Project

3.1 Existing Conditions

3.1.1 Average Daily Traffic

The average daily traffic (ADT) volumes for the study area roadway segments under Existing Conditions are summarized in Table 1. Existing roadway segment volumes are summarized from 24-hour counts which can be found in Appendix A. This scenario will serve as the base against which all subsequent scenarios are assessed.

Table 1 Roadway ADT: Existing Conditions (2025).

Roadway	Source	Date	Existing ADT
E Chapman Ave, between N Harbor Blvd and N Lemon St	AimTD LLC	11/12/25	24,907
N Lemon St, between N Berkeley Ave and E Chapman Ave	AimTD LLC	11/12/25	13,959
N Pomona Ave, between E Union Ave and E Chapman Ave	AimTD LLC	11/12/25	2,614
N Berkeley Ave, between N Harbor Blvd and N Lemon St	AimTD LLC	11/12/25	15,526

3.2 Opening Year (2028) Without Project

3.2.1 Average Daily Traffic

The ADT volumes for the study area roadway segments in the Opening Year (2028) No Project scenario are summarized in Table 2. Year 2028 No Project traffic volumes were estimated by applying an assumed 1% annual growth rate to Existing Year (2025) counts.

Table 2 Estimated Roadway ADT Opening Year with No Project.

Roadway	Existing ADT	2028 No Project
E Chapman Ave, between N Harbor Blvd and N Lemon St	24,907	25,662
N Lemon St, between N Berkeley Ave and E Chapman Ave	13,959	14,382
N Pomona Ave, between E Union Ave and E Chapman Ave	2,614	2,693
N Berkeley Ave, between N Harbor Blvd and N Lemon St	15,526	15,996

4. Traffic Analysis: With Project

This section includes the trip generation and distribution estimates for the proposed project. It also includes a summary of the traffic analysis results for the with project scenarios:

- Existing Conditions (2025) with Project
- Opening Year (2028) with Project

4.1 Trip Generation and Distribution

The trip generation for the FUHS Field Improvements and New Athletic Building Project was estimated using rates published in the ITE Trip Generation Manual 12th Edition for Land Use Code 525 High School. Per the project description, the athletic building addition is estimated to increase FUHS's enrollment capacity by approximately 54 students. The addition of lighting fixtures and its impact on afternoon and evening sporting activities will not significantly change the number of students and/or athletes during the AM or PM peak hour trips.

A summary of the ITE Trip Generation estimates for weekday daily conditions, weekday AM peak hour conditions, and weekday PM peak hour conditions are presented in Table 3. Appendix B presents the original ITE Trip Generation reports.

The proposed project is expected to generate 105 daily new trips on weekdays. During the AM peak hour, the proposed project is expected to generate 28 new vehicle trips. Sixty-eight percent of these vehicle trips (19 trips) are forecasted to enter the project site, and 32% (9 trips) are forecasted to exit the site. During the PM peak hour, the proposed project is expected to generate 8 new vehicle trips. During the PM peak hour, 48% of these vehicle trips (4 trips) are forecasted to enter the project site, and 52% (4 trips) are forecasted to exit the site.

The City of Fullerton's threshold for conducting an intersection level of service analysis is a generation of at least 50 peak hour vehicle trips as a result of a proposed project. As such, this proposed project would not require an intersection level of service analysis because peak hour trips for both the AM and PM peak hours are less than 50 vehicles.

Table 3 Trip Generation and Distribution.

Land Use and Time Period	Students	Trip Generation Rate	Distribution		Trips		Total
			Inbound	Outbound	Inbound	Outbound	
High School – Weekday	54	1.94 trips / student	50%	50%	52	53	105
High School – AM Peak	54	0.52 trips / student	68%	32%	19	9	28
High School – PM Peak	54	0.15 trips / student	48%	52%	4	4	8

4.2 Existing Year (2025) With Project

4.2.1 Average Daily Traffic

The ADT volumes for the study area roadway segments in the Existing Year (2025) With Project scenario are summarized in Table 4. The ADT volumes were estimated using a combination of the existing ADT volumes, the ITE Trip Generation estimate of 105 new daily trips, and proportions of vehicle traffic volumes on each of the roadway segments.

Table 4 Estimated Roadway ADT Existing Year (2025) With Project.

Roadway	Existing ADT	2025 With Project
E Chapman Ave, between N Harbor Blvd and N Lemon St	24,907	24,972
N Lemon St, between N Berkeley Ave and E Chapman Ave	13,959	14,047
N Pomona Ave, between E Union Ave and E Chapman Ave	2,614	2,631
N Berkeley Ave, between N Harbor Blvd and N Lemon St	15,526	15,566

4.3 Opening Year (2028) With Project

4.3.1 Average Daily Traffic

Table 5 below shows the estimated ADT volumes for each roadway segment, by scenario, including the Opening Year (2028) With Project scenario. The Opening Year (2028) With Project ADT volumes were estimated assuming a 1% annual growth rate from the 2025 With Project scenario ADT volumes.

Table 5 Estimated Roadway ADT, by roadway and scenario.

Roadway	Existing ADT	2028 No Project	2025 With Project	2028 With Project
E Chapman Ave, between N Harbor Blvd and N Lemon St	24,907	25,662	24,972	25,728
N Lemon St, between N Berkeley Ave and E Chapman Ave	13,959	14,382	14,047	14,473
N Pomona Ave, between E Union Ave and E Chapman Ave	2,614	2,693	2,631	2,710
N Berkeley Ave, between N Harbor Blvd and N Lemon St	15,526	15,996	15,566	16,038

5. Additional Analyses

5.1 VMT Screening

The proposed project is evaluated for potential impacts related to Vehicle Miles Traveled (VMT) consistent with the requirements contained in the City of Fullerton Transportation Assessment Policies and Procedures document. The guidelines establish that proposed projects with one or more of the following attributes may be exempt from a full VMT Analysis:

- **Criteria 1: Project is located in a Transit Priority Area (TPA).** The project is within 0.5 miles of a TPA, which includes a major transit stop or an existing stop along a high-quality transit corridor.
- **Criteria 2: Project is located in a Low VMT Area.** A low VMT area is defined as an individual traffic analysis zone where total daily Origin/Destination VMT per service population is 15% or more less than the City average total daily Origin/Destination VMT per service population.

- **Criteria 3: Project Type Screening.** Projects for the following land uses can be presumed to have a less than significant impact:
 - o Local-serving K-12 public schools
 - o Local-serving parks Day care centers
 - o Local-serving retail uses less than 50,000 square feet
 - o Local-serving hotels (e.g. non -destination hotels)
 - o Local-serving student housing projects Local -serving assembly uses (places of worship, community organizations)
 - o Community institutions (public libraries, fire stations, local government)
 - o Affordable, supportive or transitional housing
 - o Assisted living facilities
 - o Senior housing (as defined by HUD)
 - o Projects generating less than 836 daily VMT

The FUHS Field Improvements and New Athletic Building Project would be eligible to be screened out from the need for a full project level VMT analysis under the Criteria 3 screening attribute because the project is proposing development for a local-serving K-12 public school. No additional VMT analysis is required for the project.

5.2 Pedestrian and Site Circulation

5.2.1 *Existing conditions*

The campus has three parking lots in the central, eastern, and northern portions of campus. Vehicular access to the centrally located parking lot is provided by four driveways. These driveways consist of one ingress-only driveway, an ingress-egress driveway, and two-egress only driveways along N Lemon St. The centrally located parking lot also has a student pick-up/drop-off zone. Vehicular access to the eastern parking lot is provided by one ingress-only driveway and by one egress-only driveway located along N Lemon St. Vehicular access to the northern parking lot is provided by an ingress-egress driveway along N Pomona Ave/E Union Ave. Additional campus parking is provided at the Fullerton College parking garage for sporting events, located along N Lemon St.

Pedestrian access to the campus is provided from sidewalks along public rights-of-way bordering the campus. Alternative forms of transportation to the campus include bicycling and public bus service. A bicycle lane is located along N Berkeley Ave on the north side of campus. The Orange County Transportation Authority has one bus stop serving Route 143 near the eastern portion of the campus and bus stops serving routes 43 and 123 approximately 0.15 miles south of the campus.

5.2.2 Analysis

This subsection examines site access, circulation, and potential traffic safety issues related to FUHS's proposed project driveways and parking areas. This review is completed at a high level based on the project description provided by the District.

Intersection Sight Distance

Existing project driveways provide sufficient sight distance. No significant horizontal curves are proposed along the roadways in the vicinity of the project driveway locations. As such, no modifications to driveway sight distances are recommended as part of this analysis. No impact is anticipated.

The District should follow California Department of Transportation (Caltrans) sight distance guidelines when designing the new ingress-egress driveway for the northern parking lot.

Driveway Length

The existing site access driveways are designed to serve the school's typical peak AM and PM hour traffic volumes and turning movements. Since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, driveway congestion and queues will not be significantly impacted. No modifications to existing driveway lengths are recommended as part of this analysis. No impact is anticipated.

Driveway Proximity and Corner Clearance

Per City of Fullerton standards, the new ingress-egress driveway designed for the northern parking lot should be sufficiently distanced from adjacent intersections and from the existing driveway for the northern parking lot.

Right-Turn Lanes at Driveways

The existing site access driveways are designed to serve the school's typical peak AM and PM hour traffic volumes and turning movements. Since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, there is no need to change the configuration of right turn lanes at the study driveways.

When designing the new ingress-egress driveway for the northern parking lot, the District should follow City of Fullerton guidelines to ensure that the right turn lane can accommodate anticipated traffic volumes.

Pedestrian and Bicycle Access

To accommodate a potential increase in pedestrian and bicycle circulation due to changes in student enrollment, the proposed project would include a total of 10 bike parking spaces located on the south side of the new athletic building. It would also include the installation of walkways around the athletic building site that would connect to the existing public sidewalks located along N Pomona Ave and E Union Ave and to the rest of the FUHS campus. Sidewalks would continue to provide pedestrian access to the parking lot entrances. No additional pedestrian or bicycle crossing locations are recommended.



6. Conclusion

This memo has analyzed if and how traffic conditions are expected to change with the implementation of the proposed FUHS Field Improvements and New Athletic Building Project.

The proposed project would generate 105 daily vehicle trips, which includes 28 AM peak hour and 8 PM peak hour vehicle trips based on the ITE Trip Generation Forecast. The number of new peak hour trips does not exceed the City of Fullerton's threshold for conducting a more thorough transportation analysis under CEQA.

Because the project is proposing development for a local-serving K-12 public school, the project is exempt from a full VMT analysis by way of the Criteria 3 VMT screening attribute.

This memo reports the analysis results for the existing site access driveways for FUHS. Since the proposed project would not generate a significant change to the current volume of AM and PM peak hour trips, site circulation will not be significantly impacted, and no improvements to the existing site access driveways are recommended based on this analysis.



References

California Department of Transportation. (July 2, 2018). *Highway Design Manual, Chapter 200: Geometric Design and Structure Standards*.

<https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp0200-032020.pdf>

City of Fullerton. (2020, June 16). *Transortation Assessment Policies and Procedures*.

<https://www.cityoffullerton.com/home/showpublisheddocument/1536/637449005647300000>

ITE (Institute of Transportation Engineers). *Trip Generation Manual*. 12th ed. 2025



Appendix A – Roadway Segment Counts

ADT1 E Chapman Ave between N Harbor Blvd and N Lemon St.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB		PM Period		EB		WB		
0:00	28		17		12:00		173		195		
0:15	18		19		12:15		210		197		
0:30	19		19		12:30		186		185		
0:45	11	76	15	70	146	12:45	179	748	222	799	1547
1:00	3		6		13:00		204		217		
1:15	9		14		13:15		159		222		
1:30	8		14		13:30		227		187		
1:45	6	26	5	39	65	13:45	187	777	190	816	1593
2:00	8		6		14:00		202		199		
2:15	7		6		14:15		183		230		
2:30	6		5		14:30		195		266		
2:45	8	29	5	22	51	14:45	196	776	248	943	1719
3:00	6		6		15:00		215		253		
3:15	5		12		15:15		228		203		
3:30	13		8		15:30		232		248		
3:45	22	46	7	33	79	15:45	200	875	281	985	1860
4:00	11		6		16:00		170		290		
4:15	15		20		16:15		181		263		
4:30	25		25		16:30		196		239		
4:45	43	94	20	71	165	16:45	234	781	254	1046	1827
5:00	34		21		17:00		222		301		
5:15	52		27		17:15		220		276		
5:30	78		57		17:30		186		262		
5:45	78	242	42	147	389	17:45	186	814	269	1108	1922
6:00	90		55		18:00		184		266		
6:15	107		48		18:15		207		227		
6:30	182		58		18:30		164		252		
6:45	251	630	95	256	886	18:45	171	726	175	920	1646
7:00	271		106		19:00		160		178		
7:15	276		163		19:15		141		156		
7:30	302		177		19:30		130		116		
7:45	291	1140	148	594	1734	19:45	113	544	132	582	1126
8:00	275		173		20:00		95		137		
8:15	276		188		20:15		105		125		
8:30	255		194		20:30		91		145		
8:45	216	1022	157	712	1734	20:45	98	389	86	493	882
9:00	190		114		21:00		95		144		
9:15	174		105		21:15		83		88		
9:30	188		138		21:30		73		85		
9:45	212	764	153	510	1274	21:45	65	316	80	397	713
10:00	182		172		22:00		68		107		
10:15	159		168		22:15		46		62		
10:30	182		149		22:30		50		89		
10:45	138	661	137	626	1287	22:45	41	205	53	311	516
11:00	154		145		23:00		44		46		
11:15	184		190		23:15		49		48		
11:30	180		200		23:30		42		25		
11:45	178	696	199	734	1430	23:45	40	175	22	141	316
Total Vol.	5426		3814		9240	7126		8541		15667	
						Daily Totals					
						EB		WB		Combined	
						12552		12355		24907	
AM						PM					
Split %	58.7%		41.3%		37.1%		45.5%		54.5%		62.9%
Peak Hour	7:15		11:30		7:30		15:00		17:00		16:45
Volume	1144		791		1830		875		1108		1955
P.H.F.	0.95		0.99		0.96		0.94		0.92		0.93

ADT2 N Lemon St between N Berkeley Ave and E Chapman Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB		PM Period	NB		SB	
0:00	7		4		12:00	112		88	
0:15	12		3		12:15	116		95	
0:30	6		1		12:30	121		115	
0:45	5	30	4	12	12:45	119	468	95	393
1:00	2		2		13:00	99		121	
1:15	3		1		13:15	142		83	
1:30	1		2		13:30	109		95	
1:45	0	6	3	8	13:45	106	456	95	394
2:00	1		2		14:00	117		88	
2:15	1		0		14:15	125		110	
2:30	1		0		14:30	179		132	
2:45	5	8	4	6	14:45	178	599	113	443
3:00	1		1		15:00	154		114	
3:15	3		1		15:15	159		154	
3:30	8		1		15:30	194		138	
3:45	9	21	4	7	15:45	144	651	122	528
4:00	2		4		16:00	171		124	
4:15	10		8		16:15	113		142	
4:30	8		5		16:30	230		136	
4:45	14	34	5	22	16:45	181	695	165	567
5:00	9		8		17:00	189		142	
5:15	10		17		17:15	159		152	
5:30	21		22		17:30	168		110	
5:45	26	66	27	74	17:45	120	636	114	518
6:00	19		45		18:00	141		104	
6:15	31		44		18:15	129		112	
6:30	27		85		18:30	103		93	
6:45	55	132	76	250	18:45	96	469	75	384
7:00	43		137		19:00	105		69	
7:15	121		201		19:15	84		73	
7:30	92		196		19:30	88		47	
7:45	87	343	192	726	19:45	69	346	49	238
8:00	82		190		20:00	68		36	
8:15	139		227		20:15	54		31	
8:30	109		140		20:30	59		33	
8:45	98	428	129	686	20:45	57	238	44	144
9:00	68		135		21:00	78		32	
9:15	78		129		21:15	35		23	
9:30	90		94		21:30	36		21	
9:45	93	329	131	489	21:45	35	184	23	99
10:00	121		108		22:00	39		18	
10:15	105		101		22:15	20		16	
10:30	85		81		22:30	33		14	
10:45	86	397	71	361	22:45	24	116	10	58
11:00	93		80		23:00	17		9	
11:15	93		114		23:15	12		11	
11:30	116		101		23:30	20		9	
11:45	122	424	93	388	23:45	9	58	1	30
Total Vol.	2218		3029		5247	4916		3796	8712
					Daily Totals				
					NB		SB		Combined
					7134		6825		13959
AM					PM				
Split %	42.3%		57.7%	37.6%	56.4%		43.6%		62.4%
Peak Hour	11:45		7:30	7:30	16:30		16:30		16:30
Volume	471		805	1205	759		595		1354
P.H.F.	0.97		0.89	0.82	0.83		0.90		0.92

ADT3 N Pomona Ave between E Union Ave and E Chapman Ave.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB		PM Period	NB		SB	
0:00	0		0		12:00	3		17	
0:15	0		1		12:15	6		11	
0:30	0		1		12:30	12		22	
0:45	0	0	0	2	12:45	17	38	16	66
1:00	0		0		13:00	23		13	
1:15	1		0		13:15	7		17	
1:30	0		0		13:30	13		5	
1:45	0	1	0	0	13:45	13	56	15	50
2:00	0		0		14:00	16		8	
2:15	1		0		14:15	31		13	
2:30	0		0		14:30	34		33	
2:45	0	1	0	0	14:45	13	94	11	65
3:00	0		1		15:00	18		12	
3:15	0		0		15:15	29		22	
3:30	1		0		15:30	49		76	
3:45	0	1	1	2	15:45	40	136	39	149
4:00	1		1		16:00	38		35	
4:15	1		1		16:15	39		20	
4:30	0		2		16:30	13		19	
4:45	0	2	0	4	16:45	24	114	23	97
5:00	0		0		17:00	21		23	
5:15	0		1		17:15	15		33	
5:30	1		2		17:30	18		13	
5:45	1	2	2	5	17:45	33	87	25	94
6:00	6		3		18:00	28		21	
6:15	7		9		18:15	24		28	
6:30	7		8		18:30	17		14	
6:45	5	25	17	37	18:45	8	77	16	79
7:00	17		21		19:00	24		22	
7:15	81		86		19:15	14		25	
7:30	20		35		19:30	4		9	
7:45	42	160	42	184	19:45	9	51	8	64
8:00	61		59		20:00	8		10	
8:15	91		101		20:15	2		2	
8:30	23		51		20:30	6		3	
8:45	18	193	13	224	20:45	7	23	24	39
9:00	20		13		21:00	6		30	
9:15	18		18		21:15	4		3	
9:30	18		12		21:30	3		0	
9:45	11	67	10	53	21:45	0	13	2	35
10:00	9		15		22:00	2		0	
10:15	19		14		22:15	7		3	
10:30	9		13		22:30	2		1	
10:45	9	46	16	58	22:45	1	12	0	4
11:00	14		10		23:00	1		2	
11:15	6		15		23:15	1		1	
11:30	8		16		23:30	1		1	
11:45	12	40	12	53	23:45	1	4	3	7
Total Vol.	538		622			705		749	
					Daily Totals				
					NB		SB		Combined
					1243		1371		2614
AM					PM				
Split %	46.4%		53.6%	44.4 %		48.5%		51.5%	55.6 %
Peak Hour	7:45		7:45	7:45		15:30		15:15	15:30
Volume	217		253	470		166		172	336
P.H.F.	0.60		0.63	0.61		0.85		0.57	0.67

ADT4 N Berkeley Ave between N Harbor Blvd and N Lemon St.

Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB		PM Period		EB		WB		
0:00	3		10			12:00	106		130		
0:15	2		8			12:15	106		124		
0:30	1		4			12:30	110		140		
0:45	5	11	1	23	34	12:45	107	429	148	542	971
1:00	1		3			13:00	119		122		
1:15	2		2			13:15	93		146		
1:30	3		2			13:30	88		117		
1:45	5	11	2	9	20	13:45	107	407	164	549	956
2:00	4		7			14:00	97		160		
2:15	2		3			14:15	99		136		
2:30	0		4			14:30	142		194		
2:45	5	11	7	21	32	14:45	118	456	218	708	1164
3:00	0		2			15:00	111		200		
3:15	1		3			15:15	135		175		
3:30	2		11			15:30	163		185		
3:45	0	3	11	27	30	15:45	143	552	199	759	1311
4:00	4		9			16:00	126		176		
4:15	3		8			16:15	156		171		
4:30	4		9			16:30	145		214		
4:45	5	16	14	40	56	16:45	150	577	182	743	1320
5:00	5		11			17:00	149		167		
5:15	10		24			17:15	140		180		
5:30	12		30			17:30	129		163		
5:45	26	53	40	105	158	17:45	105	523	173	683	1206
6:00	24		31			18:00	108		154		
6:15	36		43			18:15	98		140		
6:30	60		47			18:30	101		126		
6:45	86	206	93	214	420	18:45	74	381	112	532	913
7:00	155		84			19:00	82		106		
7:15	171		151			19:15	73		85		
7:30	172		149			19:30	62		83		
7:45	175	673	173	557	1230	19:45	41	258	68	342	600
8:00	184		163			20:00	35		56		
8:15	232		156			20:15	44		61		
8:30	167		186			20:30	43		58		
8:45	142	725	150	655	1380	20:45	37	159	54	229	388
9:00	123		131			21:00	26		85		
9:15	110		111			21:15	32		38		
9:30	105		113			21:30	23		39		
9:45	121	459	115	470	929	21:45	24	105	34	196	301
10:00	119		141			22:00	17		45		
10:15	112		113			22:15	12		28		
10:30	91		120			22:30	14		33		
10:45	91	413	117	491	904	22:45	10	53	16	122	175
11:00	85		115			23:00	17		17		
11:15	114		107			23:15	8		13		
11:30	125		147			23:30	9		13		
11:45	117	441	122	491	932	23:45	7	41	12	55	96
Total Vol.	3022		3103		6125		3941		5460		9401
						Daily Totals					
						EB		WB		Combined	
						6963		8563		15526	
AM						PM					
Split %	49.3%		50.7%		39.4%		41.9%		58.1%		60.6%
Peak Hour	7:30		7:45		7:45		16:15		14:30		16:15
Volume	763		678		1436		600		787		1334
P.H.F.	0.82		0.91		0.93		0.96		0.90		0.93



Appendix B – ITE Trip Generation Reports

High School (525)

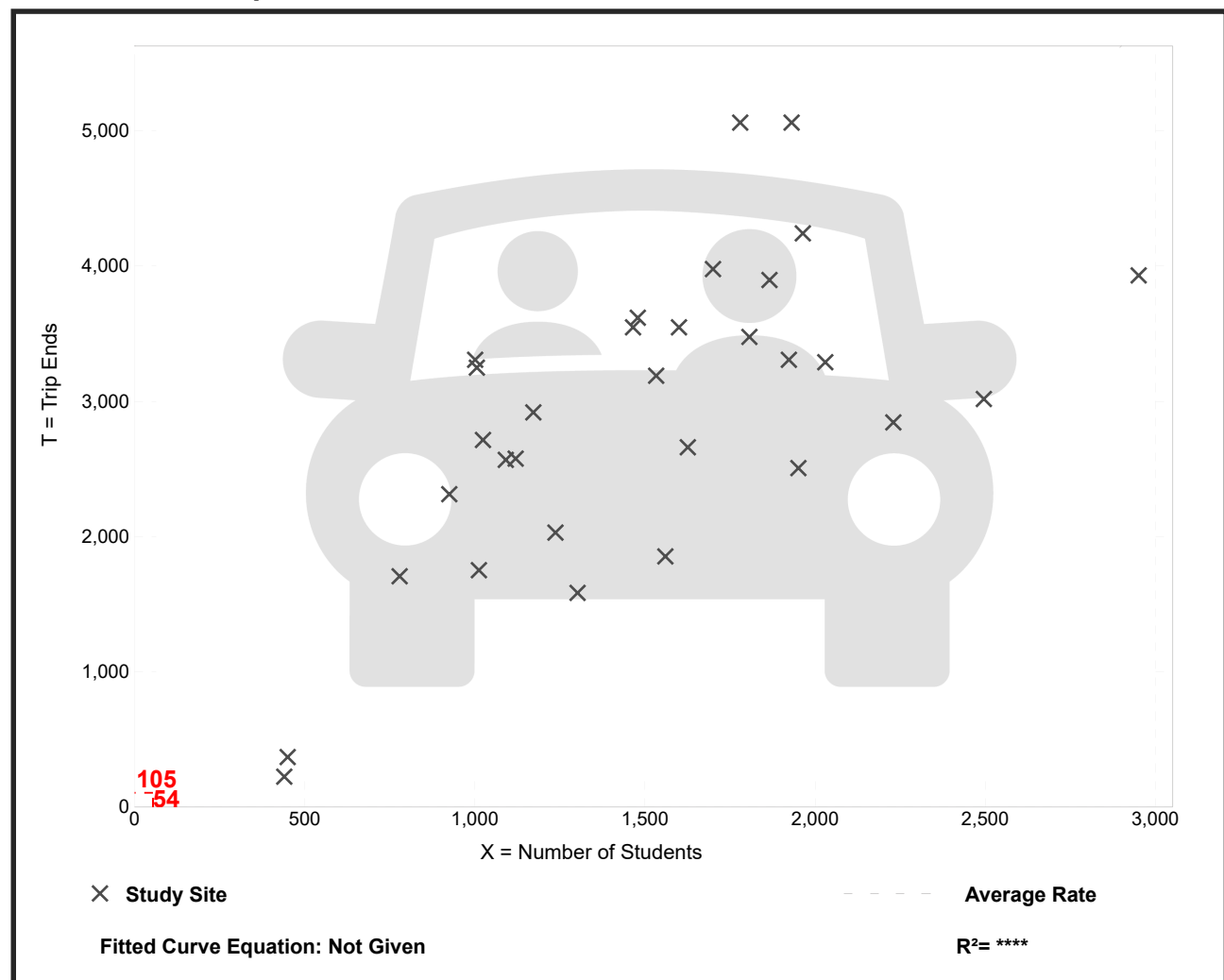
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Students: 1498
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
1.94	0.51 - 3.30	0.61

Data Plot and Equation



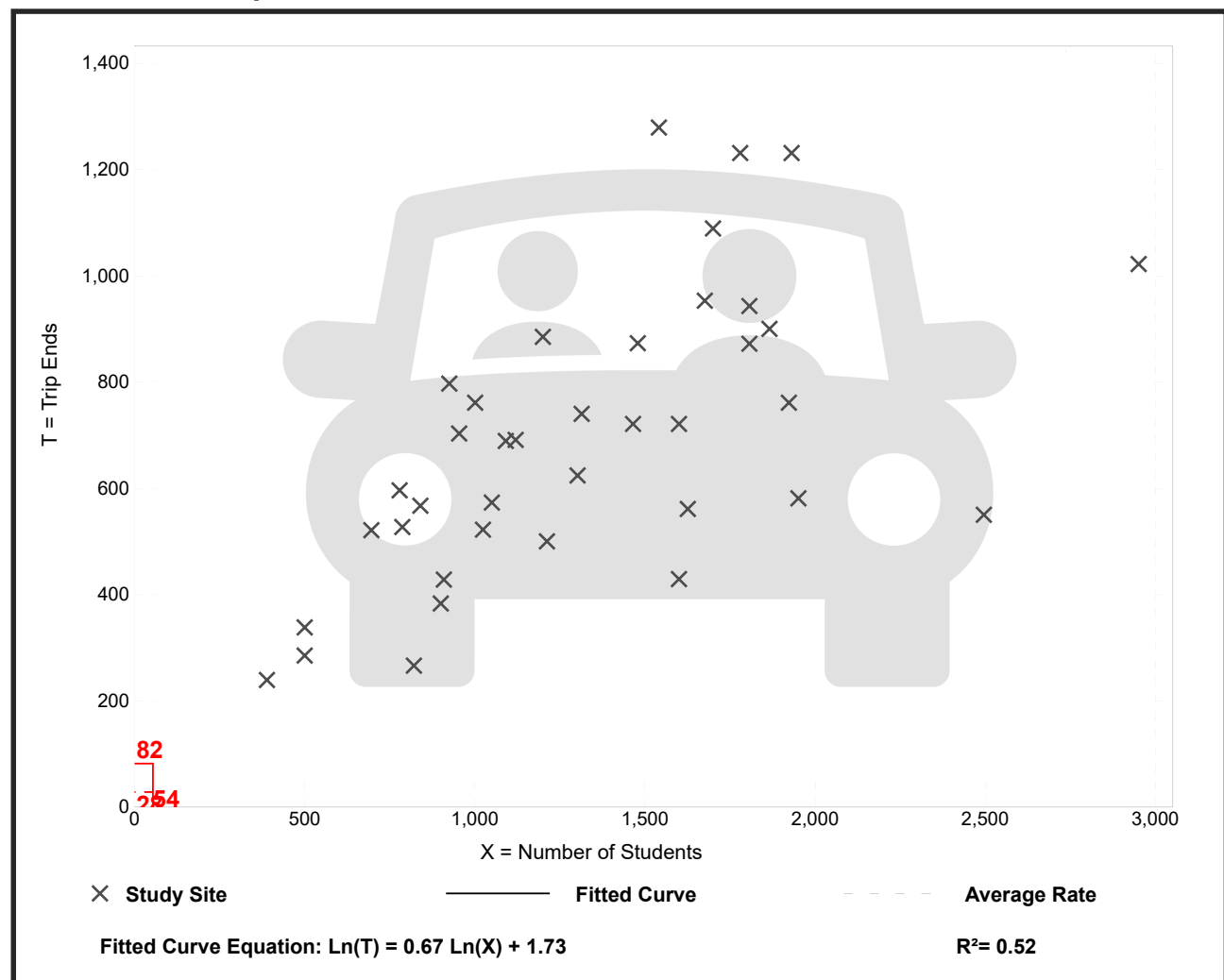
High School (525)

Vehicle Trip Ends vs: Students
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 38
 Avg. Num. of Students: 1329
 Directional Distribution: 68% entering, 32% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.52	0.22 - 0.86	0.17

Data Plot and Equation



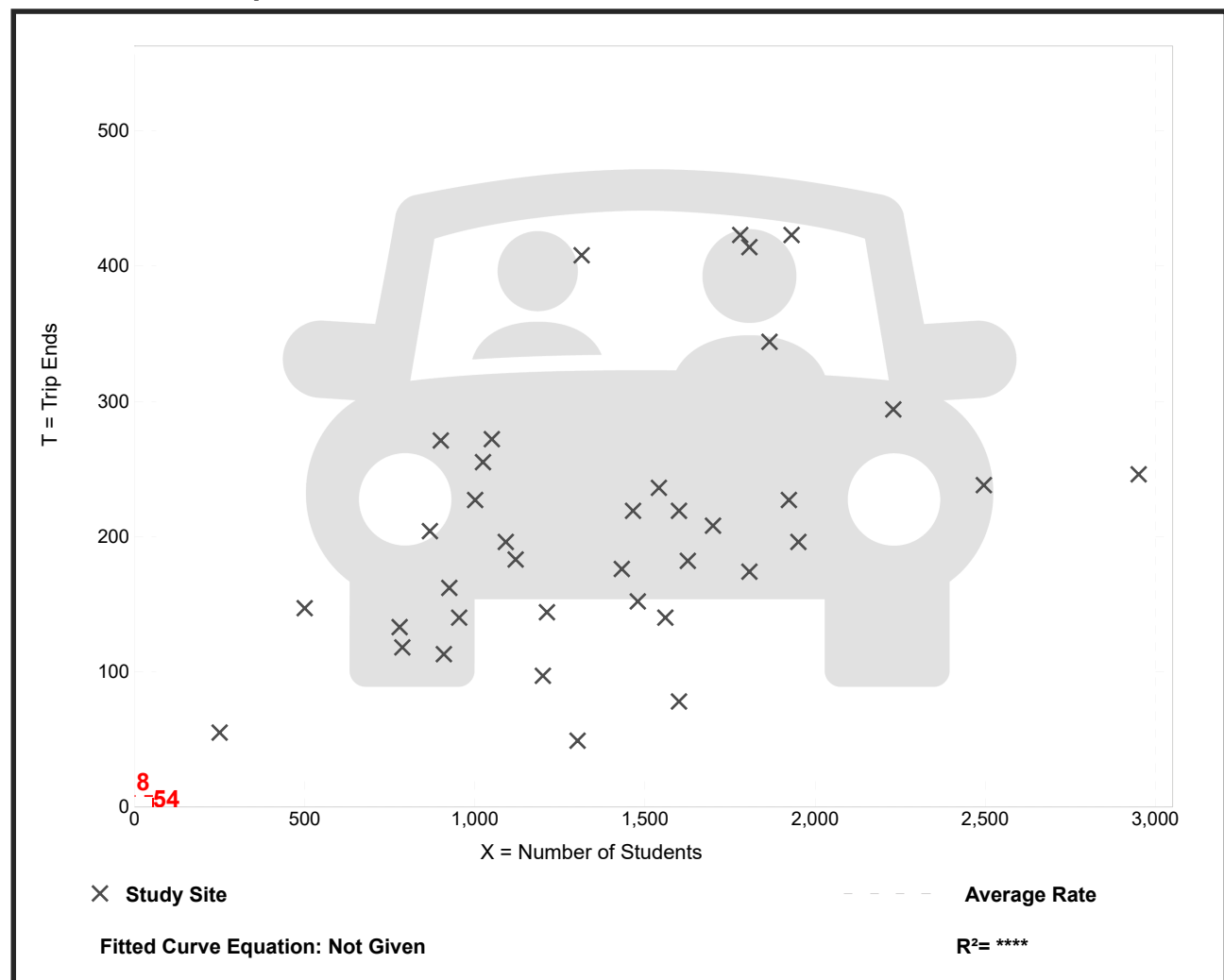
High School (525)

Vehicle Trip Ends vs: Students
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 37
 Avg. Num. of Students: 1404
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.15	0.04 - 0.31	0.07

Data Plot and Equation



APPENDIX E

SACRED LANDS FILE REQUEST

APPENDIX

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**NATIVE AMERICAN HERITAGE COMMISSION**

December 12, 2025

Angel Castro
PlaceWorks, Inc.Via Email to: acastro@placeworks.comCHAIRPERSON
Reginald Pagaling
ChumashVICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki,
NomlakiSECRETARY
Isaac Bojorquez
Ohlone-CostanoanPARLIAMENTARIAN
Wayne Nelson
LuiseñoCOMMISSIONER
Sara Dutschke
MiwokCOMMISSIONER
Stanley Rodriguez
KumeyaayCOMMISSIONER
Bennae Calac
Pauma-Yuima Band of
Luiseño IndiansCOMMISSIONER
VacantCOMMISSIONER
VacantEXECUTIVE SECRETARY
Andrew Alejandro
Paskenta Band of
Nomlaki Indians**NAHC HEADQUARTERS**
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov**Re: Fullerton Union High School Field Improvements and New Athletic Building Project, Orange County**

To Whom It May Concern:

As requested, a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed based on information submitted for the above referenced project. The results were positive. Please contact the Juaneno Band of Mission Indians Acjachemen Nation - Belardes on the attached list for more information. Be aware that tribes do not always record their sacred sites in the SLF, nor are they required to do so. As such, an SLF search is not a substitute for consultation with all tribes that are traditionally and culturally affiliated with a project's geographic area.

Attached is a list of Native American tribes that are traditionally and culturally affiliated with the project's geographic area. Please contact all of the listed tribes as they may have information about sacred sites within the project area that is not listed with the NAHC.

If within two weeks of notification, a response has not been received, the Commission requests that you follow up with a telephone call or email to ensure that the project information was received.

If you receive notification of a change of address or phone number from a tribe, please inform the NAHC so that we can assure that our lists contain current information.

In addition to engaging in tribal consultation, you should consult the appropriate regional California Historical Research Information System (CHRIS) information center to determine whether it has information regarding the presence of recorded archaeological sites within the project area.

If you have any questions or need additional information, please contact me at Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment

